

# ICCE

INTERNATIONAL CONFERENCE  
ON CHRISTIAN EDUCATION



## Christian Education in Digital Technology Era: Challenges and Opportunities

June 4<sup>th</sup>, 2022



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INTERNATIONAL CONFERENCE  
ON CHRISTIAN EDUCATION



**Christian Education in  
Digital Technology Era:  
Challenges and  
Opportunities**

June 4<sup>th</sup>, 2022



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## Christian Education in Digital Technology Era: Challenges and Opportunities

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## Welcome from the Rector of Universitas Pelita Harapan



Shalom and gratitude be to our Lord Jesus Christ! It is because of His love and mercy; we can gather together here in this event.

We are now in the end of the pandemic, where more than two years unprecedentedly we were forced to move to virtual education and embrace digital technology. Out of the millions of educators in Indonesia, both in primary, secondary, and higher education, quickly must learn and implement online teaching and learning. Every educator is required to adapt to various digital learning media, suddenly digital technology is not only a tool but the environment where we are living and interacting with one another.

Not only do the schools have to provide the system to support virtual learning, but educators also have to be equipped to design instructions that fit with the virtual setting. This need eventually triggers various parties to adapt, move, and innovate. Educators use a variety of media as a virtual meeting bridge with students. Not satisfied with just meeting virtual, educators also make some innovations by using other features and exploring any applications that will help provide creative materials and teaching materials.

However, despite of all the improvements and innovations in delivering teaching and learning in digital technology setting, there are many obstacles and challenges. The question remains, are students learning effectively? Especially for Christian educators, we need to keep asking the question, whether we have faithfully and effectively carried the mission of Christ-centered education, facilitating holistic transformational education in this digital technology era?

Christian education must consciously be aware of the current educational challenges while embracing the opportunities through the rapid development of digital technology. We should continuously ponder how to be faithful to our calling as Christian educators in this era of disruption. We should strive to be an exemplary institution in presenting Christian education during the fast-changed of digital technology. We believe that every technological progress is the fruit of cultural mandate to advance humans' life, fostering life given by God. On the other hand, Christians are also aware with our fallen nature, that there is a possibility of missing the point in any good effort that we are trying to do. Further as human beings, are we going to develop holistically if education is reduced by totally virtual learning? These are some questions that we need to keep thinking and discussing.

UPH, especially Teachers College, is grateful that we can host the first International Conference of Christian Education, especially inviting best panelist speakers to inspire us. We hope that through the ICCE event, there will be a forum for us, educators and practitioners of Christian education, to discuss the opportunity and challenges of doing our mission in the midst of such rapid technological advances. We also hope that this event will encourage us that amid various challenges that exist, God is faithful in sustaining us thus giving us hope to embrace the opportunities that are wide open to further our service to provide a quality, holistic, and transformational education.

Finally, enjoy the conference, Lord Jesus bless you.

**Dr. (Hon.) Jonathan L. Parapak, M.Eng.Sc.**

## Welcome from the Dean of Faculty of Education, UPH



Today what is happening in the classroom is different from practices before the pandemic. Changes will continue to occur, especially with the advancement of digital technology, which will become increasingly sophisticated. The interaction of education with technology is inevitable. As Christian educators, we embrace digital technology development. We believe students as the Image of God, and the purpose of educating them is to see them flourish with creativity and innovation for the development of human civilization. However, every technological development that brings about good changes may unwittingly change something essential. For example, now we cannot escape from digital technology. It is ubiquitous; from communication, working, shopping, and many more, all are on the digital platform. It has changed the way we interact with one another. To what extent has it changed us? How can Christian education embrace but also be aware of these?

That is the background of the International Conference on Christian Education with the theme, Christian Education in Digital Technology Era: Challenges and Opportunities. Christian educators must continue discussing this topic to carry out our mission faithfully. Continuously we need to learn and relearn to prepare our students well and be ready to embrace their future as disciples of Christ.

UPH Teachers College is very grateful for the cooperation with various parties, ACSI Indonesia and Australia, and Bandung Theological College, which made this first international conference possible. Likewise, we are blessed with the plenary speakers who are experts in their fields and will share their research and insights. We hope that all the presenters and participants will benefit most from this event. The committee has worked very hard to prepare for this event and we hope that by the end of the conference, the conversation will not stop. Let us continue strengthening Christian education in Indonesia through this forum, and we will meet again at the following conferences.

In the end, as our God has led all the preparation for this conference to take place, let His wisdom guide our conversation! All praise and glory be to God alone!  
God bless.

**Oh Yen Nie, S.E., M.Ed.**

## Welcome from the Head of Bandung Theological Seminary



The ever-evolving world is a part of the Cultural Mandate or the Creation Mandate, which is revealed in Genesis 1:28. Therefore, we should respond to the development of digital technology critically and positively for Christian education in various contexts.

We are grateful for the first International Conference on Christian Education (ICCE) today, June 4, 2022, as the result of the collaboration between the Faculty of Education UPH, ACSI Indonesia, ACSI Australia, Indonesian Christian Education Council, and Bandung Theological Seminary (STTB), to study the opportunities and the challenges of Christian education in digital era, by involving the experts from within and outside the country as the speakers.

Thank you, especially for the willingness of Mr. David Smith (from Calvin University, US), Mr. Darren Iselin (from ACSI Australia), and Mr. Agus Susanto (from ACSI Indonesia), as the speakers, and for all the committee from the Faculty of Education UPH who has been working hard to prepare this conference.

Hopefully, all the opportunities and the challenges in Christian education in the digital era that are studied through this conference will equip fellow educators with more comprehensive and sharper insights from the biblical point of view, so that the purpose of Christian education which is to produce Christian leaders who have a good spirituality, high competence, and strong dedication, can be more realized through this conference.

