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The Challenges and Opportunities in the Implementation of E-learning for Competence Development of State Civil Apparatus

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Abstract: Despite its common utilization in developed countries, e-Learning is relatively new in intensive ASN training in Indonesia. The utilization of e-Learning has increased sharply due to the Covid-19 response protocol that imposes restrictions on physical interaction. This study aims to reveal the challenges and opportunities in implementing e-learning in ASN training in Indonesia during this pandemic. This study applied a descriptive approach. The quantitative data was collected through surveys, while the qualitative data was collected through interviews. The data were obtained from widyaiswara (trainers), organizers, participants, and alums of the 2020 CPNS Basic Training held at the ASN Cadre Development Center of the National Institute of Public Administration (LAN). The findings show that widyaiswara, organizers, and participants, in general, can adapt to e-Learning, even though it is relatively new and sudden and apt to have several challenges. The adaptability results in the excellent progress of the training initially designed with the classical model. It implies the existence of opportunities to overcome several difficulties identified to ensure that e-Learning can become an integral part of the ASN training system in Indonesia.

Keywords: Opportunities, E-Learning, Civil Apparatus, ASN, CPNS.

1 Introduction

The utilization of information and communication technology in learning is commonly known by various names, such as understanding management systems (LMS), online education, or internet learning. LMS is a software application or web-based technology used to plan, implement, and assess specific learning processes [1]. In this study, e-learning means a distance learning process bridged by web-based applications and the Internet. E-Learning as using telecommunications technology to convey information in education and training [2]. The lowercase letter at the beginning of the term emphasizes that electronic technology is merely a tool to support real business, namely the learning process [3].

In recent years, e-Learning has been implemented in numerous universities and private training institutions in Indonesia [4], yet only some in the government sector. E-Learning is an efficient option for private companies, state-owned enterprises (BUMN), or universities to carry out the learning process. A study conducted by Pamugar et al. (2014) on e-Learning in the government sector discovers a distinctive style of e-learning compared to that in universities. In universities, the learning process takes place continually, facilitating the universities to maintain their interest in the application of e-Learning. Meanwhile, training in government organizations is limited or held only at certain times. Therefore, one of the challenges in using e-Learning in the government sector is maintaining the interest of training providers to implement e-Learning sustainably [6] [7].

Regarding implementing e-Learning in government agencies, the Ministry of Finance is one of the first to utilize e-Learning to support the training process. Several other agencies then imitate this measure. Since more and more government agencies are using e-Learning, the National Institute of Public Administration (LAN), as the supervisor of State Civil Apparatus (ASN) training, issues a policy regarding using e-Learning in ASN training, namely the Regulation of LAN Number 8 of 2018 [8] [9] [10].

The Covid-19 pandemic that has spread since 2020 has increasingly raised awareness concerning the benefits of e-Learning in ASN competence development. Responding to this sudden situation, LAN has implemented a policy of flexible distance learning and technology integration to support ASN competence development. During 2020 and entering 2021, ASN training is relatively unimpeded due to the application of e-Learning. However, its utilization is accompanied by various challenges and opportunities that need to be studied, considering that the mass use of e-Learning in the government sector only occurred during the Covid-19 pandemic. Therefore, this study focuses on answering the following

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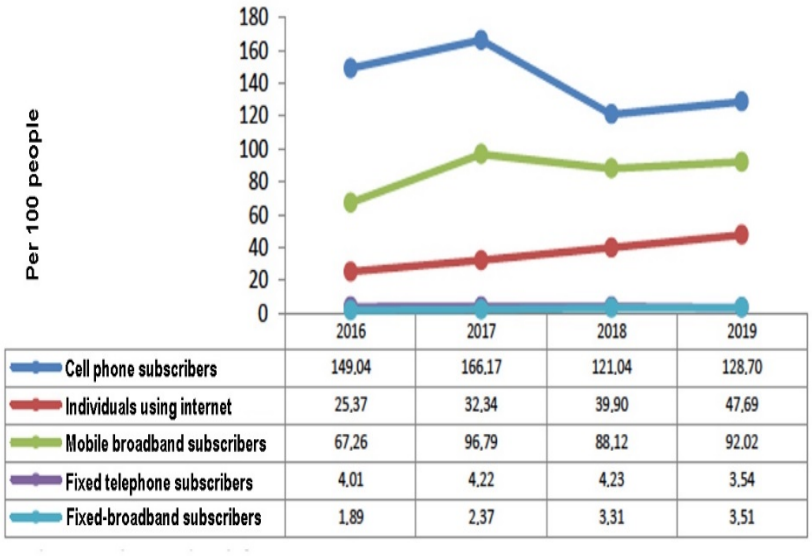
question: What are the benefits and opportunities of implementing e-Learning in the government sector in Indonesia? [11].

