## JIMP (Jurnal Inovasi dan Manajemen Pendidikan)

Vol. 4 No. 1, Juni 2024, pp. 56~63 e-ISSN 2807-3231

DOI: 10.12928/jimp.v4i1.9370

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# Implementation of Information and Comuncation Technology (ICT) into UKI Learning During The Covid-19 Period

#### Dameria Sinaga

Universitas Kristen Indonesia Jakarta, Indonesia

\*dr\_dameria\_sinaga@yahoo.com

Received December 4, 2023

Revised: June 3, 2024

Accepted: June 3, 2024

#### **KEYWORDS**

ICT (Information and Communication Technology), Learning, The Covid-19 ABSTRACT

In 2020, around February, the spread of the corona virus disease occurred throughout the world, causing changes in the economic, educational and health sectors. Likewise, in our country, Indonesia, learning has been disrupted by the presence of the corona virus disease, where previously learning was carried out in classrooms, but to prevent the spread of this virus from becoming widespread, learning was not carried out in schools but in individual homes. In order for learning to take place effectively even if you do not meet face to face, learning is carried out online. The results of this research show that using ICT learning is useful in supporting the learning process. By using ICT, teachers can do homework, mid-semester exams, final semester exams and can give grades to students without disturbing them and not being late in the class promotion process. As a result of using ICT, the learning process runs smoothly and effectively, providing motivation and making the learning process easier in getting broader information about learning at UKI.

The purpose of this study is to facilitate learning during the COVID-19 period. We know that during the COVID-19 period all learning was carried out at home using daring learning. The study was conducted at the Christian University of Indonesia with a sample of 58 students who were randomly selected. And using the experimental method with a 2 x 2 factorial design. The findings of this study are to make students more active in learning. The results showed that learning through E-Learning can improve learning and competency-based curriculum especially UKI during the COVID-19 period

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## Introduction

The whole world is now experiencing the COVID-19 Pandemic so lectures are not carried out at school / campus, therefore learning uses the Daring system. Nowadays, the development of ICT (Information and Communication Technology) has changed the pattern of life in society. All sectors of life are without exception touched by the development of ICT starting from banking, trade, including the world of education (with E-learning). E-learning is the application of ICT in the learning process both by lecturersas well as by students.

Affordable hardware and software support that can be used by lecturers, students and the wider community who care about the world of education will greatly assist in the use of ICT in the learning process.

The Christian University of Indonesia has tried to prepare ICT devices so that they can be used in the learning process. The problem is how to take advantage of the development of ICT for E-learning in the implementation of education? Indeed there are many variables that influence application of E-learning, but the lecturer factor will be a limitation for discussion because the lecturer is considered to have a very big influence in the application of E-lerning in learning.

#### **Utilization of ICT for Learning**

From the research data, both through questionnaires and questionnaires, more than 80% said that with the Covid era that occurred throughout the world, including Indonesia, which resulted in learning having to be done through ICT, they said that it was very useful and effective. Likewise, interviews with students showed that they felt that their learning was still going well even though they were not in the classroom and did not meet directly with the teacher in order to prevent the spread of the corona virus from becoming wider. This research method is an experimental method. To prevent the corona virus from being infected and we as citizens must prevent its spread from spreading, the results of this research are very useful in the learning process using ICT but the results are effective and efficient.

There are two kinds of approaches that can be implemented by teachers in implementing E-learning in learning, namely the theme-centered approach. and a software-centered approach (Fryer, 2001).

#### 1. Topic Approach

The topic approach is an approach that emphasizes the topic or learning unit as a reference. Simple steps that can be taken are determining the topic, determining the learning objectives to be achieved and then determining the relevant learning activities using ICT to achieve these learning objectives. For example withuse and adjust radio programs, TV, CD / VCD, or even on online internet and students are actively looking for material available in the ICT media.

## 2. Software Approach

The software approach is an approach that is carried out the opposite of the topic approach, namely starting from identifying ICT, followed by the teacher planning the learning strategy.

