

Implementing Video-Based Online Learning in an Asynchronous Setting: A Case Study at Madrasah Aliyah Negeri 1 Jember

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ABSTRACT

This study aims to understand the implementation of video-based online learning with an asynchronous platform during the Covid-19 pandemic at Madrasah Aliyah Negeri (MAN) 1 Jember. This research is based on a qualitative case study approach. The data collection technique is done through observation, interviews and documentation. Data analysis is done through data collection is done through virtual interview techniques, non-participant observation, and documentation. Meanwhile, data analysis was carried out using the interactive model of Miles and Hubermann. The results showed that; 1) The design of video-based asynchronous online learning is based on the synergy between the school's internal curriculum as stated in the education policy determined by the head of the institution; the use of learning technology, as well as the teacher's pedagogical aspects which are reflected in the design of planning, implementation, and evaluation of learning; 2) The implementation of video-based asynchronous online learning is implemented through the use of "classroom" and "e-learning". This study implies the importance of online learning, which must be designed in such a way by utilizing various learning resources by practitioners and managers of educational institutions in order to create effective and efficient student-centered learning by utilizing information and technology developments.

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1. INTRODUCTION

The solution to getting the best design for education in the COVID-19 pandemic is through an online-based learning model (Mustajab & Fawa'iedah, 2020; Febrian et al., 2021; Hidayah et al., 2021; Pratama et al., 2021). The implementation of online-based education will lead to increasing the

effectiveness of education (Zamroni et al., 2021; Butnaru et al., 2021), although, on the one hand, its activities have limitations, both in the form of technical barriers (Laksana, 2020; Rahmawati & Sujono, 2021) and obstacles in the conceptual level of the right curriculum to be used (Agusriadi et al., 2021; Batubara, 2021).

Therefore, the implementation of online-based education needs to be systematically and massively pursued to minimize the limitations that arise along with the learning process carried out by these educational institutions (Mushfi et al., 2021; Suwidiyanti & Anshori, 2021). Implementing the right online learning system will maximize the potential for achieving learning targets (Dakir et al., 2021; Rahman & Subiyantoro, 2021). In this context, all structural lines of educational institutions also have a role in overseeing the process of implementing online education that is applied (Subekti, 2021; Maman et al., 2021), as well as monitoring factors supporting the achievement of educational targets, as mentioned in Kim's research (Kim & Kim, 2021).

Some educational institutions have shown their adaptive progress amid the current pandemic through online learning with asynchronous platforms. One of them is Madrasah Aliyah Negeri (MAN) 1 Jember – from now on written as MAN 1 – that organizes a video-based asynchronous online learning process. This activity is an online learning implementation carried out in the form of video-based learning uploaded by subject teachers on the MAN 1 web page. This educational design involves the entire MAN 1 academic community, from the principal to students actively engaged in education. The principal of MAN 1 acts as a drafter or designer as well as the highest educated person in charge at the institutional level; the vice principals play a role in translating the video-based asynchronous learning concept into a technical-implementation realm; the IT team in MAN 1 acts as the technician; while teachers and students are the parties who carry out the learning process directly. Although several educational institutions have carried out the design of asynchronous learning (Levicky-Townley et al., 2015; Muljana & Luo, 2021) at various levels of education (Fatourou et al., 2021; Ryan et al., 2021), but it is still partial and focuses only on the technical implementation of asynchronous learning.

This research is based on preliminary research conducted by Karlina et al., (2021), which states that various learning application media are needed to carry out asynchronous learning, such as WA group, Telegram, and Google classroom SPADA, and so on. Alodianada et al., (2019) said that online asynchronous design requires appropriate learning scenarios by using various learning resources that can be used to enrich learning designs. Kurnia & Prawira (2020) said that the implementation of distance learning asynchronously with parents' participatory approach could change students' behavior and affective competence. Amadea & Ayuningtyas (2020) said that there was no significant difference between the learning outcomes of the synchronous study group and the asynchronous study group's learning outcomes.

