

## Effectiveness of Using the Klipaa.id Application for Delivering Lectures to Environmental Education Students in the Era of Artificial Intelligence

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### Abstract

The aim of this research is to analyze the effectiveness of online and offline learning through the Klipaa.id application, as an online learning medium for Environmental Education class students at STKIP Kusuma Negara Jakarta in the Artificial Intelligent (AI) era. The method in this research is descriptive research with a qualitative approach and data collection techniques are carried out through interviews. Data validity using source triangulation. Data analysis techniques use the Miles and Huberman model, namely data collection, data reduction, data presentation, and drawing conclusions. The research results show that the use of the Klipaa.id application is very effective in terms of three indicators, namely in terms of the intensity of lecture implementation which can be utilized by students and lecturers, in terms of communication it can be seen from the use of features to receive and send lecture material neatly in the agenda feature, and in terms of fulfillment, it can be seen that students feel their information needs are met during online and offline lectures. Klipaa.id is only one media/application, there are many other media/applications that can optimize learning that takes place online and offline (blended learning).

Keywords: Environmental education, Klipaa.id, Online learning.

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## INTRODUCTION

The background of this research is that there was a movement of heart and mind after carrying out the learning process from 2019-2024 with unstable learning conditions from the start of the Covid pandemic until after the Covid-19 pandemic. Where all teachers and students are faced with various kinds of learning strategies to accept and try to apply them even though conditions do not allow them to be carried out continuously face to face. From this background, it becomes urgent that learning continues in whatever conditions the academic world faces. For offline, of course, various kinds of reading texts and worksheets and assignments are very complete, but in online learning, various methods are still needed as learning strategy options, even though before the Covid pandemic there were already those that were applied only in certain conditions. At this time, it is urgently needed considering that optimal efforts for the education and learning process must

continue whatever the situation, conditionally it can still be carried out without obstacles.

Currently we are still in the process of searching for and determining the right online and offline learning strategies (blended learning) to facilitate every lesson carried out every semester. Therefore, the use of Klipaa.id in environmental education classes was implemented at STKIP Kusuma Negara long before the Covid pandemic arrived. In 2017, the use of Klipaa.id was implemented in the environmental education class of STKIP Kusuma Negara Jakarta in the assignment of simple written work as an assignment to analyze literature and conditions in the field every week, then the results of the analysis were shared at each lecture meeting, with the aim of training students from the start as preparation for writing a thesis.

In 2017-2018, the application of Klipaa.id in college assignments was very helpful every semester, where students no longer collected printouts but simply shared links to writing from assignments that had been made.

So that in 1 semester students have created 14 simple written works which are published on the klipaa.id media which can share the results of their experiences and learning with all Klipaa.id users. So, from the results of the application of klipaa.id, research was carried out which resulted in the conclusion that it was very effective in applying it as offline and online learning. From this basis, researchers were moved to create designs and concepts for online and offline learning together with digital learning programming experts, which then became increasingly serious about specializing klipaa.id for unlimited learning wherever you are. Post-Covid, the Klipaa.id function was designed and continues to be updated according to the needs of the community, especially campus residents, to re-implement the Klipaa.id media in every lesson on an ongoing basis in each semester and then examine its effectiveness in each lecture semester.

### **Digital Learning Via Klipaa.id**

In previous and recently completed research, the Klipaa.id media/application is one of the appropriate applications to be used as a blended learning alternative that can accommodate offline and online learning conditions.

The aim of this research is to determine the effectiveness of using the Klipaa.id application for offline and online learning media. The background is the change in education and learning step by step from the start of the Covid-19 pandemic, and until now the increasingly complex changes are felt by the importance of blended learning media/applications in adapting the learning process to developments in science and technology which increasingly require humans to be able to adapt quickly. One of them is changes and developments in the way students learn which must be prepared for online learning. Even though there are almost no cases of the Covid-19 pandemic anymore, wisely the concept of online learning must be prepared as an alternative learning, so that under any conditions, learning will never be interrupted for generations. Apart from being motivated by the Covid-19 incident that hit the world, what is also developing now is the development of science and technology with the presence of artificial intelligence which has entered various electronic media and various applications. This is where this article emerged and tries to find learning media that can be done easily by learners, especially students as agents of world change.