Learning strategies in applying ICT to support learning, there are several methods that can be implemented including resources-based learning, case / problem-based learning, simulation-based learning and collaborative-based learning (<a href="http://www.microlelessons.com">http://www.microlelessons.com</a>).

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## 1. Resources-Based Learning

This method tries to condition students with various types of learning materials, both printed and electronic (books, modules, CD / DVD, internet, etc.) that are relevant to achieving learning goals. With existing resources, students are assigned to look for a certain concept according to the purpose of learning and make a written report that can be sent via E-mail so that it can be responded to by their friends.

## 2. Case / Problem-Based Learning

This method tries to provide a problem according to the objectives learning can be completed by students by utilizing ICT, so that the possible conclusions drawn by students can be different and are expected to complement each other and become a concept that can be understood by students according to learning objectives.

## 3. Simulation Based Learning

This method conditions students to be able to experience events according to the learning objectives to be achieved. This method starts from planning, implementing, making reports to presenting in front of friends.

#### 4. Collaborative-Based Learning

This method is implemented by dividing the class into various groups, collaboratively carrying out different tasks to achieve the same goal. After finishing each group reunited for discuss the results of group work with other groups and make a final report collectively.

#### **Utilization Level of ICT for Learning**

UNESCO has reviewed the level of use of ICT for learning and categorized the use of ICT for learning in schools into four levels, namely:

Emerging Stage, where someone just realizes the importance of ICT for learning and have not attempted to apply it.

- 1. Applying stage that is, the stage where ICT has become an object to be studied.
- 2. Integrating stage, namely the stage someone has started integrating ICT into predetermined learning objectives.
- 3. The Transforming stage is the most ideal stage, where ICT has become a catalyst for instructional changes and administrative purposes.

Based on the above stages, there are two statements that can knock the hearts of education people (especially teachers), namely "Learning to Use ICT and Using ICT To Learn". This means that with all existing ICT facilities, there are still many applications in the learning process at stages such as the first statement: Learning To Use ICT, which is still at the teaching stage using ICT to help the learning process.

With the ICT facilities provided by UKI, it is appropriate for education human resources throughout the ranks of UKI to carry out education to be able to apply the second statement:

Using ICT To Learn, which is to use ICT totally to teach in learning. Because believe using ICT in learning according to the level of transformation will make our students have "the ability not to know about".

#### Method

Method with a  $2 \times 2$  factorial design. The findings of this study are to make students more active in learning.

## **Place and Time**

at the Indonesian Christian University, Jalan Letjen Sutoyo, Cawang, East Jakarta In the Seven semester of the 2020/2021 academic year

## **Research Subjects and Objects**

The research subjects were students from Indonesian Christian universities, while the research objects were Indonesian Christian university teachers.

#### **Research Steps**

Consists of 4 stages:

- 1. Pre research; At this stage the researcher conducts a survey of the research location and prepares the subjects to prepare the research appropriately
- 2. Field work stage; data collection stage with interviews and observations.
- 3. Data Analysis Stages; researchers carried out qualitative data analysis and interpreted the data.
- 4. Research report stage; After all the data is processed and the information is deemed sufficient to answer the researcher's questions, a research report is carried out.

#### Method of collecting data

To obtain the required data, the data collection carried out is:

- 1. Interview:
  - a. The interview in question is Lexy (2007:186) a conversation between both parties between the researcher as interviewer and the respondent
  - b. The interview conducted was a free guided interview, the questions given were asked freely and focused on the interview guide. The interview guide is used as an outline of the questions that will be asked.
- 2. Observation: The observations carried out by the researcher were non-participant observations, in this observation the researcher did not follow and was not involved in the activities carried out by the subject. Observations were carried out in a structured manner and followed the observation guidelines carried out during interviews between researchers and research subjects.

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#### **Data Analysis Techniques**

The analysis technique carried out uses Sugiono (2013: 246), namely by using an interactive model which consists of three stages, namely:

#### 1. Data Reduction:

The process of sorting data, abstracting and transforming rough data that arises from various conditions that occur in the field. Data is combined at this stage from the results of interviews and observations in narrative form.