Uniquely, the implementation of video-based asynchronous online learning at MAN 1 is based on the principle that it is not merely technical by maximizing the function of learning technology only. Still, it is also accompanied by incorporating alternative modalities in the dimensions of curriculum planning designed at the level of educational institutions in MAN 1. Because of this, the researchers assume that the synergy between learning technology through the implementation of video-based asynchronous online learning and the management of the MAN 1 curriculum is a strategic criterion for determining the success of educational design at MAN 1 even though it was hit by the COVID-19 pandemic situation which is not over yet. The implementation of online learning that is tied to video-based asynchronous learning at MAN 1 combines pedagogical dimensions and the use of information technology (IT), creating a conducive teaching-learning pattern according to the age level of students while integrating it with the design of the school curriculum.

In this context, information technology (IT) in the asynchronous learning format at MAN 1 is used as capital for the implementation of online education during the COVID-19 pandemic, as Prabowo's (2021) or Aque's (2021) research. This means that amid difficult conditions due to the COVID-19 pandemic, the pedagogical element will not be practical if it does not involve aspects of

optimal use of IT (Rifqi, 2021; Santoso et al., 2021; Zamroni & Qatrunnada, 2021). Therefore, MAN 1 is open to making adaptive progress through the synergy of curriculum design development combined with learning technology that can holistically and comprehensively improve student learning outcomes (Adham & Mahmudah, 2021). However, this synergy still needs to pay attention to the educational institution's vision, mission, and goals, especially the optimal achievement targets of students according to their talents and interests through a quality learning process (Fajri et al., 2021).

There are several benefits obtained by MAN 1 from the involvement of elements of educational curriculum planning and the use of learning technology in terms of using IT and school websites as learning resources. These benefits include but are not limited to, *first*, students can obtain information digitally so that learning will be more effective and efficient. *Second*, collaborative learning in the middle of the educational process can trigger high-order thinking skills, as evidenced through the collaborative learning process during the teaching and learning process. This proves MAN 1 in following the development of the revised 2013 curriculum, which is currently the primary reference at the central government level. Through video-based learning in an asynchronous platform, MAN 1 wants to prove the existence of its institution amid a pandemic situation without leaving the spirit of modern education in the digital era.

Therefore, the implementation of video-based asynchronous online learning can be one of the *ijtihad* to realize the noblest educational ideals: to make students real human beings without leaving a progressive-adaptive attitude amid today's advances in information technology. Moreover, MAN 1 has an educational goal to form students who are aware of themselves as decision-makers, people responsible or in charge, and active actors in undergoing all the dynamics of the modern era in society. Thus, video-based asynchronous online learning is emphasized as a strategy for developing and improving students' intellectual abilities and skills based on the noble spirit of education but accompanied by adequate adaptability in dealing with exposure to learning situations in the COVID-19 pandemic era still.

Based on this description, this research focused on the process of video-based asynchronous online learning implementation in MAN 1 Jember, East Java, Indonesia. This asynchronous learning is a form of educational innovation that MAN 1 has massively implemented during the COVID-19 pandemic. Before the pandemic, this academic institution has also accommodated the learning technology system through its school web page. Through this web page, teaching and learning activities are carried out optimally, from planning the learning stage to evaluating the learning stage. Reasonably, the optimization of learning technology is preserved by MAN 1 to continue to spur and develop higher quality online learning design through the implementation of video-based asynchronous online learning. It is expected if the optimization of learning technologies is used by MAN 1 to grow and develop the quality of online learning design. This effort could be made with the implementation of video-based asynchronous learning online.

This is the novelty of this research, where the researcher tries to present video-based asynchronous online learning as a development strategy, increasing the competence and skills of students during the COVID-19 pandemic. Therefore, the researcher focused his study on implementing video-based online learning with an asynchronous platform during the Covid-19 pandemic at Madrasah Aliyah Negeri (MAN) 1 Jember.

2. METHODS

Through the construction of the research focus, this research is based on a qualitative approach to more critically understand the meaning of the reality of video-based asynchronous online learning amid the COVID-19 pandemic. The process of understanding the purpose of this context is understanding the argumentative basis for the design and implementation of integrated MAN 1 education through video-based asynchronous online learning. Moreover, the video-based asynchronous online learning that has been implemented has succeeded to make MAN 1 a pioneer in madrasa education institutions that are competent in the field of utilizing learning technology in

Jember. Based on this framework, this research seeks to examine in depth the basic framework for implementing video-based asynchronous online learning with learning technology as its foundation through the design and implementation of its activities.