As an archipelagic country with three time zones, Indonesia can benefit from developing Information and Communication Technology (ICT) that does not recognize the boundaries of distance and time. As shown in Fig. **1**, from 2016 to 2019, there was an increasing trend in the utilization of ICT by the people of Indonesia. Internet users have consistently increased from 25.37 in 2016 to 47.69 in 2019. Mobile broadband subscribers also show a similar trend. Meanwhile, cellular phone subscribers decreased to 121.04 in 2018, then increased to 128.70 in 2019 [12] [13] [14].



	2016	2017	2018	2019
Cell phone subscribers	149,04	166,17	121,04	128,70
Individuals using internet	25,37	32,34	39,90	47,69
Mobile broadband subscribers	67,26	96,79	88,12	92,02
Fixed telephone subscribers	4,01	4,22	4,23	3,54
Fixed-broadband subscribers	1,89	2,37	3,31	3,51

Fig. 1. ICT Development in Indonesia in 2016-2019

The above data are related to Internet penetration, which has consistently increased from 2016 to 2019 [15] [16]. As presented in the results of a survey conducted by the Indonesian Internet Service Providers Association (APJII) in Fig. **2**, the proportion of Internet users to the total population of Indonesia was merely 51.8% in 2016, increasing to 54.68% in the following year. A sharp increase occurred in the next two years, namely by 64.8% in 2018 and 73.7% in 2019 [17] [18].

% to the population of Indonesia

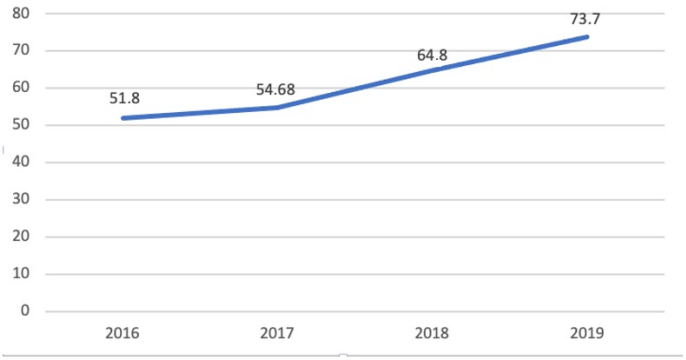


Fig. 2. Internet Penetration in Indonesia

Source: APJII (2016), APJII (2017), APJII (2020)

However, the data from Statistics Indonesia (BPS) regarding fixed telephone and fixed broadband subscribers in Figure 1 show less significant development. Indonesia faces several obstacles in developing adequate telecommunications infrastructure to support a large population distribution in a unique geographical area. Moreover, despite the increasing trend in mobile broadband users, the penetration of fixed lines and fixed broadband connection in Indonesia remains weak compared to that in neighboring countries in Asia [19] [20].

The Information and Communication Technology Development Index is an exciting indicator to observe, particularly

regarding the position of Indonesia relative to several neighboring countries and other Asian countries. Based on ITU data (2017) in Table 1, Indonesia remains below several other Asian countries in 2016 and 2017, outperforming only India. However, Indonesia improved for two consecutive years, namely 5.07 in 2018 and 5.32 in 2019, or an increase of 4.96% [21] [22].