Changes in the world can occur in various kinds of events, one of which is the Covid-19 pandemic which has hit people in all countries of the world. Suddenly all sectors of life contracted heavily. no country's government can stop a pandemic suddenly (Usman; 2022 Sep; 2022 Wicaksono; 2022). The pandemic seems to be a signal to the world community, that life must always be ready for unexpected changes. Responses to change should ideally be prepared from the world of education (Asbari; 2023 Santoso G; 2023). Changes that require education not only provide academic achievements, but ethical achievements must be the basis of any achievements in the education sector (Annur Y F; 2021 Yuriska R; 2021 Arditasari S T; 2021). During the two years during the pandemic era, the effectiveness of learning decreased significantly, experiencing setbacks, so that after Covid, various efforts were made to improve the quality of education so that it could be competitive. From 2019 to 2020 there was no choice other than assignments and learning efforts using the digital media they had, so that two class generations lost their existence (Marbun; 2021).

#### *Online Learning Demands*

2021 until now 2024 is starting to emerge with full vigilance and worry, so that online learning continues to be the main alternative even though the results are not yet optimal. Over time, people around the world have started to get used to online learning, so breakthroughs in various types of online media have been made to facilitate learning so that it is closer to the quality of offline learning. Learning in environmental education classes is one of the classes affected, where the learning and teaching process is quite difficult with online media, because some learning has to be done practically, so it feels very difficult to find online media that can facilitate practical learning activities (Azizah N; 2022).

The zoom meeting and Google meet applications that are widely used by students in the world cannot be fully relied on because they cannot contain practical assignments in the form of simple written articles accompanied by pictures (Ilmi; 2024 Junaidi; 2024 A Yusnanto; 2024 Kase E B; 2024 Safar M; 2024 Sari M N; 2024). On the other hand, the impact of the pandemic has made many lecturers who were previously unaware of online learning experience acceleration in the online mastery process, lecturers who are no longer young are required to master various applications that support online learning (Harianto B; 2024 Karjadi M; 2024). They are becoming increasingly familiar with the online world because the situation demands it. The current demand for online learning is to develop an approach that can increase the effectiveness of online learning.

#### **Online Specialized Learning**

This approach must be able to overcome the limitations of interaction between students and lecturers online (Wibawa; 2023 Mulyani; 2023 & Darmawan; 2023). In face-to-face learning, lecturers can see in detail expressions, readiness for learning, create a fun atmosphere, make quizzes with spontaneous games, and can simultaneously pay attention to students' responses and enthusiasm with one glance (Mazda; 2021 Fikria; 2021) . Face-to-face can maintain focus on learning, while online learning requires a special approach and management during lectures, so that students maintain enthusiastic and focused qualities. Without the right approach and methods, online learning can only be carried out in vain. The key word is

approach, online lectures with a face-to-face approach can be done by optimizing digital media, namely an approach that optimizes online characteristics that can provide unlimited comments, can encourage all participants to be active, even online at the same time students can ask questions in the chat column, can comments, and at the same time you can search for endless references.

This research still has many limitations, including the system devices owned by students are different, so they have different responsiveness to using klipaa.id, namely where the response from the Play store system is more easily accessed by students, while users who use the Appstore system must log in via the website, which requires entering several stages first before logging in.

## **RESEARCH METHOD**

This research uses a qualitative research approach. Qualitative research is research based on post-positivism philosophy which is used to examine the condition of natural objects where the researcher is the key instrument, and the research results emphasize meaning rather than generalizations (Yusriani; 2022). Qualitative research seeks to find what is behind actions, not an external phenomenon but an internal phenomenon and emphasizes the meaning and process rather than the results of an activity. The research method used is a qualitative descriptive method. The population of this research is students of STKIP Kusuma Negara Jakarta Class of 2020, 2021 and 2022 which are categorized as students who are actively attending college.