Welcome to this conference. God bless you!

**Sutrisna Harjanto, Ph.D.**

## Welcome from the ACSI Indonesia National Director



Dear ICCE presenters and participants.

The development of digital technology is rapidly changing the order of human life—which is also developing so swiftly as well. There are those who agree and follow the speed of development, accept it for granted, and even get involved in the development. Still, not a few are also indifferent to it, disagree and refuse to use digital technology for all kinds of reasons that are indeed or are made in accordance with their choice of decision. In addition, there are those who try to be neutral ("wise"), by looking at digital technology such as a double-edged sword or fire which can be used either for good or evil purposes. We have already seen practical examples of these two possible uses of digital technology everywhere.

What about us as Christians? Specifically Christian educators? The term of Christian educator, this can be viewed narrowly or broadly. In a narrow sense, some categorize Christian educators as those who work as teachers or lecturers. But we can also see it from a broad sense, that Christian educators are anyone who has the responsibility to educate, direct, and give vision to other people or the surrounding community. And this means that all Christians are actually educators, because Christians are followers of Christ, and Christ has assigned a role to us, Christians, as salt and light of the world. This means that we as Christians must be a flavor for the world and be a statement of God's truth to the world as well.

I represent Christian schools and Christian educators who are members of the ACSI Indonesia organization. I herewith also welcome all the speakers and participants of 2022 International Conference on Christian Education. This conference is organized by Universitas Pelita Harapan in collaboration with several Christian education organizations including ACSI. I hope that this conference can continue in the future and there will be more Christian educational organizations including churches, and synods, to be able to collaborate, like what is stated by ACSI's motto: Stronger Together, for us to be strong together, as one body of Christ. Let's salt the world more and bring light to the world. I hope that through this ICCE more and more people who work as Christian educators will grow and more Christians in general will be more aware of their calling and will realize that we are all educators, tasters, and proclaimers of God's truth, who need to be equipped and strengthened at all times. Especially through the theme of the 2022 ICCE: "Challenges and Opportunities for Christian Education in Digital Technology Era."

Finally, congratulations to UPH for initiating the first ICCE in 2022. Let us be those who wait on the Lord so that we may gain new strength, like an eagle that soars with the power of its wings, we run and do not become listless, we walk and do not grow weary (Isaiah 40:31).

Thank you, God bless us all.

**Agus Susanto, Ph.D.**

## Welcome from the Chairman of the 1<sup>st</sup> ICCE UPH 2022 Committee



Shalom Aleichem, gratitude be to our Lord Jesus Christ, because of His love and favor, we can gather in this conference. It is such an honor for me to welcome you to the 1<sup>st</sup> International Conference on Christian Education (ICCE) UPH 2022, with the main topic, “Christian Education in Digital Technology Era: Challenges and Opportunities.”

The rapid development of science and technology in today’s digital technology era encourages the emergence of various educational innovations based on learning technology, making it easier for educators and students to access multiple educational contents. This is marked by the ease of obtaining access to information and internet connection speeds. The Covid-19 pandemic has increasingly encouraged the emergence of various forms of digital learning media globally. This unavoidable pandemic requires school administrators’, education providers, educators, and students to be able to adapt to changes in learning patterns from face-to-face learning to online learning. An education system that combines digital technology with the learning process will open opportunities and challenges as real implications of the transformation and paradigm shift of education in the digital technology era, including Christian education in it. Therefore, the 1<sup>st</sup> ICCE UPH 2022 aims to 1) Explain the implementation of digital technology in learning and its implications for students' faith formation; 2) Discuss digital technology development in learning and its implications and influence on the way we communicate and relate to others in Christian educational context an excellent, holistic, and transformational; 3) Enrich understanding to Christian educators regarding the calling response to teach in digital technology era by looking at the opportunities and challenges.

For organizing the 1<sup>st</sup> ICCE UPH 2022, allow me, as the chairman of the organizing committee, to express my deep gratitude and appreciation to the Keynoted Speakers, Mr. David I. Smith, Ph.D. (Professor from Calvin University, USA), Mr. Darren Iselin, Ph.D. (Director of Research and Innovation Christians School Australia), and Mr. Agus Susanto, Ph.D. (ACSI Indonesia Director) for each conference material presented. We also express our gratitude and most profound appreciation to the Advisory Boards and the organizing partner, Mr. Dr. (Hon). Jonathan L. Parapak, M.Eng.Sc. (UPH Rector), Mr. Sutrisna Harjanto, S.Si., M.Div., Ph.D. (Chairman of Bandung Theological Seminary), Mr. Agus Susanto, Ph.D. (Director of ACSI Indonesia), Mrs. Sandra Scott (Executive Officer of International Partnerships and Service Christian Schools Australia) and Mr. Marks Spencer (Director of Public Policy Christian Schools Australia). Likewise, we would like to express our gratitude and most profound appreciation to the Supervisory Board, Mrs. Oh Yen Nie, S.E., M.Ed. (Dean of the Faculty of Education, UPH) and Mrs. Sarinah Lo, Ph.D. (Senior lecturer of Bandung Theological Seminary) and to the Steering Committee Mr. Dr. Budi Wibawanta, S.Sos., M.Si. (Vice Dean of the Faculty of Education, UPH) and Prof. Dr. Niko Sudibjo, S.Psi., M.A. (Department Chair of Educational Technology, Faculty of Education, UPH). Expressions of gratitude and highest appreciation are

conveyed to the entire organizing committee team, who have worked tirelessly to prepare for this conference so that it can be organized successfully. We also express our gratitude and appreciation to the presenters who have shared articles and published works in the form of proceedings and the participants who have involved in this conference.

