

THE ROLE OF THE OPEN UNIVERSITY IN IMPROVING THE QUALITY OF HUMAN RESOURCES THROUGH TECHNOLOGY POST PANDEMI COVID

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Abstract

The Covid-19 pandemic that occurred has had a major impact on various aspects, especially aspects of education. This is an important issue that must be addressed immediately. The Ministry of Education through its circular letter stipulates that education in Indonesia is carried out under the Study from Home (SFH) system. The system and implementation of higher education in Indonesia is based on the mandate of the 1945 Constitution to educate the life of the nation, which is then passed down in various laws and regulations starting from Law no. 20 of 2003 concerning the National Education System, Law no. 12 of 2012 concerning Higher Education, PP No.4 of 2014 concerning Implementation of Higher Education and Management of Higher Education, and Permendikbud No. 3 of 2020 concerning National Standards for Higher Education. The essence of the goals of higher education is to increase and equalize access to higher education, as well as to improve the quality of higher education to produce graduates who can contribute to improving the welfare of society and the national economy. Distance education (PJJ) is one of the strategic breakthroughs that can answer these challenges of access and quality. PJJ is an education delivery system characterized by the separation between teachers and students. The PJJ system has been implemented in Indonesia since the mid-1950s for written teacher education (Written PPPG) and has been used massively by the Open University (UT) since 1984. Through PJJ, UT has been able to distribute education services to all corners of the archipelago and has produced around two million graduates. The method used in this research is a descriptive literature method. All information is gathered to explain how the role of the Open University through distance learning continues to improve the quality of its human resources during a pandemic. The results of the study found that the Open University in improving its distance learning continues to innovate in technology, one of which is the Digital Learning Ecosystem, which is a system that organizes all activities at UT in a more structured manner. In addition, the Open University also implements policies or strategic goals to develop the quality of its human resources. The policy is abbreviated as "BRIGHT".

Keywords: Digital Technology, Education Technology, Universitas Terbuka, PJJ

1 INTRODUCTION

When the Covid-19 Virus attacked, almost all parts of the world including Indonesia were affected. The World Health Organization (WHO) has made this outbreak a pandemic that has hit the world since March 11, 2020. This virus spreads so fast that it has various health, social, economic and educational impacts (Asmuni, 2020). The Central Statistics Agency projects that the population in Indonesia in 2035 will reach 305.6 million people with a proportion of working age of 68 percent (BPS, 2013). This is in accordance with the United Nations which also predicts that in 2030 the world's population will be dominated by young people. The existence of this demographic bonus will have an impact on increasing work opportunities and competencies. These challenges certainly require the younger generation to prepare themselves from the start to be able to compete in the world of work (UT Strategic Plan, 2020). By looking at the greater challenges that will be faced by the younger generation, education is an important aspect in improving human resources. The quality of these human resources is also the key to realizing a golden Indonesia 2045 that is just and prosperous, safe, and peaceful, as well as advanced and global (Sari, 2020). The Covid pandemic that occurred is certainly an important issue that must be resolved immediately. The Ministry of Education and Culture (Kemendikbud) in the Republic of Indonesia Ministry of Education and Culture Circular Letter No 3 of 2020 stipulates that education in Indonesia is carried out with a Study from Home (SFH) system. The meaning of this education system is that the learning process is carried out remotely (online) (Salsabilla, 2020). In Law No. 20 of 2003 it is also explained that the distance learning system is learning where students are separated from educators and learning is carried out using various communication technologies, data, and other media. So that in practice this learning system uses a medium that allows interaction between teachers and students and does not meet face to face. (Kahfi, 2020). With the covid 19 pandemic, it requires us to adapt to new habits, including in the teaching and learning process. If you cannot adapt and transform with these new habits, it will certainly slow down the achievement of educational goals, especially now that Indonesia is transitioning from a pandemic to a new normal period.

Open universities are pioneers in organizing distance and open education models in Indonesia, or better known as PJJ (Rahmat, Seminar, & Suroso, 2019). Distance and open learning implemented by UT is a learning system that is carried out with both printed media and modules as the main learning resource. The media was published independently by the campus and non-print media such as audio-visual, internet, radio broadcasts and television. In addition, this

learning model is unlimited, that is, it does not limit age, study period, registration time, and learning period. One example of this form of learning is through e-learning (Salwa, 2020).

The learning system implemented by an open university is of course the opposite of the learning carried out in formal schools, where the time and space for study is determined by the school. This is certainly one of the obstacles to teaching and learning activities during the pandemic. The online learning model is certainly an alternative to use. Students can access material that is not limited by time and place (Gorky, 2021). The research gap in this study is that online distance learning has long been carried out, not only at open universities, but this system is not carried out routinely, only occasionally as a substitute if face-to-face cannot be done. Meanwhile, open universities have been established since the beginning to implement the Distance Learning system. UT does not need to adapt anymore to using the online system. UT can be used as a guideline for other campuses that wish to use a remote system. Not only that, this condition requires universities to innovate and adapt the use of technology in order to support the learning process (Ahmad in Firman, 2020).