The data collection technique used is in the form of direct in-depth interviews. After conducting interviews, various data and information are obtained, then the researcher carries out data analysis. Data analysis is a process of searching and compiling it systematically data obtained from interviews, field notes and documentation by organizing data into categories, describing units, synthesizing, arranging into patterns, choosing what is important and what will be studied and making conclusions so that it is easily understood by oneself and others other. Research data analysis was carried out using the Miles and Huberman analysis model (Purwanto; 2023). In general, there are three paths to qualitative data analysis, namely: data reduction, data presentation, and drawing conclusions (Pahleviannur; 2022 Saputra; 2022 Mardianto; 2022 Hafrida; 2022 Bano; 2022 Sinthania; 2022).

Data reduction is the process of selecting, focusing on simplifying, abstracting and transforming rough data that emerges from notes in the field. Data presentation is an activity when a collection of information is compiled, thereby providing the possibility of drawing conclusions and taking action. Drawing conclusions is where the researcher draws conclusions from measuring the results of comparing the effectiveness of the application of previous media/applications, with predetermined indicators including; the intensity of lecture implementation (on time), the results of assignments achieved through the available features (right on target), and the fulfillment of the material delivered according to plan (appropriate), as indicators of effectiveness are said to be successful.

## **RESULTS AND DISCUSSION**

From the results of research conducted on environmental education class students, the application of the klipaa.id application is very effective, it can be seen from three indicators, namely in terms of the intensity of lecture implementation which can be utilized by students and lecturers, in terms of communication it can be seen from the use of features. to receive and send lecture materials neatly in the agenda feature, and in terms of material fulfillment, it can be seen that students feel that their information needs are met from materials and worksheets and community features for class discussions during online and offline lectures.

This research provides new findings where previously the klipaa.id application was used before the Covid-19 pandemic, students did not use klipaa.com intensively enough as a means of communication and lecture discussions, because assignments were fulfilled completely face to face. Klipaa.id is only used for collecting and making assignments. In the COVID-19 study until early 2024, the use of the klipaa.id application, as a whole, provided features, was fully utilized to fulfill the lecture and assignment discussion process, which is still dominated by online learning.

### Writing articles via Klipaa.id

Research on STKIP Kusuma Negara Jakarta students focused on an ongoing basis with the same location, class and concept, and found different results from previous research, namely where only assignments for lectures were used, but because they were used to online learning, klipaa .id is used to create other simple articles outside of lectures. And this suggests that students are getting used to writing articles about what they want. Apart from that, assignments are monitored and documented intensely, on time and neatly according to the general writing structure. The community feature, which provides posts for mutual discussion before the article is published, has its own impression because discussions in the community feature cannot be seen other than those confirmed by the lecturer. So, students are free to discuss as in a face-to-face classroom.

Each meeting is assigned to create an article from the results of the discussion, so that the total assignment of 14 meetings becomes a permanent task according to the number of lecture meetings from the total lectures of 16 meetings with UTS and UAS. The assignments that students have made are very easy to check, just look at their account first, then check the detailed assignments. The display of checking tasks via account can be seen as follows:

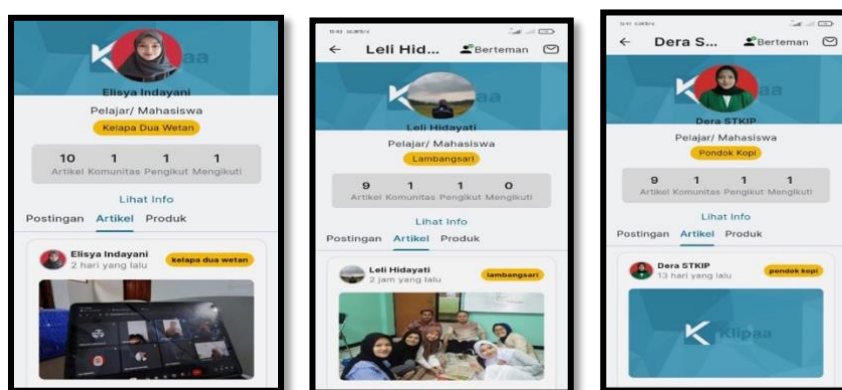


Figure 1. Display of Checking Tasks Via Account

Lecturers are faced with the challenge of utilizing online advantages to make students active, competitive, expressive through writing, and can be implemented simultaneously. Learning must still build positive energy even if it is not face to face (Setyani; 2023 Putri; 2023 Pramesti; 2023 Suryani; 2023 Ningrum; 2023). With the right method, students will not experience boredom.

Serious efforts are needed to get out of the problem of limited expression and action in online learning. The key word is creating an online learning design that further stimulates learner enthusiasm. The old method of simply delivering material via video conference is enough to make students bored, especially since interaction in the online world is very limited. Gestures, eye contact, quick responses, spontaneity in paying attention to one student at a time are relatively difficult to implement (Damayanti; 2022 Kuswanda; 2022).

### **Benefits of Online Learning**

Even though there are many limitations, online also has many benefits that can be explored further thereby increasing learning effectiveness. The following are the benefits of the online learning process: (Marlin; 2023 Tantrisna; 2023 Mardikawati; 2023 Anggraini; 2023 Susilawati; 2023).

*Flexible time and place:* The lecture schedule is very flexible and can be held in the morning, afternoon, afternoon or evening. Lecturers can determine the schedule as long as it does not conflict with the lecturer's schedule other. The lecture schedule that has been prepared can be easily adjusted at any time if the lecturer is unable to attend the specified schedule. Likewise, it is very flexible regarding location because lecturers and students do not need to come to the same place. Learning can be carried out in the office, at home and it is possible that students who are in their vehicles can also take online lectures. (Ambarsari; 2021).

*Preparation could be more:* Every lecturer and student should ideally be able to prepare more for learning. Learning time can be more focused because it no longer requires time to mobilize from home to campus. Apart from that, there are relatively many relevant materials to be delivered online on various sites on the internet. (Ajiatmojo; 2021).

*Save costs:* Costs, accommodation, room maintenance, more productive time because you can multitask. (Amri; 2022 Najib; 2022 Prihamayu; 2022 Risky; 2022). One of the efforts that lecturers can make in order to increase the effectiveness of learning is to give assignments to students to write. Writing assignments are one way to increase the effectiveness of learning. The hope is that through writing students can simultaneously train several things as follows: (Kusmaladewi; 2024 Halim; 2024 Asdar; 2024).

*Assigning writing automatically assigns reading:* Because writing can only be done after reading, especially if a minimum of 3 reading sources are required in each writing. Both online reading sources and book reading sources. Without assignments, students will not necessarily read references, this condition is dangerous for the development of the student's thinking. With assignments, lecturers can ask for written references in the form of books or relevant international journals. (Burohman; 2020 Nurullaningsih; 2020 Milawasri; 2020).

*Improving understanding of the material:* Understanding the substance, scope, depth of the material and writing becomes one way to enter knowledge into the mind, by writing knowledge will be more deeply internalized in each student.

Students who study the environment will try to understand the learning theme before writing it down. The more references you have, the better you understand, and the more you write, the more it sticks in your mind. Knowledge about the environment, for example, is not automatically complete in the mind. Reading is a dialogic process between what we know and what we read. Likewise with writing, for some people writing also stimulates the brain to understand further the subject matter or course (input the theory of the benefits of writing for the internalization of knowledge). (Satria; 2021).