Table 1: The Comparison of the 2016 and 2017 ICT Development Index

Country	Ranking		Score	
	2016	**2017**	**2016**	**2017**
South Korea	1	2	8.80	8.85
Singapore	20	18	7.85	8.05
Malaysia	62	63	6.22	6.38
Thailand	79	78	5.31	5.67
Philippines	100	101	4.52	4.67
Indonesia	114	111	3.38	4.33
India	138	134	2.65	3.03

Source: ITU (2017)

In addition to its unfavorable position of Indonesia relative to other countries, another challenge faced is the internal ICT Development Index as an essential indicator to observe the illustration of ICT development in various regions in Indonesia [23].

In Indonesia, there is a disparity between the eastern and western regions. Jakarta, in the part of the west, has the highest index for two consecutive years, namely 7.14 in 2018 and 7.31 in 2019, a striking contrast with the Province of Papua, whose indexes were 3.30 and 3.33 in 2018 and 2019, respectively. Western regions, including Java, Bali, and Sumatra, generally achieve high and medium indexes. Conversely, the low indexes are obtained by the eastern areas such as Papua, NTT, NTB, North Maluku, and West Sulawesi. According to BPS, this disparity tends to widen, marked by the increasing gap between the provinces. The highest and lowest ICT development index differences are 3.85 in 2018 and 3.99 in 2019.

Indonesia is currently developing telecommunications infrastructure to ensure that all villages, amounting to 83,218, can reach the 4G network by the end of 2022, as stated by the Minister of Communications and Information, Johnny G. Plate.

Network Readiness Index is one of the global indicators of the utilization of information and communication technology issued by the Portland Institute. As observed in 2019, Indonesia is ranked 76th below the Philippines, Malaysia, Korea, and Singapore, ranking 71, 32, 17, and 2, respectively.

Table 2: The Comparison of Network Readiness Index

Country	Rank	Score
Singapore	2	82.13
Korea	17	73.84
Malaysia	32	63.76
Philippines	71	47.70
Indonesia	76	46.15
India	79	44.81

N=121

Source: Dutta & Lanvin (2019)

Referring to the issue by the Portland Institute, Indonesia is vital in terms of people and impact, with scores of 85 and 81, respectively, yet weak in terms of technology and governance, with scores of only 75 and 62.

The data above show that, despite an absolute increase in information and communication technology use, Indonesia remains comparatively below several neighboring and other Asian countries.

The Challenges and Opportunities of e-Learning

The advances in information technology have encouraged the availability of e-Learning as alternative learning, including in civil servants' competence development. Many studies on e-Learning have been carried out, yet most focus on e-Learning in universities. However, in recent years, there have been several studies on the application of e-Learning in government agencies, such as studies conducted by. The numerous benefits derived from e-Learning indicate the magnitude of the opportunities for e-Learning to be an essential part of ASN competence development.

Many previous studies have documented the challenges and opportunities of e-Learning. In detail, there are seven opportunities or benefits obtained from the Implementation of e-learning, widely reported as follows:

First, e-Learning provides flexibility to its users in terms of the time and place of delivery or reception of study materials [24]; Second, e-Learning offers users easy access to a large amount of information; Third, e-Learning motivates its users to interact with other users as well as exchange and appreciate different points of view, Fourth, e-Learning saves users from financial expenses, Fifth, e-Learning provides users with the freedom to choose the most suitable method of learning, Sixth, e-Learning overcomes the limited number of teaching/academic staff. Lastly, e-Learning allows users to follow wisdom at their own pace.

Observed from previous studies on the benefits of e-Learning, there are four conclusions to draw: First, flexibility is an opportunity that can be utilized from e-Learning. Flexibility is related to time, pace, place, and learning method. This element is significantly relevant as a solution to the increasing volume and complexity of work and the rapidly changing environment. Second, e-Learning offers convenience. E-Learning allows easier and broader access to information and knowledge as learning resources. Third, e-Learning can also motivate the participants to interact, exchange ideas, and respect different points of view each other. The fourth benefit is efficiency, particularly in costs and energy for all parties, including participants, trainers, and organizers.

However, e-Learning also faces various challenges in its Implementation, particularly in developing countries. The challenges of implementing e-Learning that has been widely documented include the following: First, inadequate information and communication technology infrastructure and electricity.

Furthermore, users are financially constrained. Then, the lack of technical skills of trainers or widyaiswara in e-Learning and content development. Finally, a lack of awareness, interest, and motivation from the teachers/widyaiswara.