The data collection technique was carried out through interviews with several informants determined through purposive techniques, consisting of the Head of Madrasah, Deputy Head, Teachers, and students of MAN 1 Jember. Observations were made on asynchronous learning activities carried out at MAN 1 Jember during the pandemic, both to teachers and students. Furthermore, the researchers documented various vital data and information related to the asynchronous learning activities carried out.

The data analysis was carried out in stages, starting with collecting data generated from interviews, observations, and comprehensive documentation. Furthermore, data reduction, wherein this activity, researchers select and sort data according to research needs. After data reduction is made, the researcher presents the data and determines the research theme to conclude.

3. FINDINGS AND DISCUSSION

The Design of Video-based Asynchronous Online Learning at MAN 1 Jember

The COVID-19 pandemic has brought a significant change in the aspect of learning. Teachers and students are faced with fundamental changes from face-to-face traditional learning patterns to the learning environment that utilizes internet technology known as online learning. Differences in learning practices certainly require an adaptive and creative attitude from educational actors to adapt to the changes. In the technical-applicative aspect, the learning process carried out also undergoes dynamic changes, so it is reasonable to say that in the technical part of learning, the teaching-learning process in the pandemic era needs to be carried out in a multivariate manner (Krylov, Markhaichuk, Vakhromeeva, & Subbotina, 2021; Usman & Philips, 2021). Furthermore, academic preparation becomes an absolute must for teachers to deal with the massive transition of learning patterns in the current pandemic. The utilization of features from various learning technologies becomes practical guides and solutions in organizing learning sessions in the pandemic era.

Among the online learning variants, there are learning strategies with synchronous and asynchronous platforms. The meta-analysis study of the two synchronous and asynchronous variant entities focuses on discussing the technical side of the implementation of both variants (Bailey et al., 2021; Dorsah & Alhassan, 2021; Yadav et al., 2021). That is, synchronous learning techniques are interpreted based on the learning process that allows real-time communication between teachers and students at the same time by using learning technology, including video teleconference and satellite (Siddhpura & Siddhpura, 2021). Conversely, if teachers and students do not meet in a virtual space simultaneously, then the learning is included in the asynchronous category. Media that can be used on this platform include Facebook (Caipang et al., 2021). Both synchronous and asynchronous can be used as a forum for the implementation of online learning which primary use lies in maximizing IT-based learning technology. Some research even states that the two platforms – namely synchronous and asynchronous – are a growing trend at various levels of education (Zain, 2021).

The continuity of the learning implementation is an important part that becomes an obligation for educational institutions. This means that educational institutions, besides having the duty of achieving academic achievement, are also responsible for the continuity of the learning process implementation to ensure that educational messages can be conveyed to their students. Therefore, academic achievement and the continuity of the learning process are the two main holistic-integral goals that educational institutions must consider. Moreover, amid the COVID-19 pandemic, which has not yet ended, educational institutions must have multi-dimensional innovations to survive and help their students reach the predetermined learning targets. This is what MAN 1 is aiming for through the Video-based asynchronous online learning design.

Therefore, the leaderships of MAN 1 continue to strive for online learning innovations amid the pandemic era through educational designs that optimize the role of web learning owned by MAN 1

so far. In this context, MAN 1 plays a vital role in making internal curriculum policies at the level of MAN 1 educational institutions that accommodate and support the online learning system at the school. One of the structural leaders of MAN 1 stated that:

As head of the institution, we always coordinate developing learning designs *online* that are implement at MAN 1, especially during the COVID-19 pandemic. *Alhamdulillah*, the entire academic community of MAN 1, took an active role in the implementation process. We have achieved several school achievements in the field of implementing digital technology-based learning. Currently, our priority is at the planning stage of online learning design, with the main focus on implementing asynchronous through school web empowerment.

