



Analysis of E-learning Implementation Readiness in the State Islamic Higher Education in Indonesia during Covid-19 Pandemic

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Abstract. Distance learning or e-learning is a policy that is implemented as an effort to prevent the spread of the Covid-19 pandemic at Islamic State Colleges. The success of implementing e-learning is influenced by the readiness of many factors. This study's purpose is to determine the readiness of implementing e-learning during the Covid-19 pandemic from the aspects of Learning Management System (LMS) support, e-literacy of the lecturers and the students, learning culture, and face-to-face learning for future e-learning development. The research method used was survey to 527 respondents with 123 lecturers and 404 students using google form media. The research instrument was the readiness of e-learning questionnaire based on the Aydin dan Tasci models. The results showed that the LMS management support factor had a value of 3.8; declared ready but, need improvement, lecturer e-literacy readiness was 3.96; declared ready but, need improvement, student e-literacy readiness value 2.96; declared not ready and need many improvements. The learning culture factor using e-learning for learning, guidance, and exams obtained a value of 2.87; declared ready but needs improvement. The value of face-to-face learning readiness factor is 3.9; using full e-learning is 2.99; with blended learning model is 3.86; and the overall value is 3.59 so it was declared ready but needs improvement. Based on the results of the assessment, e-learning readiness is still low, so it needs improvement. This result is an evaluation to improve the implementation of e-learning in Islamic State Colleges in the future by integrating an adaptive hybrid learning model.

Keywords: e-learning readiness, Islamic State Colleges learning, Covid-19 pandemic.

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INTRODUCTION

The covid-19 pandemic has had an impact on various sectors of human life, including the education sector. Efforts to prevent the spread of covid-19 occurred in the disruption of the learning system in universities. The learning system previously relied on conventional face-to-face models, with the Covid-19 Pandemic until April 2020, there are already 95% of universities in Indonesia already carrying out distance education (Republika, 2020). PTKIN in Indonesia must suddenly carry out distance learning that brings a new situation in the change of education system by implementing E-Learning (electronic learning). The paradigm shift from pedagogic learning to hantagogic so that learning can be carried out anywhere and anytime. Universities must responsively adapt and adopt by re-deciding the e-learning system during the Covid-19 pandemic so that students can continue to learn to achieve competencies in academic culture in accordance with the conditions faced effectively. This makes e-learning more effective and efficient Ali et al (2010), creating a competitive environment, students and teachers becoming more creative and innovative (Gotthardt et al, 2006).

E-Learning is a self-learning process facilitated and supported through the utilization of information and communication technology, (Sangrà et al, 2012). Electronic delivery of learning content or learning experience using computer and computer-based media (Stockley, 2003). Use of technology and technology devices such as computers and handheld devices as a means to access and share information. E-Learning development can enrich conventional learning values and address the challenges of globalization, not replacing conventional learning models, but strengthening through content enrichment and educational technology development, adapting to capacity, diverse learning style preferences for better learning outcomes.

There are different ways of applying e-learning in learning (Mayadas et al, 2015). Lecturers and students can choose from a wide range of e-learning platform offerings that can be accessed in the learning process in college. E-learning platform by providing LMS (Learning Management System) facilities such as Edmodo, Modle, Google Classroom. LMS is a system that provides classes based on

information and communication technology that can be filled by lecturers with materials, assignments, learning resources and others (Shawar & Al-Sadi, 2010). The system also facilitates communication between lecturers and students. In addition, there is also Zoom, Google Meet, Skype which can be used for video conferences.

The success of using e-learning is influenced by many factors. The ability to adapt and adopt new technologies greatly determines the effectiveness of e-learning (Wannemacher, 2006). The application of educational technology can be a complex problem; the difficulty of changing the paradigm and pedagogical concept of lecturers who often do not use ICT even though technology is not a problem for them (Steel, 2009). This requires a complete change of view on what to do in order for learning to be effective and resistant to change for all lecturers and academic staff (Blin & Monro, 2008). The challenge of learning management system (LMS) success is personal creativity and anxiety to experiment and adopt new information technologies independently of other people's communication experiences (Al-Busaidi & Al-Shihi, 2012). This is often difficult for academics for a variety of reasons: lack of experience, skills, and technological mindset (Watts, 2007).

Readiness is the overall condition of a person that makes him or her ready to respond in a certain way to a particular situation so as to achieve optimal results. To know the readiness of an institution or college in the application of e-learning during covid-19, a gauge is needed to assess the readiness of the implementation of e-learning at PTKIN in Indonesia. Therefore, an analysis of e-learning readiness is needed to implement it. The implementation of e-learning requires readiness of both infrastructure and organizational culture. This readiness is known as e-Learning Readiness. E-Learning Readiness measurement is done so that the organization can know quantitatively the level of readiness. By knowing the level of readiness, organizations can determine what policies or strategies to determine. To measure readiness in the implementation of e-learning according to Aydin and Tasci (2005) there are four factors that determine the implementation of e-learning namely technology factor, innovation, human, and self-development.