Various challenges above discovered in previous studies form several clusters. First, infrastructure barriers, including electricity, data communication bandwidth, and network coverage. This challenge is more pronounced in developing countries than in developed countries. Second, financial constraints. Even though the price of information and communication technology tends to decline, in general, it is still considered expensive, another more relevant reason for the context of developing countries. The third challenge is the weak superstructure related to planning, policy, and technical capacity. Fourth, inadequate support, reducing interest and motivation to apply e-Learning. As a consequence, all involved actors prefer the classical learning approach.

The Development of ASN Training in Indonesia

2012 is a crucial moment in the development of ASN training in Indonesia. During the decades to pre-2012, the model of civil servants training had not experienced any significant changes. Changes in the environment and the community's demands on the government bureaucracy put tremendous pressure on the training system then. Therefore, LAN, a government agency responsible for fostering the competence development of government human resources, achieved a breakthrough in 2012 by completely overhauling the training system in the government bureaucracy. The experiential learning paradigm applied to leadership training has successfully improved various aspects of the movement. Basic Training for Candidates for Civil Servants (CPNS) follows a similar pattern of change, namely learning through the experience of habituation of implementing fundamental values of the ASN profession at the workplace and in their respective job, in addition to classroom learning.

This experiential learning emphasizes the importance of the correlation between knowledge acquired in the classroom and practices in the real world (Kolb, 1984). The participants no longer learn independently from theory in school only but also collaboratively through direct experience in the workplace. According to Dewey (1938), this experience-based knowledge is more educating. In addition, through the experiential learning model, learning activities are directed at producing innovative solutions to problems faced in their respective work environments, for example, visitation/benchmarking activities in leadership training and actualization and habituation in CPNS Basic Training.

Competence development reform also occurs in utilizing information and communication technology in the learning process as regulated in the Regulation of LAN (PERLAN) Number 5 of 2018. However, this policy still limits e-learning to 3 hours per day as a synchronous session (PERLAN Number 8 of 2018, 2018). E-Learning is not fully utilized but instead combined with classical learning. This blended learning integrates the advantages of e-Learning with classroom interaction and participation in traditional education.

The application of e-Learning in CPNS Basic Training has increased sharply during the Covid-19 pandemic in 2020 in response to the government policy that limits physical meetings. In particular training, all classical or face-to-face learning is eliminated and transformed into a distance learning model bridged by e-Learning, both synchronously and asynchronously.

Over time, there has been a paradigm shift and reform of apparatus competence development, including the implementation model, learning methods and technology, curriculum, materials, etc. Similarly, the learning approach has applied the principle of experiential learning.

2. Methodology

This study applied a qualitative approach, aiming to explore further and interpret the challenges and opportunities of e-Learning that is still relatively new in CPNS Basic Training. Through semi-structured interviews, the data were collected from widyaiswara, namely the trainers in the context of ASN training in Indonesia. In addition, interviews were conducted with training providers directly involved in implementing e-Learning in the 2020 CPNS Basic Training. It is ascertained that the 2020 CPNS Basic Training participants are under 40 years old and belong to the millennial generation who are generally familiar with the Internet. This is the basis for selecting them as the respondents. Specifically for the 2020 CPNS Basic Training alums, the data were collected using a questionnaire inquiring about their opinions and experience in applying e-Learning in training. The data were tabulated to observe the patterns and trends in the background. The secondary data obtained from the evaluation of the Implementation of the 2020 CPNS Basic Training were also used to describe the challenges and opportunities in the performance of e-Learning in training. The data from various sources were triangulated to generate more accurate and in-depth analysis results.

3. Result

In training ASN employees, e-Learning has been utilized, such as websites, blogs, social media, and cloud storage to access and download learning materials. However, the utilization of e-Learning in the form of Learning Management Systems (LMS) is relatively new, even though it has experienced rapid development. The proliferation of LMS applications in various ministries and government agencies, as well as local governments in Indonesia, on the one hand, can be interpreted as a manifestation of the increasing new awareness of the importance of information and communication technology in supporting ASN competence development. On the other hand, this new trend that has generated numerous and varied LMS without specific standards poses a challenge to developing ASN training, which is LAN's responsibility.