The policy pattern of the leaderships that is based on the visionary spirit fosters an adaptive education pattern in MAN 1, which emphasizes that the pandemic era that has hit the world of education in all its lines needs to be faced with the realization of a digital learning environment that is in line with the learning climate in MAN 1. This conformity is designed in the form of educational programs and processes that do not separate the learning environment factors and the optimization of learning technology owned by the educational institution. The creation of this educational climate ultimately led to MAN 1 to show a video-based asynchronous online learning pattern. Moreover, the learning environment at MAN 1 has the potential to be developed. Researchers analyzed the MAN 1 learning environment by their ability in managing the learning system through the school's web, which can be accessed through elearning.man1jember.sch.id. On this web, academic services are available to allow the academic community of MAN 1 to carry out a synergistic online learning process from the planning stage to the evaluation of their learning.

At the planning stage, the online learning design for MAN 1 consists of a syllabus and lesson plans (RPP) that the teacher can upload on the elearning.man1jember.sch.id page. Besides, this stage also includes planning the composition of learning materials or content adjusted to the syllabus and lesson plans that have been made. MAN 1 teachers are given creative space in designing the format of teaching materials that will be given to their students. In general, the teaching materials used in MAN 1 consist of text, animations, tutorials, simulations, and videos. The sorting of the format is, of course, taken based on the type of material and learning achievement targets that each subject wants to form; as stated in the research results, that type of material given affects the teaching media used by teachers (Koszalka et al., 2021; Logan et al., 2021; Widiartini et al., 2021). This was also conveyed by one of the teachers at MAN 1.

The teachers at MAN 1 must make a syllabus and lesson plans according to the subjects we are capable of. During the current COVID-19 pandemic, we prioritize using 1-sheet lesson plans as per the rules of the latest national curriculum. However, we still adjust it to the conditions of the students and the characteristics of our learning outcomes. Regarding the format for delivering learning materials, we each have our creativity to choose the suitable media. I tend to use a combination of text and video formats.

Furthermore, the implementation stage in MAN 1 online learning designs consists of synchronous and asynchronous formats. The first format - namely synchronous - has two main variants: video conferencing (Zoom Meeting or Google Meet) and Chat rooms. Meanwhile, the asynchronous design can be applied through links, assignments, quizzes, and videos. The latter point became the focus of the researcher's analysis in this research. Moreover, the design of the implementation of asynchronous learning at MAN 1 has procedural stages that distinguish it from other educational institutions, as stated by the head of MAN 1.

Especially for the asynchronous learning strategy that we implemented in MAN 1, we, as a structural leaders, have several policies of our own. The teachers at our school have the creative freedom to upload and customize the delivery technique of material in videos, assignments, quizzes, or links. However, it is still necessary to prioritize the characteristics of students and the pedagogical aspects of learning according to their respective subjects.

The implication is that video-based asynchronous learning as a form of online learning activity provided by educators still needs to pay attention to pedagogical aspects to emphasize students to be the actors who are free to be creative. One example, the topic that is the center of learning activities is determined based on the agreement among the students themselves. Thus, it will create an educational base construct centered on students. It is expected that they understand the process of carrying out appropriate activities with responsibility and mutual respect. Through video-based learning, in which material content is in line with the student-centered learning basis, students will be motivated to convey ideas and awareness about the meaning of learning in their respective capacities and competencies that are unique and diverse.

Interestingly, the various activities designed to implement video-based asynchronous learning at MAN 1 have vigorous academic activities that convey maximum learning messages to the students. Condition is arranging and agreed upon by and for the students themselves, based on directions given by the teachers. The teachers have a position as a companion and, at the same time, a supervisor for what students do from the learning videos displayed. Moreover, the creativity aspect of teachers is the leading supplement that supports the success of the video learning medium that is present to the students. In this situation, the effectiveness of a learning medium can be analyzed, especially in the learning process that takes place amid the current COVID-19 pandemic, as described by Mardiana or Sari in their research (Mardiana & Supriyatno, 2021; Sari et al., 2021). One of the dynamic characteristics of implementing video-based learning at MAN 1 is the provision of Q & A (*Question and Answer*) responsive facilities and videos by utilizing multivariate social media. This design triggers students to develop their curiosity about material stimuli provided by teachers through various social media. Although the learning process is carried out asynchronously, which does not allow direct face-to-face meetings, teachers' creativity in displaying video material supported by responsive Q&A facilities can become a superior learning design in MAN 1.