Finally, we hope through the organizing of the 1<sup>st</sup> ICCE UPH 2022, as educators and leaders of Christian educational institutions, we can collaborate to do concrete works in the area where God has entrusted us in responding to the opportunities and challenges in the digital technology. We will appreciate constructive suggestions and criticisms to improve the quality of future conferences. To God be the Glory.

*For we are his workmanship, created in Christ Jesus for good works, which God prepared beforehand, that we should walk in them. - Ephesians 2:10 (ESV)*

**Immanuel Adhitya Wulanata Chrismastianto, S.E., M.Pd.**

# The Ways Technology Fulfilled The Traditional Forms of Education : *A Case Study of Moodle Learning Management System*

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## Abstract

When technology was shifting from mechanical and analogue to digital in the late 1950s, we entered a new era called the Digital Era. This shifting led us to a new world we could not imagine at all. The Digital Revolution has given us a big impact in every realm, including education. The authors' research goal is to describe how technology fulfilled the traditional forms of education through Learning Management Systems (LMS) such as Moodle. By using literature and simulation-based study methods, we found that technology played a central role in education these days. Technology renews our concept that education can be so much fun and effective while it is also serving as a catalyst for transformation and innovation. The existence of technology improves the process of human learning, it is not to abolish the traditional forms of education but to fulfil them. While education always keeps us transforming, technology that is identical to transformation and innovation helps us to adequate skills and capacities needed for 21st-century citizenship. Bringing Information and Communication Technology (ICT) into schools and integrating it with the learning process cultivate education deeper and richer.

**Keywords:** Educational Technology, Ict, Digital Era, Learning Process, Moodle Lms

## 1. Introduction

According to the definition of "digital" adapted from Merriam-Webster Dictionary, the digital era means an era which is characterised by electronic and especially computerised technology. This technology carries out controls, or produces by means of computers, the Internet and storage devices. On the other hand, educational technology is the specialised aspect of a particular activity directed toward education.

Dobrinskaya & Martynenko (as cited in Yarychev & Mentsiev, 2020) stated that the concept of online learning and a digitised education system did not exist yet in the mid-19th century. The way of learning that was very common at that time was the traditional one. Students went to specific institutions and got knowledge from their teachers. Teachers also work as social workers and they not only teach students in specific institutions but they also give them knowledge outside of the schools for their better brainstorming. According to Fenwick & Edwards (2016), the concept of online learning and education arises when

online learning systems are developed and introduced in society, most people do things by using computers through this.

While the pandemic of COVID-19 spread out around the world, almost every educational institution was forced to adapt the technology for their sustainability and become familiar with it whether the education is formal or informal. This force majeure accelerated civilization and unwittingly changed global culture. Homeschooling becomes an absolute choice for students during lockdown regardless of whether it lately becomes some parents' preference or struggle.

No matter how they did as an educator or learner, an accommodated Learning Management System (LMS) will help both of these roles succeed in their process together. While good-free stuff is preferred by most people in the crisis of the economy during a global pandemic, Moodle can be a choice for a specific group of up to 50 learners. The authors' research aim in this paper is to describe how technology fulfilled the traditional forms of education through the case study research using Moodle LMS.

## **2. Literature Review**

According to Fedorova & Skobleva (2020), there are many advantages of online education that students in online classes rarely visit the campus so the area of car parking, and traffic problems are not faced by the students. At this time in the whole world, the online teaching system has been regarded as a "win-win condition" for all the universities that are involved in this educational system. That is why there is no doubt that countless students are enrolled in online classes, so the number of students in online classes is increasing faster than the number of students "on campus" in the last few years.

Yarychev & Mentsiev (2020) states that digital achievement helps educators reduce desk work by replacing textbooks and reports with workstations or tablets with all the academic data they need. Students' homework assignments, except in cases where rare teacher guidance is required, can naturally be limited by software tools. Students are also increasing their clear benefits. Best-in-class digital achievement allows us to work on any task or assignment in a group, exchange views with your teacher and classmates, plan your life journey, and report better results in a shorter period. Fenwick & Edwards (2016) found that students' education is continuing, universities are taking online tests, exams, quizzes, and even admission is open for new students and their interviews will be held online. According to Isaenkov et al. (as cited in Yarychev & Mentsiev, 2020), online learning students and campus going students both are taking advantage of the digitised education process. If countries didn't develop this system and only follow the traditional system of education, then like the current time there is and will be a huge loss because all institutions and organisations are closed. Therefore, we can say that there is a huge impact of digitalization on the pedagogical aspects of traditional education.

Advanced education is essential to stay in touch with the world and understand what's going on. However, given the growing importance of modern education, traditional education is being ignored, which is wrong. If we completely abandon traditional education, our usual way of life will disappear. (Yarychev & Mentsiev, 2020)

Learning Management Systems supports the features required by both tutor and the learner. For tutors, the features are scheduling of courses, and delivery of courses in various modes like video, audio, presentation, textual etc. For the learners, LMS offers

many learning support features such as course enrollment, listening, visualisation, reading the course content and evaluation features like assignments, quizzes, interaction with peers, tutors etc. Generally in LMS the tutor and learner are not synchronised (Anand, Abhinaw, & Eswaran, 2018).

