

Accelerating the Adaptability of Online Learning at Course and Training Institutions in the Era of the Covid-19 Pandemic

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Abstract. The COVID-19 pandemic that has not ended requires non-formal educational institutions to adapt to distance learning or online learning so that educational practices are still carried out. This research aims to explore the adaptation of online learning in the course and training institutions in the era of the COVID-19 pandemic. This research uses descriptive methods with a qualitative approach. Data collection is done through observation, structured interviews, and documentation studies. The research findings show that the adaptation of online learning in Tasikmalaya city courses and training institutions during the COVID-19 pandemic is carried out in two ways, namely, online and offline learning. Online learning uses available learning technologies such as zoom, Google meet, internal websites for meetings, and Google classroom for assignments. In comparison, offline learning (face-to-face) is done with many provisions (for example: requiring tutors and learning residents to follow health protocols, limiting the number of learning residents present, reducing lesson hours, dividing classes into two study rooms). Blended learning is considered quite effective by institution managers in providing community services to maintain the quality of graduates during the pandemic Covid -19.

Key words: Adaptability, Online Learning, Course, Training Institutions, Covid-19 Pandemic

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INTRODUCTION

Since March 2020, the Covid-19 pandemic has spread, and there have been changes in Indonesia because of various aspects of life, including education. (Adedoyin & Soykan, 2020). The meeting time has been set in face-to-face courses, but online courses require students to participate independently and become a self-discipline challenge (Martin et al., 2020). Online classes have the flexibility of online education because they can be recorded if they cannot follow the learning (Nieuwoudt, 2020). Online learning emphasizes Internet-based courses offered in sync with indirect interaction learning between students and teachers (Aliyyah et al., 2020). This suspension began with government policies that encourage people to stay at home, maintain social distancing, and lockdown to implement restrictions on community activities that are still ongoing today.

A report from UNESCO (2020) reported that as of May 15, 2020, 158 countries worldwide have closed their educational institutions due to the rapid spread of the Corona virus Diseases. It affects nearly 70% of the student population worldwide. Social distancing is one of the health protocols used to keep students safe. Various teaching methods and learning techniques were widely adopted in odd semesters when online learning began to be introduced. The Covid-19 pandemic pioneered digital transformation in Non-Formal education.

As a result, managerial regulations are presented quickly in limited quantities (Adedoyin & Soykan, 2020). Online learning was chosen as one of the alternatives to avoid the decline in the quality of graduates and maintain the existence of institutions in the community. Jia et al. (2020) reported that the COVID-19 outbreak led all schools and universities to switch to online learning immediately. There are recommendations for several things, including responding to social distancing measures.

Academics, teachers need to implement several curriculum changes. Curriculum changes in the future are needed to understand and evaluate the direction of transformative learning. In addition, changes in the learning situation in education will impact the present and the future. The good narrative is changing due to the global closure of schools as part of measures to curb the transmission of Covid-19, distance learning platforms shift instructional activities in the attitudes of administrators, instructors, and learners about the importance of online learning (Adedoyin & Soykan, 2020). The COVID-19 pandemic has prompted policymakers to look for alternatives to traditional-based learning systems in physical classrooms to use free communication platforms (Sobaih et al., 2020). With the suspension of face-to-face classes, courses must be delivered online exclusively for the combination of instruction modes that can be used in online learning through asynchronous and synchronous (Moorhouse,

2020). Courses taught in synchronous online modalities allow students to attend online classes, in real-time, at a set time (Buckley, 2020). Students and teachers carry distance learning through presentations, discussions, exchanging messages through chat boxes and writing on the board (Nieuwoudt, 2020). Tools using video, WhatsApp allows more flexibility in thinking and responding to time to create someone's persona (Rapanta et al., 2020). However, asynchronous technology involves significant delays in the time between instruction and its acceptance, so asynchronous learning is less interactive (Khalil et al., 2020). Therefore, the transfer of face-to-face learning to online learning must still be implemented. At the same time, asynchronous technology involves significant delays in the time between instructions and their acceptance so that asynchronous learning is less interactive. Remember the importance of education. In addition, the pandemic also led to the closure of schools, colleges, and courses, resulting in stressful events for educational educators with very limited options (Khalil et al., 2020). Online learning also needs to be supported by various policies from various parties to support the achievement of educational goals, especially in non-formal educational institutions. Online learning was used before the Coronavirus Diseases period in providing distance education services on a large scale through information and communication technology, offering to improve the quality of learning. Educators can choose from informal online learning platforms such as social networking sites to formal online learning platforms as a learning management system used for teaching and learning.

Long before the COVID-19 pandemic occurred, online learning was used to provide distance learning education services by covering large-scale students through information and communication technology (ICT). ICT offers a wide range of possibilities to improve the quality of learning. Through today's online learning platforms, educators can choose from informal online learning platforms such as social networking sites to formal online learning platforms such as learning management systems for teaching and learning (Zulkifli et al., 2021). The media used in online learning are Microsoft Teams, Google meet, Edmodo, and Moodle as a learning management system. In addition, solutions using Zoom, Skype for business, WebEx, and Adobe connect (Mukhtar et al., 2020).

The sudden switch to online learning is challenging and stressful for instructors. Educators related to distance education have some concerns (Etemi et al., 2021). Therefore learning in the course institution must immediately adjust all course programs previously designed for face-to-face instruction to fit the online learning instruction. Furthermore, before starting an online course, students must have the technical requirements to access online learning from home (Schlenz et al., 2020). The literature on distance learn-

ing or online learning shows no consistent definition in providing understanding. But we limit the definition of online learning starting from the concept of distance learning. It is mentioned that when computer media becomes a means of education, this definition is also identified with distance learning, both using print and electronic media. Define distance education by using the medium of experience in generating learning opportunities. We agree that advances in information and communication technology in education, namely online learning. Online learning is face-to-face learning between educators and learners, but it is done online. Learning is done through video conferencing, e-learning, or distance learning. Therefore, in this study, learning in the network is interpreted as online learning.