#### 2. Data Presentation:

The data is arranged in such a way that conclusions can be drawn regarding the research that has been carried out.

#### 3. Drawing conclusions

At this stage the researcher reveals the results of the data collected during the research, which refers to data reduction and data presentation.

#### **Research Instrument**

- 1. Interview instrument
- 2. Observation Guidelines Grid
- 3. Data Validity Test

Based on the results of interviews conducted with students studying at the Indonesian Christian University, it was very difficult for them to learn online during the pandemic.

In the next interview, they found it very difficult because they didn't have wifi or a maximum internet network for studying.

Based on the questionnaire, the results showed that as many as 55% of students experienced difficulties in learning during the pandemic

#### **Result and Discussion**

This research was conducted at the Indonesian Christian University, Jalan Letjen Sutoyo Cawang, East Jakarta. The respondents in this study were students studying at the Indonesian Christian University.

The technique for collecting respondents was carried out purposively, the criteria for informants in this research were students studying at the Indonesian Christian University.

Based on the results of interviews conducted with students studying at the Indonesian Christian University, it was very difficult for them to study during the pandemic because the need for learning devices includes a computer, Android, internet network and WiFi. In the era of webbased learning, at least students need an internet network and WiFi to be able to meet their learning needs.

In the even semester of the 2020/2021 academic year in interviews conducted with students studying at the Indonesian Christian University. difficulty studying at home during the pandemic.

Based on the questionnaire, it was found that 55% of respondents found it very difficult to learn. They were very shocked and couldn't believe that the pandemic condition meant they had to study online at home.

Based on the results of the interview, they were very confused because of the pandemic situation that hit throughout the world, especially Indonesia, which caused disruption to the learning system. Various efforts have been made by students studying at the Indonesian Christian University to deal with this pandemic. They study online every day at home.

From the results of this research, it is very clear that students who study at the Indonesian Christian University by studying online have good learning outcomes. This can be seen from the questionnaire where 72% answered strongly and 28% agreed that students studying at the Indonesian Christian University must continue to study and carry out their education well at home.

In the results of the questionnaire, 72% answered strongly and 28% agreed that students studying at the Indonesian Christian University admitted that even though they did not study on campus, online learning at home still felt that the learning was effective and useful for supporting good learning outcomes.

In the results of the questionnaire, 72% answered strongly and 28% agreed that students studying at the Indonesian Christian University played a role in preventing the spread of Covid-19 so that it did not spread more widely, so they were aware that they had to carry out online learning according to the directions given by the Government.

In the results of the questionnaire, 72% of them strongly agreed and 28% agreed that students studying at the Indonesian Christian University admitted that online learning made them aware and easier to obtain or get comprehensive information regarding all learning activities from start to finish, feeling comfortable, cool and effective. and efficient to understand so that good learning outcomes can be achieved and the existing competency-based curriculum at Indonesian Christian universities can be improved.

The results showed that learning through E-Learning can improve learning and competency-based curriculum especially UKI during the COVID-19 period.

In order for learning to take place effectively even if you do not meet face to face, learning is carried out online.

From the research data, both through questionnaires and questionnaires, more than 80% said that with the Covid era that occurred throughout the world, including Indonesia, which resulted in learning having to be done through ICT, they said that it was very useful and effective.

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#### Conclusion

The application of ICT in the learning process at UKI is very beneficial and motivating and facilitates the learning process in obtaining broader and easier, more comfortable and more efficient information to understand, so that it can increase competency-based curriculum learning, especially UKI.