Therefore, in 2019, LAN built an LMS to consolidate various existing platforms in the internal scope of the institution. According to the development team, in the long term, this LMS will also be encouraged as the reference standard for implementing e-Learning in various government agencies in Indonesia. Eventually, this LMS will be a sharing application for all government agencies to implement e-Learning.

The training in 2020 began in March, coincident with the early detection of cases of Covid-19 in Indonesia that subsequently escalated into a pandemic. The Covid-19 pandemic raised concerns that it would hinder training in 2020 since the movement had been designed and planned in the face-to-face method. As the supervisor of ASN training, LAN took immediate measures by implementing a flexible distance training model and integrating information and communication technology in the training model as a reference for all ASN training providers in Indonesia. The LMS built in 2019 can be optimally utilized in a variety of training in the form of blended learning.

Despite the relatively short preparation and design, this new training model effectively supported the Implementation of the planned training. This new model proved the adaptability of government bureaucracy and ASN, evident from their ability to learn and adapt in a digital and online work environment. As a unique experience, however, the use of this technology is not yet optimal. Several challenges should be faced supposing it is to be implemented until the new average era. This pandemic has at least opened the opportunities to achieve more optimal utilization of e-Learning in future ASN training.

The challenges and opportunities of e-Learning in this study are based on the experience of the participants, organizers, and widyaiswara in implementing the CPNS Basic Training through the LMS of LAN called ASN Unggul.

The data in Table show the participants' responses to CPNS Basic Training regarding various aspects of applying e-Learning as a learning instrument. The score ranges from 0-100, where 0 means bad and 100 means good. In general, they assess the Implementation of e-Learning as good with a score above 90, except for the benefit of the social learning feature, which obtains a slightly lower score of 88.72. The typical standard deviation proves the participants' responses are relatively consistent. The low coefficient of variation strengthens the fact that the reactions between participants in describing their experience using e-Learning are pretty compatible.

These high responses show the opportunity for e-Learning to be part of the ASN competence development at present and in the future. Even though it is relatively new, in reality, the participants have benefited from it. As they become more accustomed to using e-Learning, this technology will have more opportunities to become part of the mainstream of ASN competence development.

Interestingly, their experience related to the benefit of social learning features has a relatively low mean and the highest standard deviation and coefficient of variation. According to the developer of the LMS, this social learning feature should be helpful as it prevents the participants from feeling isolated when attending online learning from their respective places.

The social learning feature aims to emulate the basic social principles of learning. According to the LMS developer at LAN, social learning is a new feature introduced following the learning process. It explains the relatively low score from the participants since they do not have enough experience using this new feature. Another reason, as stated by one of the participants, is that widyaiswara has not consistently valued the ideas proposed in the discussion forum that is part of social learning.

Table 3: The experience of the participants of CPNS Basic Training in using e-Learning

Item	Mean	Standard Deviation	Coefficient of Variation
The quality of utilization guidelines	92.10	7.10	0.08
The ease of accessing LMS	93.82	7.05	0.08
The ease of using learning features	92.27	6.59	0.07
Systematic presentation of materials	91.02	6.99	0.08
The quality of the user interface	90.08	7.86	0.09
The benefit of social learning features such as discussion	88.72	8.55	0.10
E-Learning support for the achievement of learning objectives	91.07	7.06	0.08

N=60

4. Discussion

a. The Challenges of e-Learning

Various parties involved in organizing ASN Basic Training in 2020, particularly participants, organizers, and widyaiswara, all encounter challenges in using e-Learning. Several challenges are due to the transitional factor as it is a new experience for them, yet several are more systematic. The following is the grouping of challenges that accompany the experience of using e-Learning in the 2020 ASN Basic Training held at the ASN Cadre Development Center of LAN.