*Expanding horizons of thought:* Writing often provides a broader horizon of thought. Because before writing students have to read learning sources, interact with sources of knowledge and then formulate them in their minds, before writing them into papers. (insert the theory of the benefits of writing and reading to broaden your horizons). (Istajib; 2024 Nurhaidah; 2024 Hakam; 2024 Mujiadi; 2024).

*Practicing systemic thinking:* Knowledge stored in the mind is often abstract, less structured. Writing it down is a more systemic way of thinking. Especially in the context of the millennial generation who often write spots of ideas and dictions for status updates on social media. Writing is a way to practice thinking more comprehensively. Students will be trained to understand written content more comprehensively from the introduction to the conclusion. They will also be trained to create a clear frame of mind, present facts and arguments more clearly. In verbal language, people easily jump from one theme to another, the rules of structure in writing are not very strong, on the contrary, writing must be neat. Systemic thinking must be trained, developed and continuously honed, as one of the main characteristics of academics and educated people is the ability to write (Wardhany; 2024 Muhid; 2024).

*Practice communicating ideas:* Writing is a way of conveying ideas that is more difficult than verbal methods. When writing, students will be trained to express many ideas in their minds into sentences. The writing process is a process of learning to communicate ideas which will be very useful for students in their future lives. (Hikmawati; 2020 Sahidu; 2020 Kosim; 2020).

*Training Creativity:* One of the important skills and creativity in this millennial era is training creatively in choosing writing titles, the theme of the writing has been determined by the lecturer, while the title of one student and another student must be different. Choosing a title in the academic world is more difficult than using titles on social media. The diction must be interesting, but not just a title, and have appropriate rules, according to correct spelling. (Parinduri; 2023).

### **Practical Learning Through Online Media Klipaa.id**

Environmental education on the theme of making liquid organic fertilizer as an effort to build sustainable development, using the Klipaa.id application is very helpful in a comprehensive manner. From the production stage to marketing through Klipaa.id media, it can be done freely by utilizing various features, from chat features, stories, images which can be accessed by all people in Indonesia, especially accessed by all village administrators throughout Indonesia, who have using the Klipaa.id application as a medium of information between citizens.

For example, students carry out practice in lectures by, for example, making fermented organic fertilizer. You can upload pictures and production stages by

marking the production date; to avoid image plagiarism, examples can be seen in the following pictures:



Figure 2. Production Date to Avoid Image Plagiarism

This is an illustration of one of the environmental education themes carried out practically in Klipaa.id learning. Using the Klipaa.id application does not reduce motivation in the process. In order for learning about environmental concepts based on "sustainable development" online to be achieved effectively, it is necessary to understand and implement virtual environmental management (Hayati; 2023 S Jariah; 2023 A Imam; 2023 Yoluut; Kusmawan; 2023). Because with the right use of online learning applications, proper management will also be produced (Monica; 2020 Fitriawati; 2020).

The accuracy of online learning and offline learning will provide conditions that will not only affect one country but will have a big influence on the world, especially if it is implemented by the entire world community, then they will be able to inherit better conditions than before, plus in 2024 now artificial intelligence has penetrated various information media and technology (Sari; 2023 Avianty; 2023). Studying the environment, for example by practicing organic fermentation for fertilizer, is a new discovery, already known to many people, which is new in the context of environmental education, online learning is made easier through Klipaa.id as a start to aligning learning in the era of artificial intelligence which will soon mushroom throughout the world of science and technology.

The practice of fermenting organic fertilizer in environmental education through Klipaa.id can provide information about environmental education through online learning classrooms, that the role of environmental education is shifted as a practical solution for managing organic waste but also becomes interesting and promising information. The impact it will have on students and the world community when the results are published on the media klipaa.id, because it will be known to all readers in the online world and can be one way for entrepreneurial plans. (Soputan; 2021 Mamuaja; 2021 Krisnanda; 2021).

Environmental education in the community context in organic waste management through fermentation is new, so it still needs to be developed. The use of Klipaa.id media is designed to be a solution which is widespread in society through educational modules and content and online training.