#### Reference

- Anglin, Gary J. (ed), 1991, Instructional Technology: Past, Present, and Future, Englewood, CO: Libraries Unlimited.
- Alwi, S. (2017). Problematika guru dalam pengembangan media pembelajaran. *ITQAN: Jurnal Ilmu-Ilmu Kependidikan*, 8(2)
- Ashby, Eric, 1972, The Fourth Revolution: Instructional Technology in Higher Education, A Carnegie Commission on Higher Education Report. New York: McGraw-Hill Book Co.
- Dabbagh, Nada dan Brenda Bannan-Ritland, "Online Learning: Concept, Strategies and Application", (Ohio: Pearson-Merril Prentice, 2005)
- Donald, Ary, Lucy Cheser Jacobs, Asghar Razavieh, *Instroduction to Research in Education*. 3<sup>rd</sup>., New York: Holt, Rinahart and Winston, 1985.
- Edward L. Vockell, *Educational Research*. New York: Macmillan Publishing CO., INC, 1983.
- Ellul, Jacques, 1967, The Technological Society, New York: Alfred A. Knopf.
- Fryer, Wesley A, 2002, Strategy for Effective Elementary Technology Integration, <a href="http://www.wtvi.com/teks/integrate/tcea2001/powerpointoutline.pdf">http://www.wtvi.com/teks/integrate/tcea2001/powerpointoutline.pdf</a>
- Gay, L.R, *Educational Research-Competencies for Analysis and Application*. 4rd Ed. New York: Macmillan Publishing Company, 1992.
- Issacc, Stephen and William B. Michael. *Handbook In Research and Evaluation*. Edits Publisher San Diego. California, 1982.
- Joko Purwanto, Agus : Online Learning; Pelaksanaan dan Kendalanya; Studi Kasus Pelaksanaan
  Online Learning Mahasiswa S-2 MAPU dan MM di UT Copyright 2003-2008
  IlmuKomputer.Com Artikel Memahami Lebih Lanjut tentang e-Learning1
- Kerlinger, Fred N., *Azas-azas Penelitian Behavioral*. Jogya: Gajah Mada Press, 1995. (Alih Bahasa: Landung R simatupang & H.J Koesoemanto).
- Linn L. Robert. Gronlund, Norman E. Measurement and Assessment in Teaching. Englewood Cliffs, New Jersey: Printice Hall, 1990.
- Martyn Descombe, *The Good Research Guide*. For Small-Scale Social Research Project. Philadelphia: Open University Press, 2000.

Miarso, Yusufhadi, dkk., 1998, Jaringan dan Sistem Informasi NUSANTARA 21 : Aplikasi Bidang Pendidikan, Jakarta: Yayasan Litbang Telekomunikasi dan Telematika, naskah untuk penerbitan.

Miarso, Yusufhadi, dkk., 2004, Menyamai Benih TEKNOLOGI PENDIDIKAN: Pustekom DIKNAS

Moleong, Lexy J. Metode Penelitian Kualitatif. Jakarta: PT Remaja Rosdakarya (1990)

Moleong, Lexy J., Metodologi Penelitian Kualitatif. Bandung: Rosdakarya, 2000.

Moleong, Lexy J. Metode Penelitian Kualitatif Edisi Revisi. Jakarta: PT Remaja Rosdakarya (2004)

NIE, Singapore, General Typology of Teaching Strategies in Integrated Learning System, <a href="http://www.microlessons.com">http://www.microlessons.com</a>

Stephen Isaac and William B Michael, *Handbook In Research and Evaluation*. Second edition. San Diego: EdITS Publishers, 1982.

Sugiyono. Metode Penelitian Pendidikan. Bandung: AlfaBeta (2008)

Sugiyono. *Metode Penelitian Pendidikan, Pendekatan Kuantitatif, Kualitatif, dan R&D*. Alfabeta. Jakarta, 2008

Suryaningtyas, Wahyu : Mengakrabkan Dosen Dengan Dunia Maya Dalam Rangka Pembelajaran Berbasis E-Learning Melalui Informal Learning Community (ILC)

The International Commission for the Study of Communication Problems, UNESCO, 1980, Many Voices, One World, London: Kogan Page.

UNESCO Institute for Information Technologies in Education (2002), Toward Policies for Integrating ICTs into Education, High-Level Seminar for Decision Makers and Policy Makers, Moscow

UNESCO (2002), Information and Communication Technologies in Teacher Education: a Planning Guide, Division of Higher Education.