According to Teddy & Swatman (2006) there are six factors of e-learning readiness namely student readiness, teacher readiness, infrastructure, management support, school culture and face-to-face learning. This research measures the readiness of e-learning in PTKIN using teddy & swatman model (2006) from management support readiness, lecturer and student e-learning literacy, learning culture experience and face-to-face learning. The use of e-learning is necessary e-literacy readiness for lecturers and students. E-literacy or digital literacy can improve the literacy and thinking capabilities of science and thinking analysis (Setiaji & Jumadi, 2018), increase motivation (Wardono et al., 2016), improve communication effectiveness (Al-Said, 2015), facilitate better assimilation and accommodation stages (Dinata et al., 2020), improve readiness and shorten learning time (Ravitz & Blazeovski, 2014).

Research related to the readiness of e-learning from Fariani (2013) which adopted the Aydin and Tasci models (2005) shows that there are still universities that are not ready in the application of e-learning. Standish (2014) assessed the adoption of a new system related to acceptance, readiness or satisfaction resulting in software adoption not necessarily positively affecting the adoption of the software itself at the consumer level. Wuryanto & Insani (2013) readiness level (Readiness) Implementation E- Learning in Yogyakarta High School" is still weak and requires improvement of entrepreneur technology readiness is still moderate, (Pamukti et al, 2017) self-development technology still needs improvement. By knowing the category of readiness level of e-learning implementation in PTKIN, it can be used as information and input in decision making to increase the readiness of factor implementation that affects the successful implementation of better e-learning. Therefore, this research aims to measure the e-Learning Readiness model at PTKIN, and determine ptkin readiness improvement strategies for better e-Learning implementation going forward based on measurement results.

RIVIEW LITERATURE

E- Learning

The application of e-learning in universities continues to develop and become an alternative priority in the covid-19 pandemic. Researchers are constantly studying to ensure effective online learning. The use of E-learning provides opportunities for students to learn independently, openly, and self-regulated learning in control of their learning success. E-learning is all learning activities that use the help of electronic technology, which can be applied in conventional education and distance education. Combining network and multimedia technology with pedagogy, andragogy and heutagogy approaches. Requires utilization of internet technology support.

The use of e-learning in distance learning becomes formalized instructional learning, where time and geographic situations that limit learning between educator and student cannot be directly contacted

(King et al., 2001). The educational process, all or part of teaching is carried out separately in space and time, through artificial medium electronics or print (UNESCO, 2002, p.22). Institution-based formal education separately between educator and student and telecommunication media in the learning process (Simonson et al, 2006; Schlosser & Simonson, 2009, p.1.) As a planned teaching and learning, the teaching takes place in a different place between educator and student media communication through technology specifically organized by education organizers (Moore & Kearsley, 2011, p.2). Organized learning programs, where educators and students are physically separated (Newby et al., 2000, p.210). Referring to Blaschke (2012) e-learning in distance education is more precise in the form of Heutagogy learning theory, because students are required to determine the achievement of independent learning outcomes. He also stated that in a distance education environment, students need to understand that the distance education learning environment is different from traditional learning environments. In a heutagogical approach to learning, learners are highly autonomous and self-determined and emphasis is placed on development of learner capacity and capability with the goal of producing learners who are well-prepared for the complexities of today's workplace.

The role of lecturers in e learning, not only to upload learning materials that can be accessed online by students, but also to design, preparation materials, evaluate, and establish communication, collaborate, and manage other aspects of learning. In e-learning there must be active participation interactions and engagements involving students, teachers and content. E-learning is flexible, but requires conformity with the characterism of students with different knowledge, learning style preference, e-literacy, time management and organizational support, and interaction using online technology. The involvement of active partitioning of students with subject matter, has an important impact on career decisions that students will make in the future (Kori et al, 2016). Lecturers need to find ways to keep students engaged and motivated in hybrid learning (Handelsman et al, 2005; Highley, 2014; Wang & Eccles, 2013) to avoid students becoming discouraged, when they feel their learning speed slower than others, especially with reduced or absence of face-to-face interactions with lecturers or fellow students (Jordan, 2015; Manjoo, 2015; Sunar et al, 2017).

Wildavsky's various problems with e-learning are the drinking of contact and socialization frequencies between students and with teachers, the high cost of following e-learning, and the lack of time to follow the e-learning schedule. Therefore, research focusing on the effectiveness of e-learning models continues to be conducted to compare with traditional learning patterns or mixed models. One important area of research is the readiness of e-learning applications for students to succeed in the e-learning environment, often referred to as e-learning readiness (Bernard et al, 2004; Roblyer et al, 2008; Yu, 2018, Yeh et al., 2019) Students have varying degrees of readiness and preparedness that are likely to affect success) (see Hung et al, 2010; Yeh et al., 2019).