Policy

The policy is one of the most critical factors for the parties involved in implementing e-Learning. According to widyaiswara, for example, policy dramatically affects the effectiveness of their learning process because it is needed as a reference in regulating the division of tasks, obtaining rewards, and dividing authority and workload among the various parties involved. Generally, widyaiswara feels a heavier workload with learning through e-Learning. Yet, it has not been accompanied by an equivalent reward, particularly regarding the number of learning hours acknowledged. They feel that the workload for preparing teaching materials and learning plans has not received adequate recognition because only e-Learning activities are synchronous and only a maximum of three learning hours for each recognized training subject. The following is one of the opinions of widyaiswara:

"Using the name of video conferencing facility] is quite tiring. Supposing I teach more than one class, I can sit online all day in front of the computer. I'm sure the participants also feel a similar experience as they frequently convey it implicitly."

The policy, more inclined to offer recognition of synchronous learning, also impacts the participants. They generally perceive that learning through virtual meetings is too time-consuming and less attractive than classical learning in the classroom. They prefer learning through asynchronous LMS, particularly interactive and gamification-based ones. The experience of the following participant represents the alums of the CPNS Basic Training in general:

"In my opinion, online learning equaled a classical class with 8 hours of full learning is less effective because it is quite difficult to concentrate in the afternoon, combined with a significantly high level of eye fatigue. An evaluation is necessary to develop learning methods besides having a full day of online meetings."

Observed from the organizers' perspective, they encounter a higher workload due to the absence of a policy regarding the boundaries of responsibility and authority between them and widyaiswara. They argue that the party responsible for the materials should do a portion of their work. The organizers also perceive that they have many ideas and experience regarding problems and solutions as front-line officers. Yet, their ideas and expertise remain not accommodated in the policy organizing CPNS Basic Training through e-Learning.

Emotional Connection

The emotional connection seems to be a unique and essential element in the culture of ASN or even Indonesia. This element is not found in previous studies. According to widyaiswara, the emotional component of the participants is difficult to read through e-Learning, posing yet another challenge. The success of learning through e-Learning is not only observed from the quality of the materials and the Implementation. They believe the emotional connection with the

participants is essential in evaluating their commitment and learning achievement. Similarly, organizers who focus more on monitoring attitudes and behavior also consider e-Learning less able to reveal participants' " mood " despite it being an essential part of the evaluation process.

Technical Capability

According to widyaiswara, in addition to attempting to familiarize themselves with the existing technology, they also need to receive special training or guidance to master the basics of using e-Learning. A widyaiswara expresses the following statement:

"Since Zoom meetings are necessary daily, we can use the Zoom application only for easy use. There remain numerous unknown additional facilities to improve the quality of learning, and we need special training to learn about them."

Due to the low technical mastery in applying e-Learning, widyaiswara tend to only provide monotonous assignments according to their technical ability. The participants consider this less appropriate, as commented in the following:

"The schedules and assignments are excessive for distance learning, as distance learning provides more distractions. It is better to have a shorter daily lesson schedule [but] with a more feasible time to finish the assignments."

Observed from the point of view of the organizers, the capability of the participants to use technology is quite good, yet not everyone has mastered its use in learning. In terms of the technical ability of the organizers, they complain about the rapid change in the system, as presented in the following statement:

"Mastering the use of e-Learning applications requires time. However, the level of mastery obtained will be pointless should the e-Learning application change frequently."

They suggest that system development should incrementally use a similar platform to retain previous experience and knowledge.

Data Infrastructure

However, this technical challenge does not appear to be too prominent observed from the data obtained in this study. The limited comment on this issue is reflected in the following statement of an alumnus:

"The websites supporting distance learning are significantly helpful; all materials are well-conveyed even though the learning is online. The explanations are easy to understand. The frequent challenge participants and facilitators encounter is a poor network and internet connection."

The insignificant challenge related to infrastructure in this study requires explanation considering that the ICT development index of Indonesia in recent years remains below several countries in the Southeast Asian region, such as Malaysia, Thailand, and the Philippines (ITU, 2017).

b. The Opportunities of e-Learning

In general, the opportunities to apply e-Learning in the future are pretty promising, mainly because it is supported by the increasing technological development and the sharp increase in the capability of ASN employees to use technology during the Covid-19 pandemic. It is also revealed from the data obtained from alums, widyaiswara, and organizers who generally notice more of the advantages than disadvantages of applying e-Learning.