The use of Klipaa.id in an effort to help facilitate learning about environmental education online, can increase productivity in society, and most importantly helps environmental education students to inform the public about the development of their learning outcomes in online media, one of which is about learning to produce organic fermented fertilizer online to the public (Marlina; 2023 Khan; 2023 Cahyadi; 2023 Subandoyo; 2023 Barkah; 2023 Megawati; 2023). By using the online media Klipaa.id, environmental education students can also publish their

production results as a start to entrepreneurship (Saefullah; 2022 Hidayatullah; 2022 Noviar; 2022 Fadli; 2022 Herawati; Nurhayati; 2022). As an example of environmental education results published on Klipaa.id, can be seen as follows:

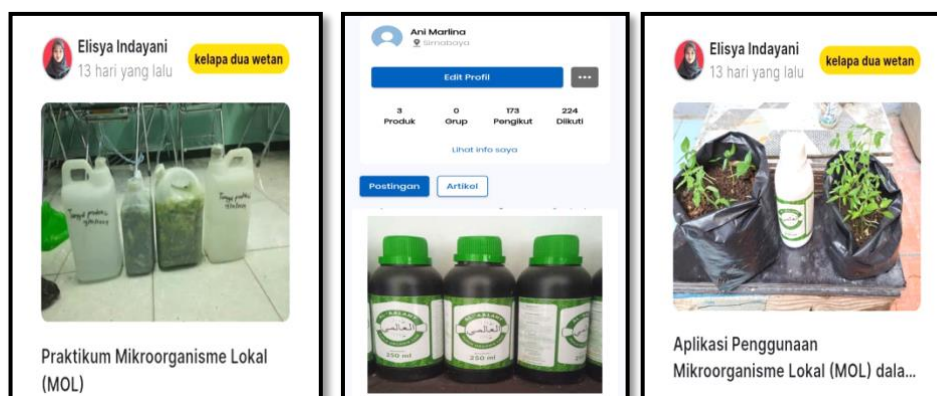


Figure 3. Practice Results Published via Klipaa.id

Environmental education by applying appropriate offline and online learning concepts can foster the empowerment of interests and talents of students in particular and society in general by studying in depth through Klipaa.id, where learning can be done independently and guided. Guided not only by course lecturers but can be monitored by all levels of society, in this case the village administrators, as the responsibility of every resident who is active at Klipaa.id. Klipaa.id is not only an online media for chatting and updating written statuses, but also tries to pay attention to each other, providing education to stay within the limits of action in using social media in the online world until it becomes a habit in the online world.

Research shows that learning carried out online using the klipaa.id application at STKIP Kusuma Negara Jakarta can be concluded to be effective. The steps and explanations for using the klipaa.id application that are applied during learning are as follows:

Every student must have an account, a klipaa.id account is a door for students to connect directly with the village where they live, and can take advantage of various klipaa.id features that can be used in the online learning process. As an online media, klipaa.id is equipped with citizen/student account features who can use it for college and school assignments. Klipaa.id users are residents who are automatically connected to villages and schools and campuses by the system. Thus, Klipaa's features are designed to serve the collaborative needs of village residents and campus residents. The Klipaa.id application can be downloaded in Play store with the following display:



Figure 4. Display Klipaa.id in play store

Klipaa.id develops web and Google Play based technology to manage accounts. The use of Web technology is one of the strengths that makes it easy for Klipaa to be accessed anywhere, apart from that, Klipaa can also monitor the activities of its users online. Klipaa utilizes the benefits of information technology to connect digital citizen accounts. After education residents and village residents are connected on klipaa.id, klipaa designs collaborations with the potential of residents to face various community problems in everyday life.



Figure 5. Environmental Education Class Community

Students who enter Klipaa can access the assignment articles they have written, as well as other articles grouped by themes and categories. The top article comes from the Klipaa editor, then articles from the village admin, superior product articles, then articles from the education category which specifically contain various articles related to education. At the bottom is a collection of all articles sorted according to the timeline, from the newest.