E-Learning Readiness

Readiness in the implementation of e-Learning (e-Learning Readiness) is an organization's physical and mental readiness to carry out, perform actions and create e-Learning experiences. E-Learning Readiness illustrates how ready an organization is in some aspects to implement e-Learning. Readiness is not only for teachers or students but the readiness of the organization itself. The success or failure of e-learning is influenced by several factors. Aydin and Tasci (2005) said e-learning was influenced by four factors: 1. Technology is influenced by the user's ability to access computers and the internet as well as a positive attitude towards the use of technology 2. Innovation is a factor in the ability and openness of users in adopting innovation. 3. People are influenced by the readiness of the user to learn by using technology. 4. Self Development is influenced by the user's ability to set the user's time and attitude to develop themselves Chapnick (2000) explore factors that influence the success of e-learning: (a) Characteristics of infrastructure, attitude and control of existing technologies and how to teach (b) The characteristics of learners, computer use competencies, interactive collaboration between learners and teachers, content and design used in the learning process of e-learning (c) Technology, where the ease of access to e-learning content and existing infrastructure is one of the success factors of e-learning (c) Technology, where the ease of access to e-learning content and existing infrastructure is one of the success factors of e-learning (c) Technology, where the ease of access to e-learning content and existing infrastructure is one of the success factors of e-learning (c) technology. (d) Support from educational institutions and governments in conducting learning using e-learning.

Teddy & Swatman (2006) in his research on e-learning in educational institutions divided into six categories of e-learning readiness factors namely (a) Factor Students Preparedness which is the readiness factor of students in using technology and e-learning. (b) Factor Teachers Preparedness is the readiness factor of teachers in using technology to implement e-learning, (c) Factor Infrastructure i.e. infrastructure

readiness such as hardware, internet network software, technical support and also financing to adopt e-learning. (d) Factor Management Support is support from management regarding the implementation of e-learning. (e) Factor School Culture is the readiness factor of the institution's environmental culture in adopting e-learning. (f) Factor Preference to meet Face-to-face is a readiness factor in learning that enables face-to-face meetings through online.

Some challenges in implementing e-learning are (a) E-learning adoption management, (b) incompetence of educators (c) Technology Learners (d) Technology, (e) User Psychology (f) Culture/Language. One of the reasons why e-Learning adaptation and implication readiness is necessary is that there are obstacles or barriers in this adaptation and implementation. Specifically stated seven major barriers in the adaptation and implementation of e-Learning. Personal Barriers, including time management issues, language and attitude issues to e-Learning (b) Learning Style Barriers include situational barriers, including situational barriers, including duration of learning and interruptions in learning, (d) Organizational Barrier, including organizational barriers, lack of time for study, interpersonal barriers, limited availability of online subjects, problems in registration, lack of awareness and failure to engage employees in planning or decision making. (e) Technological Barriers include the quality of the Learning Management System (LMS), the issue of conclusiveness, lack of training, navigation problems, limitations of technical support, data loss and inadeciable transfer of data, (f) e-Learning Content Hurdle (Content Barrier) including students' expectations of lessons, relevance of lessons, content that is not specific to participants, poor content quality and poor assessment/evaluation system. (g) Instructional barriers include lack of progress reports and feedback, limited student engagement, limited instructional design, limited reference materials, limited multimedia use access and navigation issues, inconsistent instructions, excessive information, lack of instructor presence/interaction and poor coordination.

Institutional efforts in measuring e-learning learning readiness can include providing resources to help assess readiness to follow e-learning. Studies show that lecturers can apply specific practices to help students assess or understand e-learning readiness (Dray et al, 2011). Research can better inform these efforts and address some of Yu's past research challenges (2018) that propose models that demonstrate e-learning readiness that can influence learning outcomes, satisfaction, and retention. To measure this level of readiness is based on the components of e-Learning Readiness used as the basis for the formation of the e-Learning Readiness model/Model Chapnick (2000) grouped eight categories in a readiness assessment that is (1) psychological readiness that considers the perspective on the influence of E-learning initiatives.

This factor is an important factor to consider and has the highest opportunity to sabotage the implementation process (2) sociological readiness considering the interpersonal aspects of the environment with the program to be implemented (3) environmental readiness that takes into account the operation of great forces on stakeholders, both inside and outside the organization (4) human resources readiness that takes into account the availability and plan of the human resources support system (5) financial readiness that takes into account the size of the budget and allocation process (6) technological skill readiness of technical competencies to be observed and measured (7) equipment readiness that takes ownership of appropriate equipment (8) content readiness that takes into account learning content and learning goals.