Therefore, based on the explanation that has been explained, writing this article aims to explain what is the role of the Open University in improving the distance learning system (online) to improve the quality of its human resources after the pandemic.

1.1 The Open University

Based on Presidential Decree No. 41 of 1984, the Open University (UT) was established. The Open University (UT) is a state university that is the pioneer of distance higher education. This tertiary institution also has different characteristics compared to other conventional tertiary institutions. UT was inaugurated by the president on September 4, 1984. The open university has the main task of organizing academic and vocational education at various levels of science and technology, professions, and vocations. UT consists of 4 faculties namely, Faculty of Economics (FE), Faculty of Law, Social and Political Sciences (FHISIP), Faculty of Saints and Technology (FST), Faculty of Teaching and Education (FKIP) and one Postgraduate Program (UT, 2020) .

The objectives of the establishment of the University are:

- 1) Providing wide opportunities for Indonesian citizens and foreign nationals to obtain higher education

- 2) Providing higher education services for those who, due to work or for other reasons, cannot continue their education at face-to-face tertiary institutions
- 3) Develop academic and professional education programs in accordance with the real needs of development that have not been developed by many other universities.

1.2 Human Resources

According to Hasibuan 2001 in (Widodo, 2015), what is meant by human resource development is the process of improving the quality and ability of humans to achieve something such as national development. On a micro level, human resource development is planning education, training, and energy management to achieve maximum results.

There are several principles of human resource approach according to Dharma (1985)

- a. Human resources are important assets owned by an organization or company
- c. Company culture and values, atmosphere and behavior that often occur in an organization will have a major impact in achieving the best results.
- d. Human resource management certainly involves all members of the organization involved in achieving the same goals.

2 METHODOLOGY

This study uses a descriptive analytical literature method in which this method describes an object of research collected through data and samples without conducting an analysis and general conclusions. Deep surgeons. The literature used in this research comes from various articles, books, and online journals. The steps taken in conducting this literature review are explaining the scope of the topics or titles to be reviewed, identifying relevant sources, conducting reviews, writing literature, and applying the literature to the studies to be used (Salsabilla et al, 2020).

3 FINDINGS AND DISCUSSION

3.1 Learning Strategies in the Transitional Period

Currently, Indonesia is in a transitional phase from the pandemic to the new normal. The transition certainly raises a few pros and cons in society. If teaching and learning activities return to normal then the entire academic community will be able to run normally again and students can carry out learning activities as before. However, this condition also raises concerns

for parents because even though it has entered the new normal transition period, the Covid case has apparently not ended. There are several learning models that can be carried out in the post-pandemic period (Rohana, 2022) :

1. Offline Models

The offline model is a learning model that is carried out directly or face to face.

2. E-Learning/Online Models

The e-learning model is a learning model that is carried out using intermediaries such as electronic media (LAN-WAN, and the internet). The e-learning learning model will facilitate interaction between students and lecturers because learning materials can be accessed from anywhere and at any time. Learners can share information and access learning materials at any time repeatedly. There are three possibilities for the development of internet-based learning (online).

- a. Web course, where full learning is done online without face to face. Materials, teaching materials, discussions, assignments, tests, and other activities are carried out via the internet.
- b. Web Centric Course, where learning is internet-based which combines distance and face-to-face learning. In this model the lecturer provides material via the internet for students to study, then the material is discussed face to face.
- c. Web Enhanced Course, where this learning utilizes the internet as a medium to support the quality of learning conducted in class. The internet functions as a medium of enrichment and communication between students and lecturers.

3. Model Project Based Learning

The project-based learning model aims to provide training for students to collaborate, work together, and empathize with others. This model is effectively used by students by forming small learning in conducting experiments or innovations.

4. Model Blended Learning

The Blended Learning model is carried out using two approaches, namely online and face-to-face using video conferencing, even though learning is carried out remotely, lecturers and students can still interact with each other. This model also combines the delivery of learning

both face-to-face and online (internet and mobile learning). The material is delivered with graphics, text, animation, audio, and video. So that Blended Learning has several meanings according to Houghy in (Rohana 2020), namely:

- a) Delivering information, communication, training on teacher training materials, learning substances and education science online.
- b) Does not replace the direct/face-to-face learning model but strengthens the learning model through content and development of educational technology
- c) Providing various tools that can increase the value of conventional learning such as textbooks, CD-ROMs, and computer-based training.
- d) Utilizing electronic technology services where fellow students, fellow lecturers or students and lecturers can communicate easily without being limited by protocol matters
- e) Utilizing computer sophistication such as digital media and computer networks.