Motivational Instrument

Referring to the interview with the organizers, it is revealed that e-Learning can trigger the confidence and activeness of the participants. This is based on recording the participants' activities, such as more active discussions through the e-Learning platform than face-to-face classroom talks.

According to them, it differs from classical training, generally dominated by sure participants who intimidate or demotivate other participants. Implementing e-Learning is also motivating because it provides equal space for all participants. E-Learning offers each participant the opportunity to be actively involved without limits. However, according to widyaiswara, the active participation of the participants means an additional workload for them to evaluate and appreciate the various learning activities of the participants. This is reflected in the statement of the participant that "widyaiswara have not consistently valued the ideas proposed in the discussion forum". However, using the automatic feature available in all standard e-Learning applications, the motivational effect can still be achieved without causing too heavy a workload for widyaiswara.

In line with the experience of widyaiswara, the participants' perspective obtained through the survey reveals that they generally consider e-Learning to motivate them to interact with fellow participants and widyaiswara. In this regard, 29.6% strongly agree, 51.9% agree, and 18.5% disagree that e-Learning is motivating.

Interactivity and social learning

According to the e-Learning developer, this platform has various functions that can support interaction between fellow participants or between participants and widyaiswara and organizers. Considering the complaints of participants and widyaiswara regarding the amount of time needed for synchronous learning, social learning features that can facilitate asynchronous interactive learning can streamline the learning process in the future. Utilizing these social learning features, the advantages of classical education can be maintained. One participant states, "… the learning has progressed quite well so far, particularly the light discussion method to provide deeper understanding." This reflects the preference of the participants for interactive learning content.

The preference of the participants for social learning features is also reflected in the following statement: "Not all WI (widyaiswara) apply SCL (social learning) or group discussions." These activities are already available on the e-Learning platform and can be utilized more in the future.

According to the system developer, the discussion room is merely one of the various social learning features already available in the e-Learning platform. Various other interactive features open opportunities for e-Learning to become an instrument and a mainstream learning method in the future.

Resource Efficiency

Resources, mainly financial, are never adequate and have become a common reason for the inability to fulfill the rights of employees for competence development. The data obtained from various parties show appreciation for the opportunities to provide training to more ASN employees due to resource efficiency from the Implementation of e-Learning. For example, the organizers observe that e-Learning, not constrained by distance and time, is a solution to overcome the expensive training costs due to the geographical condition of Indonesia as an archipelagic country. Another opportunity identified by the participants is its ability to facilitate massive learning with participants from different geographic areas. Learning materials and resources can be replicated or used repeatedly, provided they are relevant without requiring additional costs and energy.

The following statement adequately represents the participants' perspective concerning the impact of resource efficiency from implementing e-Learning.

"Non-classical learning does not reduce the essence, value, and benefits of the materials taught. Even though it is carried out by distance learning, the learning process remains well, full of moral messages, and memorable for me. Hopefully, it can be better and better in the future."

The survey results of the CPNS Basic Training alum more convincingly reveal the opportunities in implementing e-Learning. All respondents believe that e-Learning facilitates them in accessing learning resources. As shown in Table , 59.3% of the alums agree, and 40.7% strongly agree that e-Learning enables accessing learning resources. The alums also consider e-Learning financially efficient, where 48.1% strongly agree, 44.4% agree, and only 7.4% disagree. Regarding whether the alums also believe that e-Learning overcomes the limited number of widyaiswara, 44.4% strongly agree, 44.4% agree, and only 11.1% disagree.

When inquired about whether e-Learning requires expensive facilities for trainees, most alumni (85.2%) answered "no," while only 14.8% agreed.

Table 4: The flexibility of e-Learning, according to the alums of the training

Statement	Strongly Disagree	Disagree	Agree	Strongly Agree
Facilitating me in accessing learning resources	0	0	59.3	40.7
Reducing my financial expenses	0	7.4	44.4	48.1
Overcoming the limited number of widyaiswara/teaching staff	0	11.1	44.4	44.4

Note: Figures are in percentage

N= 40

However, to achieve maximum efficiency, e-Learning should not only be used as a supplement to classical training. E-Learning must be an integral part of the training with a policy that emphasizes the contribution of e-Learning from any aspect to achieving learning objectives in the activity.