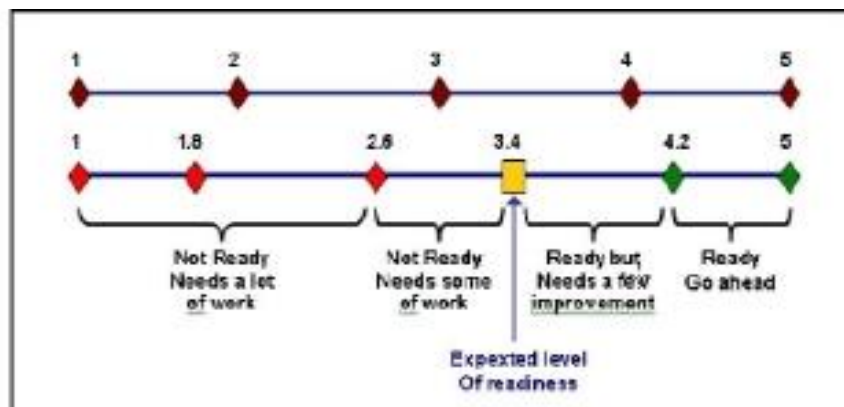
While the model of e-learning readiness (ELR) submitted by Aydin, and Tasci (2005) there are four factors namely (1) technological factor (2) innovation factor (3) human factor (4) factor of self-development. The E-learning readiness model (ELR) widely used in education is the model developed by Teddy & Swatman (2006) using six factors in the readiness assessment (1) Teacher Readiness, (2) Teacher Readiness, (3) Infrastructure Readiness, (4) School Management Support Factor, (5). Cultural Factors of the school, and (6). Tendency Factor to Face-to-Face Learning. And the Model Saekow, A., & Samson (2011) there are seven categories in its assessment namely (1) business readiness (2) technological readiness (3) readiness training readiness (4) cultural readiness (5) human readiness (6) financial readiness. E-learning readiness expressed. In this study adapted from teddy & swatman model (2006) using six factors /categories in readiness assessment (1) Infrastructure readiness and LMS management support, (2) Student e-Literacy Readiness, (2) Lecturer E-Literacy Readiness, (4) Learning Cultural Readiness. Guidance and Exams with e-Leraning, and (5). Readiness of tendencies towards face-to-face learning.

RESEARCH METHODS

Research Design

This research uses a quantitative approach, a type of survey conducted at the State Islamic Higher Education in Indonesia. Gatering data was conducted in June 2020 after the end of the even semester of the 2019/2020 academic year. The number of participants was 527 respondents with 123 lecturers and 404 students. Retrieval of data using questionnaires through google form media by spreading chain to whatsapp application groups. The study used questionnaires containing 34 questions and a questionnaire assessment scale using the Likert scale (1-5), (1=strongly disagree to 5 = strongly agree).

Questions were developed adapting from the Teddy &swatman model to measure the readiness of e-learning implementation based on six factors namely (1) Management support, (2) Learning Management System (LMS) infrastructure), (3) lecturers' e-literacy readiness, (4) Student r-literacy readiness, (5) learning culture that includes learning processes, Final Assignment guidance, and exams, and (6) pre-face learning trends for future e-learning development. This model will provide a readiness score or score on each factor and readiness to use E-learning in PTKIN as a whole. This model is suitable for use in Indonesia widely developed for agencies in developing countries. All assessment results of the question will be assessed based on the category of e-learning readiness there are four categories i.e. (1) Ready and implementation can be implemented (2) Ready but require a slight improvement, (3) is not ready and requires a little improvement and requires a slight improvement (4) The category of readiness level of e-learning implementation can be seen in picture 1 below:



Picture 1. *E-Learning Readiness Index by Aydin & Tasci (2005)*

For the readiness level category, the study used an index model adapted from Aydin & Tasci (2005) in the following table 2:

Table 1. *Value Range and Category*

Value Range	Category
$1 \leq \chi \leq 2,59$	Not Ready , Requires a lot of improvement
$2,6 \leq \chi \leq 3,39$	Not Ready , Requires A Little/Some Improvement
$3,4 \leq \chi \leq 4,19$	Ready , Requires a bit of development
$4,2 \leq \chi \leq 5$	Ready , E-Learning implementation can be continued

The mapping results show the e-Learning Readiness index and will illustrate the level of organizational readiness in the implementation of e-Learning Average value calculations for each variable this study shows the e-Learning Readiness index for each of those variables. To determine the overall index of the organization, an average calculation of all research variables was performed. Furthermore, for the purposes of validation of the framework proposed in the study, a comparison of the e-Learning implementation readiness level is made with the proposed framework, with the readiness level using the ELR (E-Learning readiness) toolkit. ELR toolkit is a tool to measure the readiness level of e-Learning implementation based on eMM (e- Learning Maturity Model). The dimensions used in the ELR toolkit are (elearningreadiness.org, 2011) Using the ELR toolkit, the readiness level has an index with a scale of 0-100. The category of e-Learning readiness level is divided into three levels namely (1) Beginning or beginner (0-32.9); (2) Improving level (33-65.9) and (3) Establishing level (66-100).