“Opigno, Forma, OpenOLAT, ILIAS, Eliademy, ATutor, and Moodle are few of the most popular LMS software” (Anand & Eswaran, 2018). Chourishi et al. (2012) found that the use of ICT for e-learning through Moodle improves effectiveness in Higher Education. “Moodle is a Course Management System (CMS) - a software package designed to help educators to create quality online courses” (Chourishi et al., 2012). Hussein & Al-Kaddo (2014) states that Moodle is specifically oriented towards the provision of educational material. “Moodle provides a wonderful platform to manage resources and communication tools that are essential in an academic environment. It was created by Martin Dougiamas, a scientist and educator” (Anand, Abhinaw, & Eswaran, 2018).

Moodle provides a variety of interesting features that can be used in managing academic activities, namely:

- a. Resources feature that can be used to provide learning resources for students in the form of text, powerpoints, and videos that can be processed by the teacher themselves or linked to other websites.
- b. Forum and chat features that can be used to communicate interactively between teachers and students.
- c. Quiz, assignments, surveys, glossaries and other features that can be used to support activities in this virtual class.
- d. Turnitin feature that can be used to examine every submitted writing assignment, whether is the result of plagiarism.

### **3. Research Method**

In general, there are characteristics in data collection techniques, namely interactive techniques and non-interactive techniques (Borman, LeCompte, and Goetz, 1986). Using interactive techniques means that in data collection, researchers interact directly with living data sources, namely humans, while non-interactive techniques mean that there is no direct interaction with humans. Both techniques were used in this study. Interactive technique, namely data collection through interaction with human data sources, is carried out by conducting interactive learning class simulation using Moodle and WhatsApp. Non-interactive technique, namely data collection through analysis of academic literature. So, the data collected in this study were obtained in two ways, namely classroom simulation and literature study.

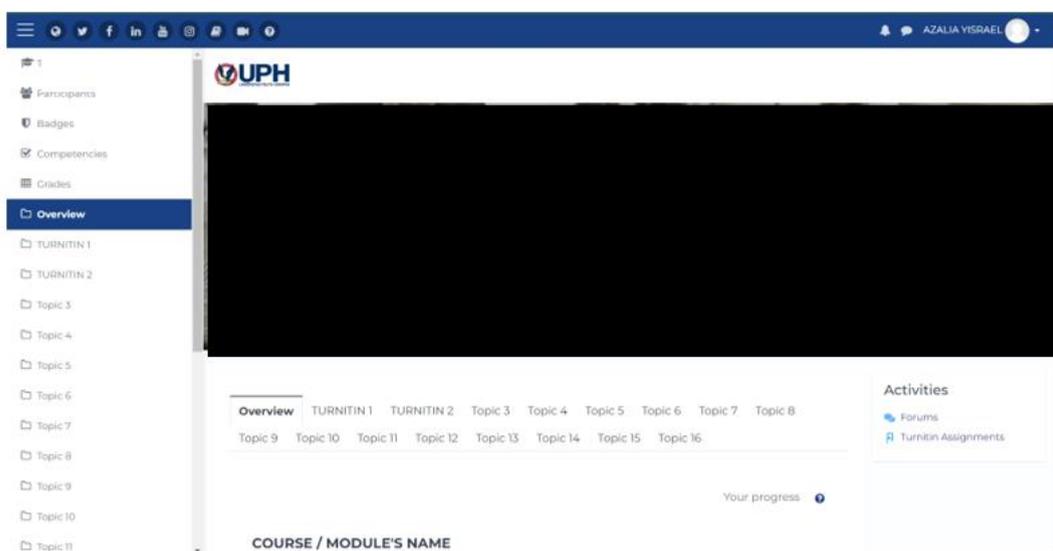
### **4. Results and Discussion**

This paper is a case study discussion of an interactive learning class simulation that was attended by five students. Two of this paper's authors acted as the researchers. The interactive learning class simulation's topic was “The Techniques of Vocabulary Learning”.

It was held virtually on Moodle from April 6, 2020, to May 3, 2020, using Indonesian as the language of instruction. The researchers played the role of the teachers. So, there were two teachers and five students in the classroom simulation.

The design of varied learning techniques is needed to be attractive to students to support the students' vocabulary mastery process in the classroom. So, this learning was an implementation of interactive learning media that has been designed previously as varied as possible based on the understanding that students' ability to speak and master vocabulary is different from one another and the teacher plays an important role in choosing the right learning strategy (Pramuniati, 2014) to encourage students to learn and enrich vocabulary through the development of vocabulary learning techniques.

There was one meeting per week for a total of four meetings during this class. The class was designed to learn four techniques of vocabulary learning so that each technique was discussed per week. In Moodle, there is an interface feature that can be used to manage each week separately that is shown as a tab for a topic or for each class meeting as seen in Figure 1 below.



**Figure 1.** Moodle Interface on Every Course's Homepage

By default, there were 16 topic tabs plus one overview tab. However, they can be managed (moved and changed) as much as needed. Since this class simulation just had four meetings for four topics, the teachers managed the tabs so only four tabs were shown until the end of the class, such as Figure 2. Teachers can also set these tabs (except Overview Tab) as hidden tabs when they are still not needed so students can focus on the topic of the week first. In the Overview Section, there were some pieces of information, such as the description of the class, the aim of the class, a brief information about the teachers, learning topics, learning strategies, grading scheme, references, assessment rubric, and general announcement, as shown in Figure 3.