The above description what is needed currently is education that is oriented towards global relevant needs, namely relevant needs. In addition, it is necessary to have reliable resources, both human resources and adequate infrastructure. The existence of covid has encouraged academic actors to make new policies related to the learning process.

3.2 Development Through Digital Technology

Human resource management can be interpreted as a tool to achieve goals. So that the part contained in human resource management must be good so that the goals can be achieved. In the field of education, there are three components of human resources that need attention, namely students, teachers and the community. These three components are important elements, especially during the current transitional period where sharing and caring are needed to be able to balance the child's psychological condition due to the transition from limited activities to normal conditions again (Arafah & Bahri, 2020).

The number of internet users in Indonesia has reached quite large numbers. In its use, the amount of internet usage can be grouped by age or educational status. The largest number of internet users based on age is at the age of 15-19 years with a large usage of 91 percent. Meanwhile, internet usage based on educational status was greatest at the high school and college levels, namely 90.2 percent and 92.6 percent.

Table 3.1 Internet Usage Data

Internet Users (millions)	User Age (Percent)					Users based on Education Status			
	10-14	15-19	20-24	25-29	30-34	SD	SMP	SMA	K
171.176.716,80	66,2	91	88,5	82,7	76,5	41,4	80,4	90,2	92,6

Data Source: APPJII, 2019

The large number of internet users in Indonesia certainly provides an opportunity for the Open University to improve internet-based educational services. In addition, the large use of the internet provides an opportunity for the Open University to create a good image as a higher education institution that has implemented distance learning for a long time. The Open University has a vision of becoming a world-class Open and Long-Distance Higher Education institution. The meaning of this vision is that UT as an open university continues to develop academic products, organize distance education, organize study programs and graduates. Everything is achieved to make UT a world-class university. In addition, the main mission of an open university is to provide accessible higher education programs. So that in order to achieve the Vision and carry out the Mission, the objectives of organizing UT are formulated as follows :

- a. access to world-quality higher education for all levels of society through the implementation of various Open and Long-Distance Higher Education (PTTJJ) programs to produce highly competitive graduates;
- b. developing an Open and Distance Higher Education system (PTTJJ) to support the implementation of a distance learning system in Indonesia; And
- c. utilizing and disseminating the results of scientific and institutional studies to respond to the challenges of national development needs.

In carrying out this vision and mission, the Open University has utilized information and communication technology in all teaching and learning services. The whole of this process is called the Digital Learning Ecosystem. In the last two years, namely 2020 and 2021, the Open University has integrated its vision and mission into all learning service processes, technology applications, and roadmaps in a series of Digital Learning Ecosystems so that they have a strong foundation and direction.

The Digital Learning Ecosystem is a step in structuring the entire UT system which provides an architecture implementation plan which includes the Business Architecture Roadmap, Data Architecture Roadmap, and Technology Architecture Roadmap. Alignment of the vision and mission of the organization, business processes with information technology in the perspective of data, applications and technology will be brought together in an application called SPARK. This SPARK application in the DLE-UT Architecture mapping will enable users in a university environment to monitor and manage processes according to their duties and responsibilities. In addition, the DLE-UT Architecture contained in the SPARK application will make it easier for the leadership to see the entire process and assist in making the right decisions (Setiani, Made et al, 2021).

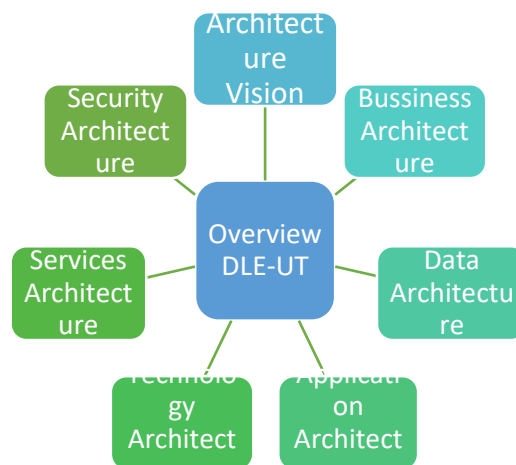


Figure 1. Digital Learning Ecosystem

From the figure above it can be explained Setiani, Made et al. (2021) :

- a. Architecture Vision provides an overview of the Open University, vision, mission, business model, and the mapping and synergy of all architectural layers in the development of the UT Digital Learning Ecosystem.
- b. Business Architecture describes the structure and interaction between business strategy, organization, functions, business processes and information requirements, along with their relation to risk, key performance indicators, data and applications.
- d. Data Architecture describes the main types and sources of data needed to support the business. Data is modeled to obtain information on the relationship between data entities.