The third stage is evaluating video-based asynchronous learning through elearning.man1jember.sch.id includes three activities: assignments, Mid-Semester Exams (UTS), and Final Semester Exams (UAS). The three forms of evaluation are made in one place to make it easier for students to access the Moodle-based platform elearning.man1jember.sch.id. As an educational process that must be carried out by MAN 1, the planning to the evaluation of learning stages have a vital position that determines the success of achieving learning targets as shown below:

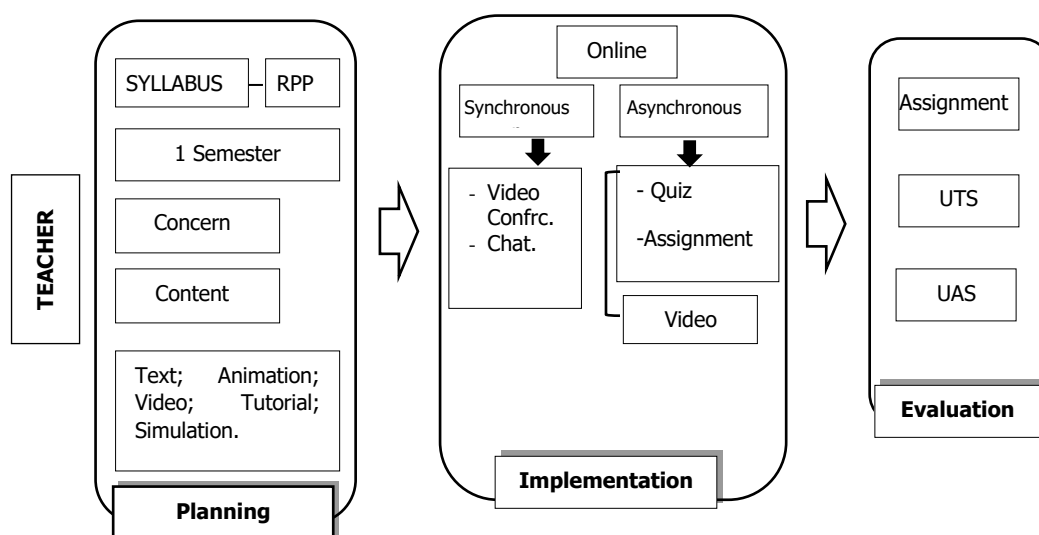


Figure 1: Video-based Asynchronous Online Learning Design at MAN 1

In the end, the video-based asynchronous learning at MAN 1 came down to combining the knowledge and skills of the students themselves. Researchers analyzed that students' new knowledge and skills came from the accuracy of the designs designed by educators through the planning,

implementation, and evaluation of the educational process carried out. Through the right learning design, a quality education system will be created (Munandar, 2020).

In this way, it expects if the design of learning online video-based at MAN 1 based on the synergy between the school's internal curriculum as stated in the education policy determined by the head of the institution; the use of learning technology which is manifest through the page elearning.man1jember.sch.id; as well as the pedagogical aspects of the teachers which reflect in the design of planning, implementation, and evaluation of learning.

The Implementation of Video-based Asynchronous Online Learning at MAN 1 Jember

The emergence of video-based asynchronous online learning at MAN 1 cannot be separated from the characteristics and potential of this educational institution, learning technologies that shape the environment, and internal curriculum management at this institution. In this context, the features of the learning technology used by MAN 1 can apply online learning designs through web design elearning.man1jember.sch.id. Martin (2021) reveals in his research that the technology's sophistication cannot be separated from the role of environmental support that can maximize it. The learning environment directly impacts academic activities (Haleva et al., 2021) and motivation of students (Raufelder & Kulakow, 2021). Thus, it can be said that the implementation of online learning applied at MAN 1 is inseparable from the learning environment and internal curriculum designs, which become the basis for supporting it.

This condition was felt by MAN 1, which led to the emergence of video-based learning as learning amid the COVID-19 pandemic. Therefore, the implementation of education is carried out optimally in the form of two-way learning that is dynamic and responsive. Nevertheless, the performance of video-based asynchronous online learning is arranged proportionally while still being oriented to the benefits and achievement of learning targets. Researchers analyzed several activities in this video-based asynchronous learning that applies two-way knowledge and is dynamic-responsive.