Figure 2. Modified Moodle Interface on Every Course's Homepage

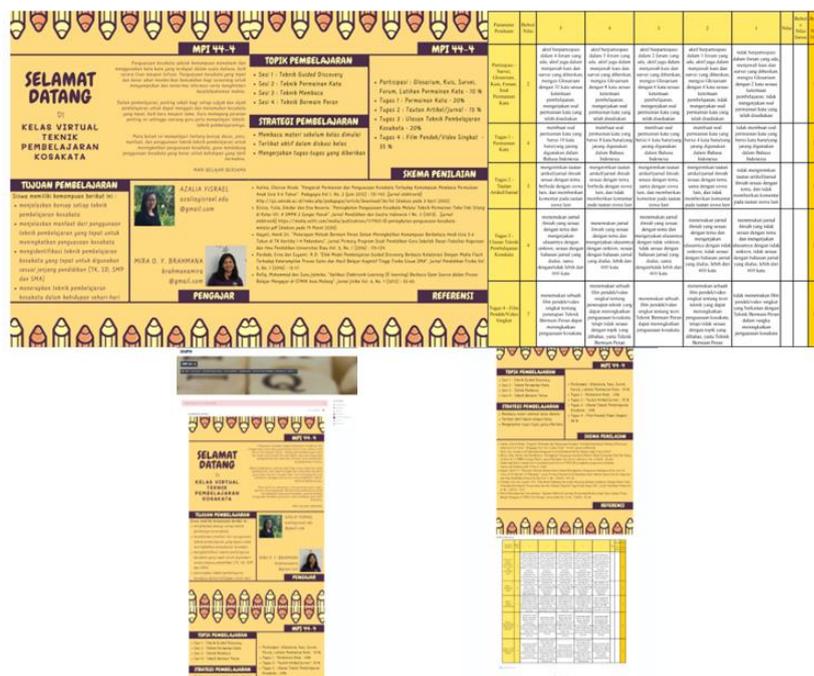
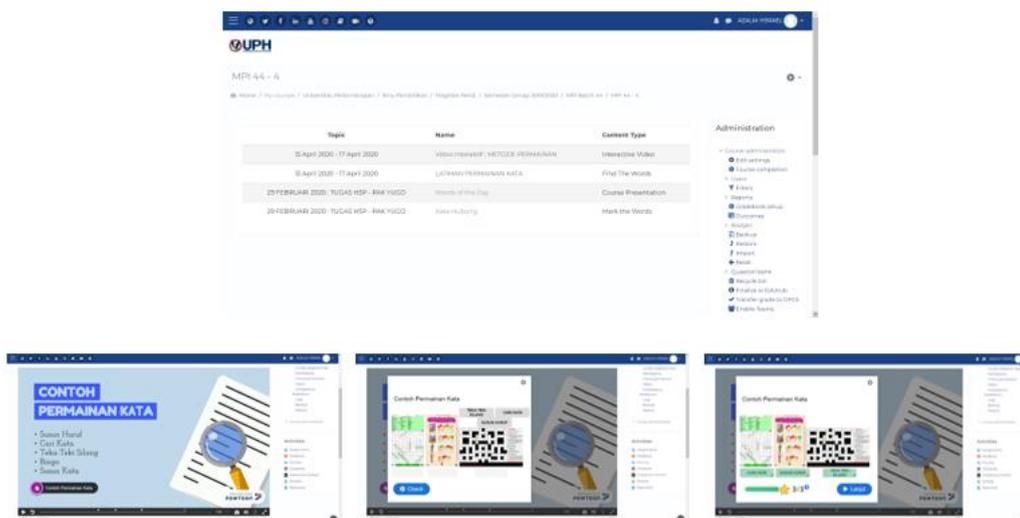


Figure 3. Moodle Interface of Overview Section

In the Topic Section, the teachers added many interactive contents for students' activities, such as Interactive Video, Find The Words, Words of the Day, and Conjunction (Figure 4). Besides these interactive contents, teachers also used the Forums feature (Figure 5) to gather students in some learning discussions.



**Figure 4.** Interactive Content List and The Example: Interactive Video



**Figure 5.** Forums Feature

To analyse the effectiveness of interactive learning class simulation, the researchers used Moodle’s Report features. Moodle has some features that can be used to know students’ participation, grading, and learning feedback. With the features that have been provided by Moodle, the implementation of interactive learning media for Vocabulary Learning Techniques can be directly presented in the form of analytic data which includes student participation, assessment, and learning feedback. By using these data, an explanation of the implementation of interactive learning media that has been carried out will be easier to understand because these data provide a more detailed picture.