Flexibility

Since e-Learning is online-based and not constrained by space, distance, and time, it is considered flexible in accommodating the needs of various parties. Observed from the survey data obtained from the alums of CPNS Basic

Training, it is evident that most of them (63%) consider e-Learning as providing flexibility in place and time and in choosing ways to learn. More than half of the respondents agree, 40.7% strongly agree, and 7.4% disagree. Furthermore, the alums also generally perceive that e-Learning allows them to participate in learning according to their respective opportunities.

Table 5: The flexibility of learning through e-learning

Statement	Strongly Disagree	Disagree	Agree	Strongly Agree
E-Learning provides flexibility in terms of time and place	0	3.7	33.3	63.0
E-Learning provides the freedom to choose ways to learn	0	7.4	51.9	40.7
E-Learning allows me to learn according to my opportunities	0	7.4	48.1	44.4

Note: Figures are in percentage

N= 40

This flexibility is an excellent opportunity to apply e-Learning, considering the highly dynamic changing era that creates uncertainty, leading to the great need for learning. The flexibility in terms of time, place, and ways of learning will ensure the increasing importance of e-Learning in the future.

Data and Supporting Infrastructure

Data infrastructure such as Internet bandwidth and supporting infrastructure such as electricity are frequently considered challenges to the Implementation of information and communication technology in Indonesia, particularly in the areas located in the eastern region of this archipelagic country. However, the alums of CPNS Basic Training do not encounter this particular challenge. As shown in Table **5**6, all alums of CPNS Basic Training consider that data and supporting infrastructure are adequately available.

Table 6: Supporting Infrastructure

Statement	Strongly Disagree	Disagree	Agree	Strongly Agree
The availability of supporting infrastructure, such as electricity	0	0	25.9	74.1
Speed and stability of Internet connection	0	0	48.1	51.9

Note: Figures are in percentage

However, it should be underlined that the respondents attended the training in Jakarta, which has the best electricity supply and telecommunications infrastructure. The alums from any activity in the eastern regions will undoubtedly have a different experience.

The Capability of Widyaiswara

Even though e-Learning is relatively new for most widyaiswara, observed from the perspective of alums, they are considered to have been able to provide suitable learning support. It is a perfect opportunity considering widyaiswara is essential to Indonesia's ASN competence development system. As shown in Table , none of the alums rates the ability of widyaiswara as poor or very bad. On the other hand, the majority of the respondents (59.3%) consider that widyaiswara is capable of delivering e-Learning materials. Even 40.7% of the alums perceive that the widyaiswara is notably good at creating learning content. They also assess that widyaiswara are motivated to implement the learning through e-Learning and provide good and excellent support in the learning process through e-Learning.

Table 7: The Capability of Widyaiswara

Statement	Strongly Disagree	Disagree	Agree	Strongly Agree
The skills of widyaiswara in technical terms and creating e-Learning content	0	0	59.3	40.7
The motivation of widyaiswara in implementing learning through e-Learning	0	0	59.3	40.7
The support of widyaiswara in the Implementation of learning through e-Learning	0	0	59.3	40.7

Note: Figures are in percentage

N= 40

5. Conclusion

E-Learning has excellent potential to become an integral part of the ASN training system in Indonesia. This is evident

from the ability of widyaiswara, organizers, and trainees to adapt quickly to various elements involved in the training. Technical capabilities are a small part of the challenges faced. The more significant challenge lies in the policy and culture.

Even though this study provides an optimistic picture of the future of e-Learning in the ASN training system, the two aforementioned main challenges have a significant impact. Policy and culture are elements of the superstructure that become the precondition for the successful implementation of e-Learning. Supposing these two issues are not addressed, e-Learning does not have a solid foundation to be accepted to support its quality and effectiveness.

Therefore, to ensure that e-Learning becomes an integral part of the ASN training system, the factors of policy and culture need to be developed and harmonized with the principles of implementing technology, namely efficiency, flexibility, accountability, transparency, and eventually, the effectiveness of the supported process, in this regard learning. Policy and culture should place e-Learning as a learning supplement and an integral part of the overall learning process in ASN training.

Conflict of interest

The authors declare that there is no conflict regarding the publication of this paper.

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