- e. Application Architecture is an architecture that maps applications that support processes business.
- f. Technology Architecture defines the technological requirements of both hardware and software technology to support application operations. It aims to manage technology standards, technology portfolios, configuration management and model the distribution map of application portfolios at each implementation location.
- g. Services Architecture is an architecture that describes the general description of the services provided by the Open University to internal and public.
- h. Security Architecture is an architecture that describes the security aspects of the Open University.

4 CONCLUSION

With the design of the chart model above, the DLE-UT architecture of learning services at open universities can be properly and comprehensively integrated so that in its development DLE-UT can have a strong, solid, and clear foundation. There are many system applications as a development of DLE-UT, including in the administration section, there is an Academic Information System (SIA), Teaching Materials Management System (SIMBA), Information System and Transactions of Teaching Materials (SITTA), Graduation and Certification Applications (AKSI), Research Management Information System and Community Service, besides that in the learning services section there are UT Digital Teaching Materials, Virtual Reading Room, UT-TV, UT Radio, Online Tutorials (TutOn), Webinar Tutorials (Turweb), Course Assignments (TMK), Online Examination System (SUO), Take Home Exam (THE). The use of these various applications is of course based on strategic policy objectives so that implementation can run smoothly. Policies/strategic goals carried out by the open university aim to improve the quality of human resources. This goal is called "BRIGHT"

- a. Bright breakthrough solution to community development

In developing the quality of human resources. The open university carries out community development through program innovation. This innovation is in the form of certificate diversification and development of digital library service products so that they can be accessed by the wider community through the internet network and regional partnership programs such as customer social responsibility (CSR).

b. Resource collaborative and accelerating supporting system

Universitas Terbuka also develop their human resources by collaborating with partner universities. This collaboration was developed through a collective innovation program which put forward the needs of the community according to the region or location of the partner tertiary institution. In addition, the development of partner collaboration is supported by strengthening the diversification of funding from non-academic businesses, community grants, and alumni funding.

c. Innovation and continuous improvement

In developing the field of IT infrastructure, innovation, and continuous improvement, human capital readiness is required in its implementation.

d. Good open university governance in serving stakeholder

e. This strategy is related to organizational attitudes that have the principles of good open university governance in providing services to the community. This service can be in the form of organizational governance, institutions, and strengthening rules that support the creation of organizational transformation.

f. High impact in distance education

g. Quality distance education is of course a priority for open universities in developing the quality of their human resources. This increase is carried out through the integration of cyber university networks.

i. Trigger academician in research excellence

Universitas Terbuka also provides services in terms of scientific development through community research. As an open university, UT must continue to develop research to improve the quality of technology, as well as the readiness of human capital to carry out distance learning. This quality improvement will later have an impact on the quality of teaching staff in tertiary institutions.

All the above policy objectives aim to improve the quality of human resources. Improving the quality of technology must also be balanced with good quality human resources so that the vision and mission of the university can be achieved. Human resources are very important for the implementation of an organization in this case education. So that the existing resources must be managed properly so that the goal is achieved. (Arafah & Bahri, 2020) *aliquam*

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4.3 Conclusion

The existence of the covid outbreak has had a big impact on various aspects, especially the educational aspect. education is one important aspect in improving human resources. The quality of these human resources is also the key to realizing a golden Indonesia 2045 that is just and prosperous, safe and peaceful, as well as advanced and global. Distance learning is currently used more effectively during a pandemic. Therefore, the Ministry of Education and Culture (Kemendikbud) in the Republic of Indonesia Ministry of Education and Culture Circular Letter No. 3 of 2020 stipulates that education in Indonesia is carried out with a Study from Home (SFH) system. Distance learning is currently used more effectively during a pandemic, which has even continued to be used today (post-pandemic).

The open university is a pioneer in holding a distance and open education model in Indonesia, or better known as PJJ. Open universities have used information and communication technology in all teaching and learning services for a long time. Distance and open learning implemented by UT is a learning system that is carried out with both printed media and modules as the main learning resource. All online activities in the Open University are summarized in a system called the Digital Learning Ecosystem (DLE-UT). The aim is to integrate the vision and mission of the Open University in all learning service processes, technology applications, and roadmaps so that they have a strong foundation and direction. In addition, this system is strengthened by the existence of a policy target called "BRIGHT". So that with good use of technology through the system, the Open University can continue to improve the quality of its Human Resources even during a pandemic.

4.4 Recommendations and Suggestions

4.4.1 Advice

- There is a need for development in the implementation of virtual practices and practical's
- In terms of IT infrastructure, the Open University requires improvement in management and academic fields so that all regional students can access Tuton in the UT system.

4.4.2 Recommendations

Some of the teaching materials used in the learning process need to be updated again with more careful planning when revising. In addition, teaching materials that are artificial intelligence or web-based need to be developed further

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