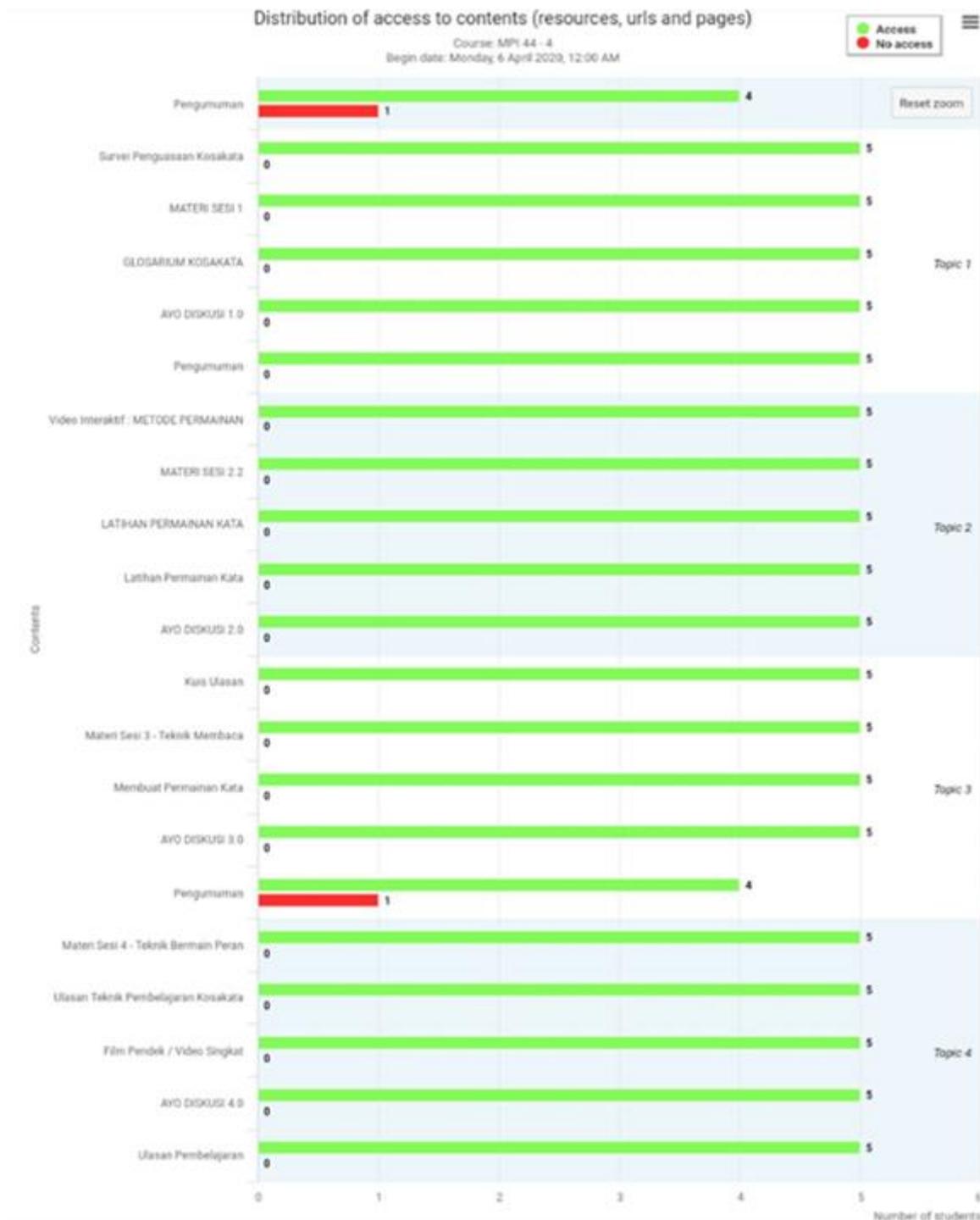
Student participation can show the level of enthusiasm/willingness of the students to respond and be creative in activities carried out during the teaching and learning process (Safrida, et al., 2017). The data displayed in this section will explain the role of students in

participating in lecture activities, such as by accessing information (announcements) and learning materials, filling out surveys, doing exercises, quizzes and assignments, participating in discussion activities in forums for each session, and expressing opinions about the learning in the last session.

First name / Surname	Email address	Survei Penguasaan Kosakata	MATERI SESI 1	GLOSARIUM KOSAKATA	AVO DISKUSI 1.0	Pengumuman	Video Interaktif: METODE...	MATERI SESI 2.2	LATIHAN PERMAINAN KATA	Latihan Permainan Kata	AVO DISKUSI 2.0	Kuis Ulasan	Materi Sesi 3 - Teknik Membaca	Membuat Permainan Kata	AVO DISKUSI 3.0	Pengumuman	Materi Sesi 4 - Teknik...	Ulasan Teknik Pembelajaran ...	Film Pendek / Video Singkat	AVO DISKUSI 4.0	Ulasan Pembelajaran
FRANSISCA AMELIA	01669190052@student.uph.edu	<input checked="" type="checkbox"/>																			
BAYU FEBRIAWAN	01669190057@student.uph.edu	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
YULIA PRATIWI	01669190068@student.uph.edu	<input checked="" type="checkbox"/>																			
JANSESSE IKIT GUNAWAN UPU	01669190067@student.uph.edu	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
FIRMAN JOUHARA PANJAITAN	01669190073@student.uph.edu	<input checked="" type="checkbox"/>																			

**Figure 6.** Student Participation in Learning Activities

Figure 6 shows the roles of the five students who are quite active in taking the Vocabulary Mastery Techniques class by accessing the information and materials provided every week, including doing exercises, quizzes or assignments, discussing in forums, filling out surveys and learning reviews. The boxes in Figure 6 will automatically be checked (v) and green after students take part in the activities available in each session, such as accessing information and materials, doing quizzes, assignments and so on. On the other hand, if students do not take part in learning activities, the box in Figure 6 will be white and unchecked (v).