Another important feature is hashtag shortcuts, especially for educational hashtags. In the initial appearance of klipaa, each article title is accompanied by a photo, the name of the account that posted the article and there is a shortcut to the village website where the author of the article is located. By clicking on the author's name, you will immediately go to the author's social media, where we can comment and follow his account, then you can also click on the website link for the village where the article author lives. The initial appearance of klipaa.id as explained is as follows: Explanation of the picture, it appears that the editorial article was written by Edy Mantap with the titles "Quality Education" and "Natural Resources", and "Global Warming", the person concerned lives in Kelapa Dua Wetan village, as stated above the article title. When you click on the name Edy Mantap, the relevant data will immediately appear on the social media feature, as shown in the following image:



Figure 6. example of a user account

The image above is very clear, who the user is, which village he comes from and his status position on social media, which we can comment on to connect with each other, and we can follow to know each other's latest status. Especially for accounts that live in the same village, you don't need to follow them and you're automatically friends.

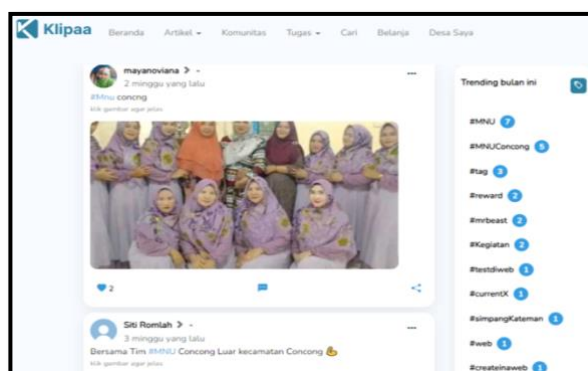


Figure 7. Hashtags for each article created by students

At klipaa.id, apart from the status update and create story features, there is also a hashtag facility for writing articles that can be used in learning media. The use of hashtags is very practical as an assignment identity. By determining hashtags, all assignments can be managed quickly, students don't need to write down classes, courses, colleges, etc. Simply by making a hashtag (#) as the assignment ID, it is very easy for lecturers and students. In today's developments, the learning media that are popularly used are not even specifically designed to be learning media.

Popular learning media that are very often used include Zoom, Google Meet, Google Form and even chat applications such as WA and Telegram. All of these applications are not designed as learning media (Azzahra; 2021). In contrast to applications such as Moodle, Edmodo which are designed for online classes (Shavab; 2020). Zoom and Google can be used for video conference processes with students, Klipaa supports learning through assignments after video conferencing. So Klipaa is providing alternative assignments so that students can learn

independently but with supervised guidance, through personal learning methods, heutagogy, and contextual learning at the same time.

A simple measuring tool for a lecturer's mindset about online is the way they view online. If lecturers still think that online learning is an obstacle, problem, obstacle then that is a sign that the lecturer's mindset is still a face-to-face mindset. But if you are greeted online with feelings of joy, enthusiasm and challenge, it will be very exciting.

The general spontaneous response of the public is to complain, some common complaints that lecturers usually encounter include the following:

"Online learning is not effective, because I can't convey the material more freely," another lecturer complained, "Oh, I'm dizzy from being online all the time yesterday." Likewise, students are very lazy about studying online. Of course lecturers need to develop positive thoughts and a mindset that is more online-friendly; 'online is very challenging because you can try various assignments that are not possible during face-to-face learning' or other positive expressions 'with online I can design courses that are more fun, more participatory, and make children more independent' at STIKIP Kusuma Negara, especially in the mathematics study program in environmental education classes, online learning using klipaa.id was carried out long before the Covid-19 pandemic. This way, during a pandemic, there will be no difficulties at all. All processes are running well, even the Semester Learning Plan (RPS), Diklat/teaching materials and so on have been prepared for offline and online. The learning process by students, in general, is as follows:

*Create an account on klipaa;* It should be noted that accounts on Klipaa must be written with their real names, this is to make it easier to interact with lecturers, it is not recommended to use aliases. Bambang's name is written in klipaa as ibenk, minarmi becomes ami. But it must be written according to the actual name as well as the email address which is the correct email address. Likewise, the profile photo needs to be filled with a close-up profile photo, not a photo of them together.