RESULTS AND DISCUSSIONS

Validity and Reliability Test

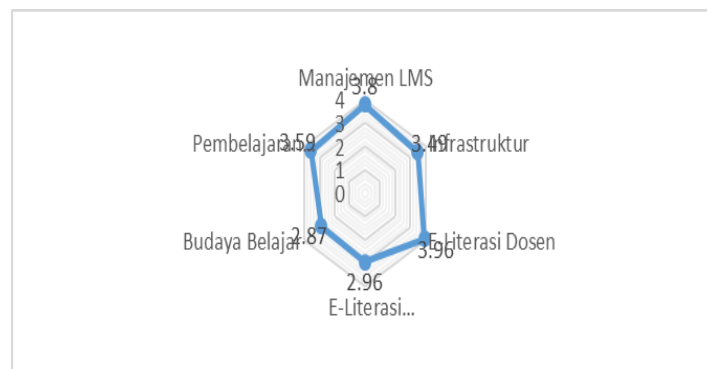
Test validity and reliability of instruments is required so that in questionnaire questions that researchers ask respondents bias is said to be valid. Test validity and reliability using Pearson product moment test with SPSS software. The validity and reliability test result of the sample count is 527 then $DF = N - 2 = 527$ with a probability of 0.05 then get r table of 0.307. From the table for corrected value the item-total correlation has a value greater than the r table so that the 45 questionnaire questions are said to be Valid. As for the instrument reliability test using Cronbach's Alpha if deleted item value where all the values presented in the table are more than r table of 0.307, so the overall reliability of the instrument is valid.

E-Readiness (ELR) Research Results

From the results of data processing obtained from 527 respondents with 123 lecturers and 404 students then analyzed using the E-learning Readiness model with the criteria put forward by Aydin & Tasci (2005) of readiness value factor (1) support Management Learning Management System (LMS) value 3.80, (2) Infrastructure support grade 3.49, (3) readiness of e-literacy lecturer grades 3.96, (4) Readiness of e-literacy students grade 2.96, (5) learning culture that includes the learning process, Final Assignment guidance, and exams, grades 2.87 and (6) predisposition to face-to-face learning score of 3.59. Meanwhile, the overall value of the six factors shows that the results of the e-Learning implementation readiness index at PTKIN during covid-19 amounted to 2.95. The 95 that are defined as being in the category are not ready but require some improvement in implementing e-Learning. And the level of readiness of e-Learning implementation based on eMM (eLearning Maturity Model) using ELR toolkit, readiness level has an index with a scale of 0-100. The category of e-Learning readiness level is divided into three levels, Beginning or Beginner (0-32.9); Improving rate (33-65.9) and Establishing level (66-100). E-Learning readiness level in PTKIN during covid-19 pandemic with a value of 2.95 is at the Beginning level. E-Learning Readiness Index results as shown in the following table here's a radar chart image of PTKIN toolkit E-learning readiness (ELR) measurement in Indonesia:

Table 2. E-Learning Readiness Index

No	Factor	Number of factors	Average factors	Value Readiness
1	LMS Management Support	16037	3,80384	3,80
2	Infrastructure Support	16037	3,80384	3,49
3	Lecturer's e-Literacy Readiness	3901	3,9644309	3,96
4	Student E-Literacy Readiness	8390	2,966761	2,96
5	Learning culture (learning process, guidance and exams)	19659	2,8695081	2,87
6	Face-to-face learning	5680	3,5926629	3,59
	Average			2,95

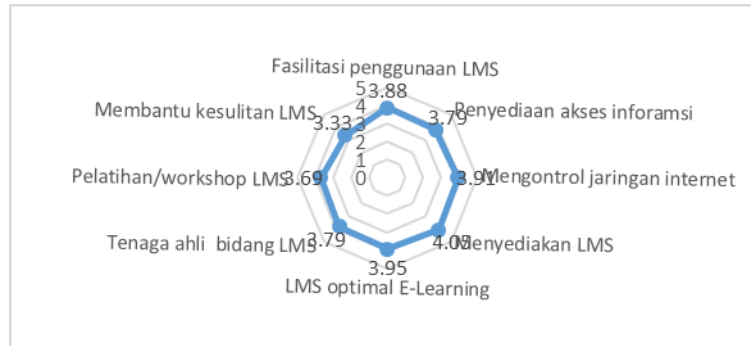


Picture 2. Radar chart for e-learning readiness measurement for PTKIN Indonesia

Learning System Management Support Factor (LMS)

From the learning system management support factor (LMS) obtained a value of 3.80; be declared ready but need improvement. Question indicators include (1) Institutions facilitating the use of LMS values of 3.88, (2) Institutions providing data access & dissemination of value information 3.79, (3) Institutions

controlling internet network infrastructure value 3.91, (4) The Institution provides LMS value of 4.05, (5) Optimal LMS availability to support the learning process value of 3.95, (6) The Institution has experts in the field of LMS value 3.79, (7) The Institution provides training/workshop on LMS value 3.64, (8) The Institution assists difficulties in the use of LMS value 3.37. E-Learning Readiness (ELR) readiness value from the management learning system (LMS) indicator value as shown in the radar chart:

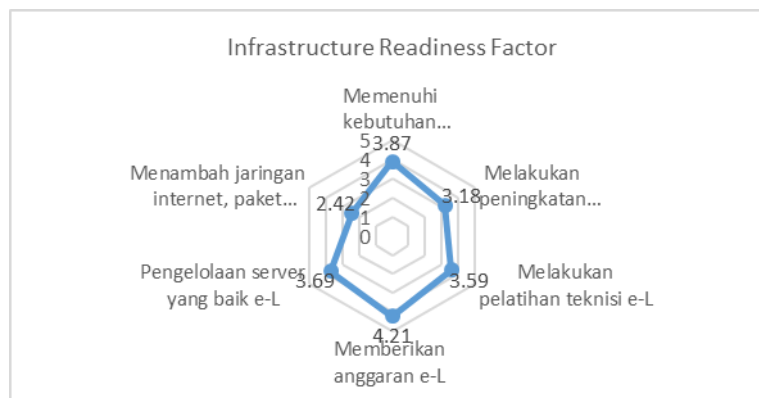


Picture 3. Radar Chart Management learning system support factors (LMS)

The data above the highest ELR value is the availability of LMS of 4.05, declared ready with a slight improvement. And the lowest is to help difficulty in the use or use of e-learning with an ELR value of 3.33, otherwise unprepared, but blinding a slight/some improvement. There is still a blank signal with a geographical location that does not support it.

Infrastructure Support Factor

From the infrastructure support factor obtained a value of 3.59; be declared ready but need a slight improvement. Question indicators include (1) Institutions meeting the needs of infrastructure starting space, computer laboratories, the number of computer scores 3.87, (2) Institutions perform technician upgrades that support the implementation of e-learning scores of 3.18, (3) Institutions conduct technician training and increase the number of technicians to support the implementation of e-learning values 3.59, (4) Institutions provide a budget for the implementation of e-learning 4.21, (5) Institutions have good server management by appointing a responsible e-learning management team value of 3.69, (6) Institutions increase internet network access, provide data package assistance, and related facilities as needed for the readiness of e-learning value of 2.42. The E-Learning Readiness (ELR) readiness value of the Infrastructure Support indicator value as shown in the radar chart below:

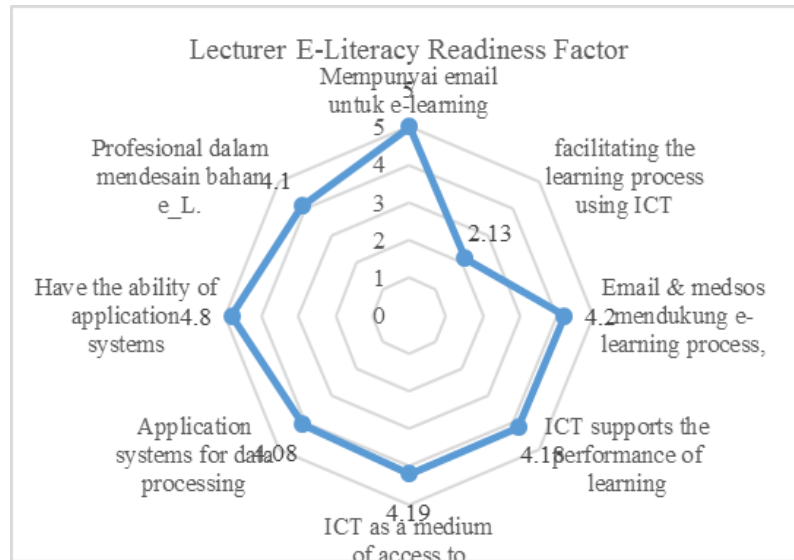


Picture 4. Radar Chart Infrastructure Readiness Factor

The data above the institution's highest ELR value provides a budget for the implementation of e-learning of 4.21, declared ready with a slight improvement. And the lowest is to increase internet network access, provide data plan assistance, and related facilities as needed for the readiness of e-learning g implementation with elr value of 2, 42, declared unprepared, but blinding a little/some improvement. There is still a blank signal with a geographical location that does not support it. It is appropriate the use of E-learning in Turkey (Parlakkilic, 2015) the level of readiness for infrastructure dimensions shows ready with little improvement

Lecturer's e-Literacy Readiness

From the Lecturer's E-Literacy Readiness factor obtained a value of 3.96; be declared ready but need a little improvement. Question indicators include (1) Having email and utilizing for e-learning, (2) In facilitating the learning process using ICT, (3) Email & social media plays a role and supports the productivity and performance of learning (4) ICT as a medium of access to learning resources to support the productivity of learning and research, (5) Application systems for data processing, word processing, and video processing help and support the productivity and performance of learning processes, (6) Have the ability of application systems for data processing, word processing, audio processing, and video processing, (7) professionals in designing learning materials in e_Learning/slide systems before covid-19. E-Learning Readiness (ELR) readiness value of lecturer's e-literacy readiness indicator as shown in the following radar chart:

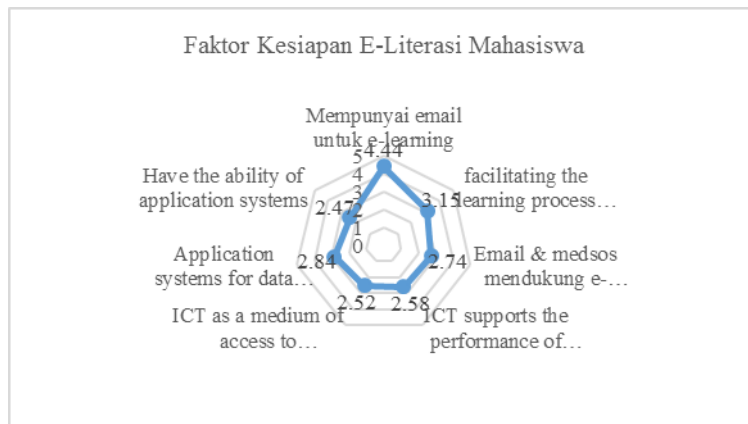


Picture 5. Radar Chart of Lecturer's E-Learning Readiness Factor

The data above the highest ELR value is Email & social media plays a role and supports the productivity of the learning process performance, at 4.20 declared ready for the implementation of e-learning. And the lowest is in facilitating the learning process using ICT with an ELR value of 2.13, declared unprepared, but blinding a slight/some improvement.

Student E-Literacy Readiness

From the E-Literacy Readiness factor students get a score of 2.96; unprepared and needs a little improvement. Question indicators include (1) Having email and utilizing for e-learning value of 4.44, (2) In facilitating the learning process using ICT nilai 3.15, (3) Email & social media play a role and support the productivity and performance of learning value 2.58 (5) ICT as a medium of access to learning resources to support the productivity of learning and research value 2.52, (6) Application systems for data processing, word processing, audio processing, and video processing help and support the productivity and performance of learning processes value 2.84, (7) Have the ability of application systems for data processing, word processing, audio processing, and video processing value 2.47. E-Learning Readiness (ELR) readiness score from student e-literacy indicator value as shown in the radar chart:



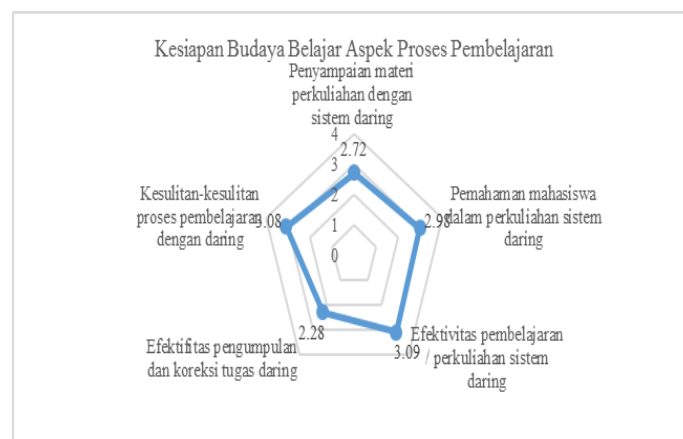
Picture 6. Radar Chart Factors for Student E-Learning Readiness

The data above the highest ELR value is Having email and utilizing for e-learning, s, s, 44 declared ready to implement e-learning. And the lowest is Have the ability of application systems for data processing, word processing, audio processing, and video processing with an ELR value of 2.47, declared unprepared, but blinding a slight/some improvement.

Learning Culture (Learning Process, Guidance and Exams)

From the Learning Culture Readiness factor (Learning Process/ Lecture, Guidance, and Exams obtained a score of 2.87 stated to be unprepared but need a little improvement;

Aspects of the learning process / lecture obtained a value of 2.87 declared unprepared but need a little improvement. Question indicators include aspects of the learning process, namely (1) The delivery of lecture materials with an online system for lecturers of value of 2.72, (2) Students' understanding in receiving lecture materials with online system nilai 2.98, (3) Effectiveness of learning / online system lectures 3.09, (4) Effectiveness of collection and correction of tasks 2.28, (5) learning process difficulties with online system value 3.08. E-Learning Readiness (ELR) readiness value from the learning/lecture process readiness indicator value as shown in the radar chart:



Picture 7. Radar Chart of Cultural Readiness learning aspects of learning process/lecture

The data above the highest ELR score is the effectiveness of online system learning/lecture (online, 3.09 declared ready but needs improvement. And the lowest is the effectiveness of the collection and correction of tasks with an ELR value of 2.28, otherwise unprepared, but blinding slightly/some improvement.