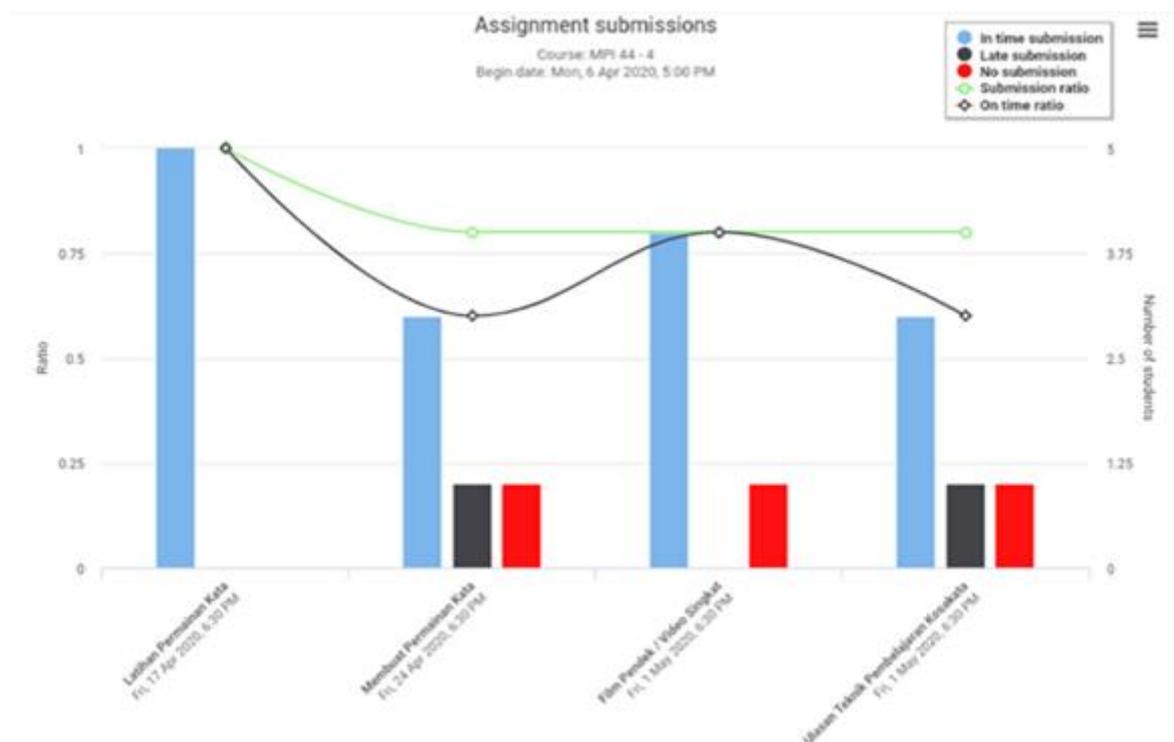


**Figure 7.** Content Access Data

In Figure 7, the green line shows the number of students who accessed the information and lecture materials, while the red line shows the number of students who did not access the information and materials. In accordance with the data shown in Figure 7, most students access the content of this lecture and there is only one student who does not access the lecture information contained in the announcement section.

According to Mulyasa (in Nurhayati, 2019), educational assessment is the process of collecting, and processing data and information to measure the achievement of student

learning outcomes. The assessment for this course is based on a rubric that has been designed before this lecture begins and the rubric is contained in the Design for Making Learning Media. Following the rubric, the assessment parameters are student participation and assignments collected by students. To map the collection of student assignments as a whole, the Assignment Submission from Moodle (Figure 8) also provides analytic data that describes the ratio of the number of students who did and did not work on the total number of students in each assignment, including information about students who submitted assignments on time or who did not.



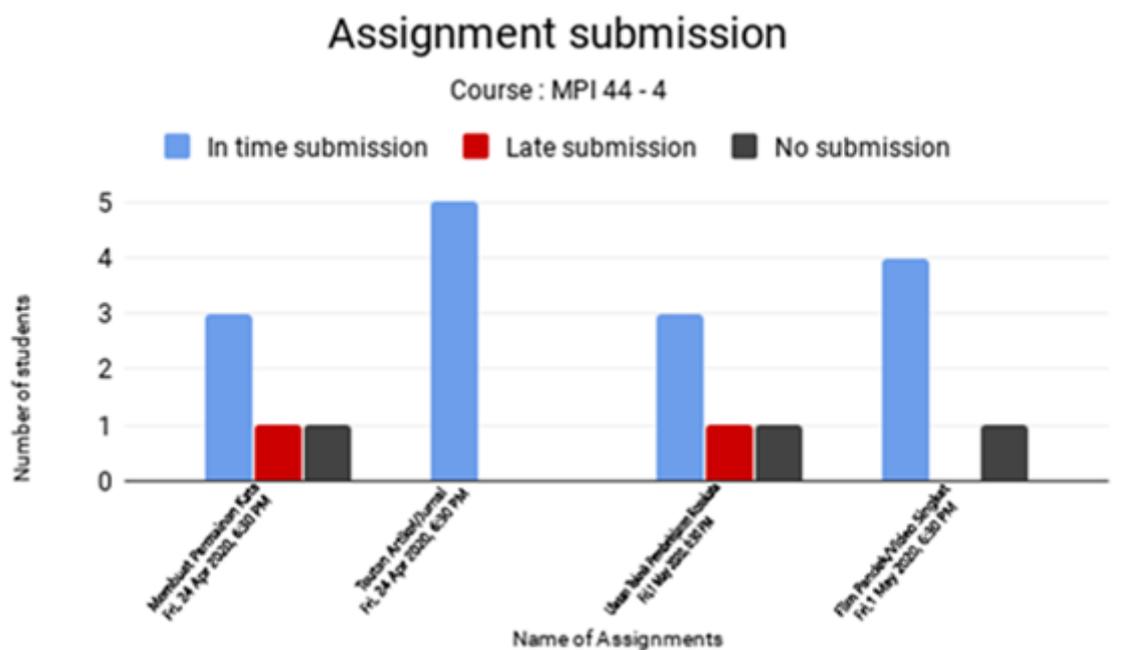
**Figure 8.** Assignment Submission from LMS Moodle

However, it is unfortunate because the Assignment Submission from Moodle LMS cannot show all the assignments that have been designed by the teacher. The reasons for this to happen are as follows.

1. There is a task given using the Forums feature (Let's Discuss 3.0) to activate student interaction through forum discussions and stimulate students to be able to find and understand other vocabulary mastery learning techniques that continue to develop so that this task cannot be categorized as Assignment by Moodle. The results of this task indicate that the goal is achieved. There were 3 (three) students who were able to find other techniques, namely the Pictionary Technique, the Skid Board Technique, and the SMCR-Berlo Communication Model Technique. In addition, the interaction of several students can be seen from the comments made between one student and another, according to the directions in the forum, using the Reply feature provided by Moodle.