The *first* is learning through "classroom" and "e-learning" on the elearning.man1jember.sch.id page. In this section, the teachers upload the learning content materials using PPT media in ppsx format. Each fabric consists of 1 (one) introductory video, while the PPT material is divided into several sub-chapters according to the syllabus and lesson plans that the teacher has designed. The material presented has a prerequisite system, meaning that students will not access other material before completing the material in the previous stage. In this asynchronous learning, there is also a summary of the material presented through infographics and quizzes, which usually consist of 5 (five) questions in the form of multiple-choice tests to measure students' level of understanding. Uniquely, after the materials and tests are given, the teacher provides feedback on the completeness of the material through the "classroom" column on elearning.man1jember.sch.id page. Class dynamics are created when the teacher opens a discussion forum and requires each student to respond to the material that the teacher has explained. Although, in this asynchronous learning, students are given lenience to submit their answers up to two days after the learning schedule. In general, the technical knowledge that is summarized in "e-learning" and "learning room" is the management of online education in the form of a Learning Management System (LMS). MAN 1 utilizes LMS as a learning space for students through open-source electronic computing devices, as shown by Asamoah's (2021) research. The results of other research studies reveal that the process and evaluation of learning through LMS is the most important factor supporting the achievement of student learning targets. (Fahmi & Cipta, 2020; Oguguo et al., 2021).

The second is learning through YouTube channel media. Learning activities are carried out using teachers uploading teaching materials in line with the flagship programs of MAN 1, including religious programs, academic programs, skills programs, regular programs, and the *tahfidz* program. The diversity of the program affects the video content created by subject teachers at MAN 1. The researchers assume that the video-based asynchronous learning process through YouTube media has

greater learning flexibility than asynchronous learning activities through school e-learning. In the aspect of learning evaluation, students' level of understanding is measured through tests whose duration of processing is more extended than tests through school e-learning. The teachers provide feedback in assignments whose collection time ranges from 3 (three) to 7 (seven) days—the underlying reasons for considering the time duration, proposed by one of the teachers at MAN 1.

Media *YouTube* also uses the maximum function in the learning process of a pandemic era COVID-19 today. However, I allow work on assignments by uploading videos on YouTube for one week. We do not open discussion rooms and ask questions like the forums that usually exist in Moodle. We only use YouTube to upload videos that our students will respond to in *assignments* sent to the school's e-learning page.

The third is learning through links containing handouts or learning modules from each subject teacher. In some practical subjects, there are also material tutorials in the form of links linked via Google Drive, which can then be communicated via email to the subject teacher. In this context, the active role of students has a significant contribution in supporting the achievement of learning targets.

Based on the three academic activities conducted by MAN 1 through video-based asynchronous learning, the researchers can confirm that the learning process carried out by MAN 1 consists of five main contents, including providing learning materials, giving and collecting assignments, giving feedback, consulting, as well as evaluating the learning. Researchers analyzed the learning stages of MAN 1 that the students undergo, leading to the creation of a student-centered learning process with three synergistic steps.

The first is the preparation of individual students. The primary modality of an educational process lies in individual students' readiness to participate in each learning activity. Video-based asynchronous learning organized by MAN 1 gradually prepares these modalities well. Even though the video-based asynchronous learning process, students independently check information about the learning topics to be studied through the asynchronous platform before engaging in active learning with other students. At this stage, students listen to the learning video or PPT, take notes on meaningful material delivered through the video, or look at the quiz at the end of the material. Thus, it is reasonable that Brame concluded in his research that learning media in the form of videos could reduce students' cognitive load and increase their involvement during the learning process (Brame, 2016). Through this research, the researchers found that not all MAN 1 student have a visual learning style.