Cultural Readiness to Learn in the Final Task Guidance Process

From the Learning Culture Readiness factor (Final Task Guidance) obtained a score of 2.89; otherwise unprepared but need a little improvement; Question indicators include aspects of Mentoring (thesis, thesis, or dissertation (1) Understanding The thesis/thesis/dissertation guidance process with online system value 2.86, (2) Student understanding of feedback process with online system value 3.16, (3) Effectiveness of guidance process with online system value 2.61, (4) difficulties, guidance with online

sisten score 2.93. E-Learning Readiness (ELR) readiness value of Learning Culture readiness indicator value (Final Task Guidance) as shown in the following radar chart:

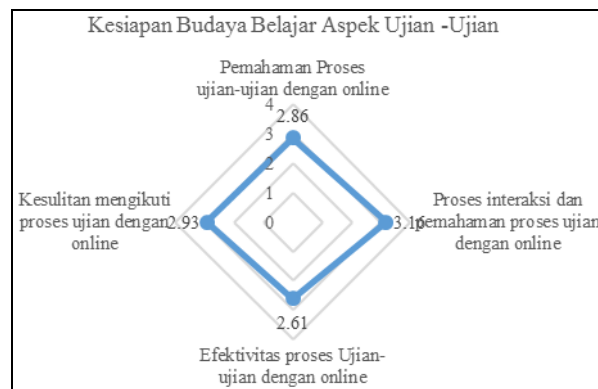


Picture 8. Radar Chart Cultural Readiness Learning Aspects of Final Task Guidance Process

The data above the highest ELR score is the student's understanding of the feedback process with the online system (online at 3.16 is declared ready but needs improvement. And the lowest is the effectiveness of the guidance process with the online system, with an ELR value of 2.51, declared unprepared, but blinding a slight/some improvement.

Cultural Readiness of Learning in Exams

From the Cultural Readiness factor of Learning in exams (thesis, thesis, dissertation, UTS, UAS) with online score scoring 2.88; otherwise unprepared but need a little improvement; Question indicators include aspects of the implementation of exams (thesis, thesis, dissertation, UTS, UAS) with online, (1) Understanding the implementation of exams with online systems, (2) The process of interaction and understanding between testers and students in the exam process with online systems, (3) The effectiveness of the exam process with online systems, (4) the difficulties of testing with online systems. E-Learning Readiness (ELR) readiness scores from the Learning Culture readiness indicator score take exams with online systems as shown in the radar chart:



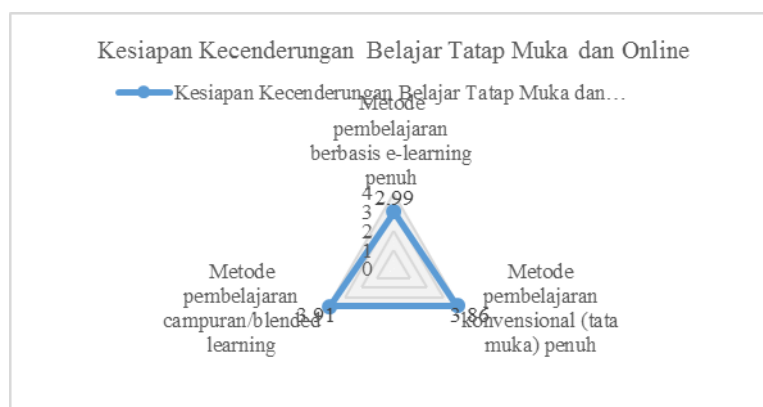
Picture 9. Radar Chart for Learning Culture Readiness Aspects of Online Exams

The data above the highest ELR score is Understanding the implementation of exams with online systems, at 3.00 declared unprepared but needs a slight improvement. And the lowest is the effectiveness of the exam process with an online system with an ELR score of 2.71, declared unprepared, but blinding a slight/some improvement.

Sedance of Face-to-Face Learning

The tendency to learn face-to-face with online earned a score of 3.59 is otherwise ready but needs a little improvement. Question indicators include aspect(1) The use of full e-learning-based learning methods is more effective and enjoyable with a value of 2.99 (2) The full conventional learning method (face-to-face) is more effective and enjoyable with a value of 3.8, (3) Conventional mixed learning methods (advance) and e-learning is more effective and enjoyable with a value of 3.91. E-Learning Readiness (ELR) readiness

value of the readiness indicator value of the tendency to learn face-to-face with e-learning as shown in the radar chart:



Picture 10. Radar Chart Readiness Tendency to Learn face-to-face and Online

The data above the highest ELR value is that conventional mixed learning methods (advance) and e-learning are more effective and enjoyable, with 3.91 declared ready but needing a slight improvement. And the lowest is that the use of full e-learning-based learning methods is more effective and enjoyable, with an ELR value of 2.99, otherwise unprepared, but blinding a slight/some improvement.

CONCLUSION

Based on literature studies and the results of analysis of measurement components of e-Learning Readiness in terms of LMS management support, infrastructure, faculty and student e-literacy readiness, learning culture and tendency to learn face-to-face with the online system has an e-Learning Readiness index of 2.95 out of 3.40 as a reference for e-learning readiness standards from an organization. This means that PTKIN in Indonesia that implements e-learning during the covid-10 pandemic is done quickly and suddenly shows it is not ready to implement e-Learning and needs some improvement. The results of this study have an impact on the institutional system, organizational management and development of e-learning in the future which needs to be based on the current condition of each at PTKIN in Indonesia. The implementation of e-learning at PTKIN is recommended to increase mansuia (HR) resources, e-literacy learning culture, smart campus technology strengthening, leadership policy, institutional funding and infrastructure strengthening and blended learning implementation.

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