2. Word game exercises are part of the teaching material that students can try (interactively) to ensure that students not only understand the teaching material and understand the enjoyment of learning through playing itself so that later students can practice it on their own. Because the topic is related to games, we as teachers also invite students to play as well. Therefore, we cannot make the Word Game Practice a student task in this course, but instead categorize it as part of student participation (see Assessment Rubric for reference). The Assignment feature on the Moodle LMS is only used to collect "screenshots" of the final results of the Word Game Exercises carried out by students, to ensure that students have done this exercise.

With these 2 (two) things and the fact that the Forum Graph in Moodle LMS cannot be accessed by teachers, we reprocessed the existing data and made it into a new diagram as shown in Figure 9 below. It is better if the Forum Graph feature is opened for teachers so that teachers can have and process the analytical data in the Forum according to the needs of the teacher.



**Figure 9.** Student Assignment Data Collection

Figure 9 is a recapitulation of the data collection of student assignments as a whole contained in this lecture. There are 4 (four) tasks that we give to all students, namely 3 (three) items in the Moodle LMS Assignment activity format (Creating Word Games, Short Films/Short Videos, and Vocabulary Learning Technique Reviews), 1 (one) task in the format Forum activity (Article/Journal Links). If these four tasks were judged according to whether they were submitted according to the deadline or not (Figure 9), the items in the Forums activity format were successfully submitted according to the given deadline. However, for the three assignments given in the Assignment activity format, there was 1 (one) student who experienced technical problems in the Moodle LMS in the collection process so in the Moodle LMS, the student was only read as collecting the draft assignment,

not collecting the Word Game Making assignment, Short Films/Short Videos, and Reviews of Vocabulary Learning Techniques. Not surprisingly, in Figure 9, there is a black bar chart depicting a student who did not submit assignments. In this case, the data in the bar chart (in black) above refers to the same student.

In addition to the black bar charts, there are also red and blue bar charts. The red bar charts can be found in the Making Word Games and Vocabulary Learning Techniques Review assignments, while the blue bar charts can be found in each assignment in this course. The red bar chart shows that there is a student who submitted assignments by missing the deadlines given for both assignments. In this case, the data in the bar chart (in red) above refers to the same student. The blue bar chart shows that some students turn in assignments on time. In the Article/Journal Link assignment, all students submit assignments without missing the deadline, while in the Short Film/Short Video assignment there are only 4 (four) people, due to technical problems in the Moodle LMS as discussed in the previous paragraph. On the task of Making Word Games and Reviews of Vocabulary Learning Techniques, there were only 3 (three) people who managed to collect assignments without missing the deadline. This is because one student was late in collecting and another was exposed to technical problems in the Moodle LMS.

From this fact, it is found that although Moodle still needs to improve the system, update some features, and add new features for giving students and educators better experiences, these datas which have been gotten from Moodle and some features that Moodle already has are so helpful for educators and students. It fulfilled the traditional forms of education because of its innovation and transformation. Educators can make the learning process much more entertaining because of those features. Educators can also get the report about students' participation, grading, submission time, and learning feedback instantly so educators can control and know the improvement of the class by having some learning activities in a better way. This statement was proven by the students (Figure 10).

Date	How is the overall learning of this class?	How is the learning material in this class?	How about the tasks in this course?	How is the effect of learning in this class?	Your input on this virtual class is...
Tuesday, 28 April 2020, 12:57 AM	very interesting	very varied	normal	very entertaining and very inspirational	I feel happy taking this class, starting from topics 1-4. It's just that I have limitations when doing video assignments, because my current condition is difficult to make videos that involve other people. Sorry I can't make a video about the role playing technique. In addition, please give an example of a brief explanation of the steps for learning to role play to increase vocabulary, because this is very new to me, so I need more enlightenment from the teacher. Thank you.
Wednesday, 29 April 2020, 9:28 AM	very interesting	very varied	heavy	very entertaining and very inspirational	Naturally, the assignments are much interesting and interactive. However, the Final Project is a bit difficult to carry out due to the limited time and human resources to make roleplay videos, especially during a pandemic like this. Thank you Ms. Mira and Mr. Azka for making this course, this course is really interesting, varied and cool.
Wednesday, 6 May 2020, 11:35 AM	very interesting	very varied	normal	very entertaining and very inspirational	My input is only on the flexibility of time here because yesterday I had a lot to do so I didn't have time to get according to schedule, and thank you for responding. Good luck for the future.
Tuesday, 28 April 2020, 12:26 AM	interesting	very varied	heavy	inspirational	This class is very creative, the learning design and assignments are very varied. I am happy to be able to study in this class. Thank you teacher for sharing a lot of new knowledge for me.
Wednesday, 29 April 2020, 4:29 PM	very interesting	very varied	heavy	very entertaining and very inspirational	very interesting and fun.

Figure 10. Students' Responses

## 5. Conclusion

The era shifting from no concept of online learning to a digitized education system gives us a big impact on education. Technology renews our concept that education can be so much fun and effective. While education always keeps us transforming, technology that is identical to transformation and innovation helps us to adequate skills and capacities needed for 21st-century citizenship. Educators can improve the curiosity of students so that both teachers and students learn to be life-long learners. By using Moodle, students can also interact with one another actively through forum discussions that are supported by Moodle Forums feature. In addition, it was proven that the students enjoyed the learning that was held through Moodle. Moodle stimulates students to be able to find and understand other learning techniques that continue to develop. Bringing Information and Communication Technology (ICT) into schools and integrating it with the learning process cultivate education deeper and richer.

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