*Fill in residence data, Try writing a status that the learning is ready to be implemented, Try to follow at least 4 friends from the same class:* Follow the name of a friend's student, then click on the friend's account according to the name and then follow, Follow by clicking on the assignment hashtag to find out the author's account, Follow must be implemented so that fellow student accounts are connected to each other, including when updating the status of each other's assignments, they can know each other, *Study the assignment grid:* Immediately ask the lecturer if there are writing provisions that you don't understand.

Students must carefully study the assignment, especially the title and hashtags. Because if you write the hashtag incorrectly then you may not be able to collect your assignment. *Enriching reading to produce good quality writing, enrichment is very important for student assignments, especially for assignments that use personal learning methods, write a title:* The title must be interesting, different from one student to another. Writing the title is the simplest part but requires creativity from each student. In this case, students will be trained to choose titles that are creative and interesting but still contain correct rules, *create article content:* You can write article content directly on klipaa.id or write it first in regular word and then transfer it into the klipaa article.

Articles can be added with photos, with a maximum size of 300 kb. If the photo in question is not available, you can use a profile photo so that you can increase the

introduction of students and lecturers online, *create hashtags*: creating hashtags must be exactly as stated in the provisions, the hashtag itself cannot be different. *Send a report to the lecturer (just share the article link)*, Respond to comments from lecturers and from other students in the article comments column.

Easy the learning process with klipaa.id: One account for life, facility to save passwords and reset passwords, the features are made simple, there is no need for a complicated appearance like a blog, and easy to share.

This research still has many limitations, including the system devices owned by students are different, so they have different responsiveness to using klipaa.id, namely where the response from the Playstore system is more easily accessed by students, while users who use the Appstore system must log in via the website, which requires entering several stages first before logging in. So the researcher as a supporting lecturer, who in this research is one of the developers of the klipaa.id application, is being evaluated to continue improving the system in adjusting programs so that they are easier to use by students in particular and the general public.

As an implication of this research, it is important for all students and lecturers to collaborate on various applications as learning media, one of which is the klipaa.id application which can document the various agendas of each meeting neatly from each semester, so that they can be easily identified and checked during each class discussion. online on the application as material for evaluating subsequent learning.

For lecturers or administrators, it is a consideration to make klipaa.id a collaboration in online learning, because klipaa.id is very easy to use, no need to log in a lot, increases students' digital literacy in order to write articles, students are more connected to the village as part of the court community, digital documentation is recorded neatly, and can be used as a portfolio and research about online learning.

## **CONCLUSION**

Based on research, it can be concluded that it is very effective as an alternative to online learning in environmental education classes. Online learning has received very good responses from all environmental education class students, because learning is more flexible when using it as a solution for completing lecture assignments, practicing writing scientific papers, making entrepreneurial plans, and being able to print personal work history in every lecture meeting, which may be useful in the future with His permission. Online learning makes students more independent and guided and encourages students to be more active in lectures in order to prepare themselves for the widespread era of artificial intelligence in the world of science and technology. The klipaa.id application is very effective in terms of three indicators, namely in terms of the intensity of lecture implementation which can be utilized by students and lecturers, in terms of communication it can be seen from the use of features to receive and send lecture material neatly in the agenda feature, and in terms of fulfillment it can be seen of students feel that their information needs are met during online and offline lectures. It's just that there are several things that need to be paid attention to, one of which is the availability of internet data packages which students pay extra for when learning online. Online learning through klipaa.id makes learning more effective, because of the many

supporting features when it takes place online. Klipaa.id is prepared for offline and online learning alternatives.

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