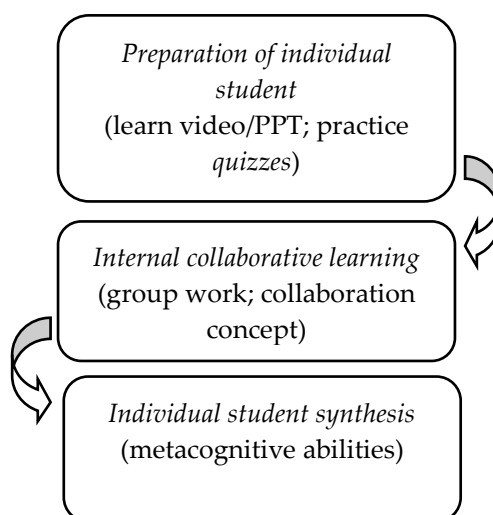
I cannot understand the material that is only delivered through video media. Moreover, in physics subjects, it is not enough to explain the material in the form of images and sounds in the learning videos presented by our teachers.

Therefore, MAN 1 has also facilitated a *Learning Management System* (LMS) in its institution by providing learning media in documents (PPT or Word) on several learning materials that teachers can upload. In addition, the provision of Q & A (*Question and Answer*) facilities are also a factor supporting the smoothness of the video-based asynchronous learning process at MAN 1. The teachers stimulate their students with several questions before the material is delivered to create active learning conditions. The approach to student-centered learning becomes the central point that every teacher wants to focus on in the teaching-learning process. The preparation of individual students in video-based asynchronous learning also comes from the tasks given to students during the learning process.

The second is internal collaborative learning. In this stage, an online internal collective experience takes place. The learning situation amid the COVID-19 pandemic does not allow direct face-to-face interaction between students. Therefore, through video-based asynchronous learning in MAN 1, students train themselves to work in small groups. It is hoped that students can interact, share learning information, and collaborate in completing group tasks given during the learning

process. Research shows that the achievement of students' learning targets can be improved by forming heterogeneous study groups based on the demographic factors of students, as experienced by MAN 1 students. However, it is undeniable that the asynchronous learning process also provides an option to let students choose teammates based on their availability in the class. If internal *collaborative learning* is carried out in a small group format, then active learning can be pursued through discussions and chat replies during the asynchronous process. Another option is collaborative concept mapping (Morita et al., 2021; Olesk et al., 2021). This means that the study of small groups formed by students is discussed with other groups in one class through chat replies, as the researchers observed during the asynchronous learning process at MAN 1.

The third is individual student synthesis. In this third stage, students have a new understanding of the knowledge they have acquired during the video-based asynchronous learning process. This new understanding appears to imply concepts, materials, assignments, and other evaluations given by teachers. At this individual synthesis stage, the implementation of asynchronous learning reaches its peak targets. With the new knowledge that has been built, the students' metacognitive abilities. (Mowling & Sims, 2021; Stanton et al., 2021) and creative thinking abilities (Kusuma et al., 2021) will be honed and improved. Ideally, through video-based asynchronous learning that has been carried out by MAN 1, each student individually gets an alternative to know their abilities in assessing assignments via email, quizzes, or LMS.



Picture 2. The Steps of *Student-centered Learning* as the implication of asynchronous video-based learning at MAN 1

Thus, the MAN 1 education process, which is held through the application of video-based asynchronous learning, becomes a strategy that can be used as a pilot project for other educational institutions to deal with the problematic situation of the COVID-19 pandemic that hit the education sector. Preparation of individual students, Internal collaborative learning, and Individual student synthesis became the estuary for the video-based asynchronous learning process at MAN 1.

4. CONCLUSION

The dynamics of changing learning patterns during the COVID-19 pandemic is not an excuse to reduce the meaning of learning for students. MAN 1 Jember has implemented it in the video-based asynchronous learning design, consisting of the planning, implementation, and evaluation stages. Planning design allows teachers to prepare teaching tools in the form of text, animations, videos, tutorials, and simulations; the implementation is done through quizzes, assignments, links, and

especially learning videos; while the evaluation is done through projects, Mid-Semester Exams (UTS), and Final Semester Exams (UAS).

The implementation of video-based asynchronous learning is done through the "classroom" and "e-learning" menus on the elearning.man1jember.sch.id page. Several variants of learning media such as YouTube channels and learning via links containing handouts or learning modules also support the implementation of video-based asynchronous learning in MAN 1. The performance of asynchronous learning leads to creating a student-centered learning process that consists of three stages that synergize with each other, namely: Preparation of individual students, Internal collaborative learning, and Individual student synthesis.

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