The challenges in online learning are not only related to adaptation to educational technologies, such as the ability of instructors or students to access online sites and use computers (Kim, 2020). However, there are challenges, such as the stigma of graduate quality. Online learning often carries a lower quality stigma than face-to-face learning because online learning brings negative effects such as prolonged electronic exposure, boredom, nervousness, and lack of understanding of materials, making it psychologically unhealthy (Bolotov et al., 2021). destroy the stigma, and opportunity efforts are had to strengthen the first-class of graduates, despite the fact that learning is achieved on-line. regardless of the mastering medium used, academic programs must be designed similarly among on line and conventional getting to know.

Technological advances in pandemic conditions indicate opportunities for the use of learning technology. The findings of the success of online learning or the similarity of graduate quality between online learning and offline learning have not been fully revealed. Currently, distance learning programs are being hotly discussed regarding the quality of education. Recent findings report that online course participants become cooperative like their peers in conventional learning formats. In addition, participants' level of interest certainly remains high during online classes (Jia et al., 2020). Online courses require students to consider new ways to prepare, organize, engage, and complement requirements that call on students to take advantage of higher levels of self-reliance and direction (Martin et al., 2020). The results show that the online classroom approach can be just as effective as conventional instructional instruction, and students remain engaged during online classes. The implementation of Large-Scale Social Restrictions (PSBB) by the Indonesian government has had an impact on the routines of the community and students in the distance learning system or School from Home (SFH) (Aliyyah et al., 2020). Although teachers encourage student participation through weekly questions and topics, such as face-to-face classes.

Although teachers have encouraged student participation through weekly questions and topics, in face-to-face classes, online learning has decreased significantly. Judging from the interaction and participation of students on online platforms dropped dramatically. From 95% of interactions in the first week to 37% in the third week and no further interaction from the fifth week onwards. So the results are disappointing. Therefore, conventional learning is still needed during the pandemic, but it needs careful implementation. So keep in mind how great the advancement of learning technology is. Which has advantages and disadvantages, so conventional learning is still needed. Face-to-face learning is the best learning experience ever and cannot be completely replaced by technological advances. A large survey of 40,000 students conducted by the EDUCAUSE analysis and research Centre revealed that 70% prefer face-to-face learning. This model was chosen because it includes different technological factors and complements the explanatory model in online courses (Lakhali et al., 2021). To improve the competence of trainees in the course, an institution needs to develop learning models (Herwina et al., 2019). Online learning is designed as an adaptive endeavour with education also chosen as an alternative to avoid dire consequences for universities as educational institutions, e.g., consolidation and closure.

In addition, many teaching academics are rapidly implementing some changes to their teaching, including changes that allow the realization of online teaching. To contain the spread of the pandemic, the university suspended all face-to-face classes in February 2020. Online learning is more instructed to be used throughout the university to avoid the spread of a pandemic. As a result, all universities were forced to convert all face-to-face courses to online classes. Switching to online learning is challenging and stressful for instructors, and all courses are designed for face-to-face instruction to fit online (Jia et al., 2020). Adaptability is stronger than other approaches (Feng et al., 2020). Most of the teaching changes related to tools or techniques, such as synchronous tutorials delivered in video meeting rooms. References related to online learning adaptations in formal and non-formal educational institutions in Indonesia have not been found much. Therefore, this article aims to explore the adaptation of online learning carried out by non-formal educational institutions (especially courses and training) in the era of the COVID-19 pandemic.

METHODS

This research used qualitative research methods with a descriptive approach. In a qualitative descriptive approach, information or data is collected, formed from words and images, not numbers. When there are numbers, it just supports. This study explores the adaptation of online learning in the course and training in-

stitutions in the era of the COVID-19 pandemic. This research provides a scientific, simple, and objective method for training institutions during the training process (Tsai et al., 2020). This study's data collection techniques use interviews, observations (observations), and documentation studies. Techniques of collecting key data using interviews are reinforced with observation techniques and documentation. In-depth interviews are used as a primary data collection technique, then reinforced and confirmed by observation and documentation techniques. The research was conducted from July to August 2021. The determination of study participants is carried out through purposive sampling techniques. Some managers, tutors, and learners expressed a willingness to participate in the study. Information about their knowledge and perception of the pandemic and understanding the challenges is beneficial for the training institution (Isiekwe et al., 2021). A total of forty-one questions were asked from the study participants. Each participant conducted an in-depth interview for 55 minutes to each participant, considering that health protocols were important to observe. Purposive sampling selects appropriate participants who will generate insight into the problem under investigation rather than empirical generalizations (Tusiime et al., 2020).

Researchers use purposive sampling techniques to choose institutions that still exist to provide educational services and course training even though they are still in the era of the COVID-19 pandemic. The study participants numbered 18 people divided into three types: primary data (institutional managers and tutors) and secondary data (learners). The participants of 18 studies were representatives of six non-formal educational institutions in Tasikmalaya City that were still studying in the pandemic era. Based on our analysis, we discuss how the absorption of sustainability-oriented competencies has the potential to be accelerated in training (Metelerkamp et al., 2020). Data validity is a triangulation of data sources, namely the three parties who focus on data collection in conducting research. Data analysis uses qualitative procedures ranging from data reduction, display, and verification to conclusions. To test the credibility of the data, researchers used data source triangulation, which means that researchers compare information obtained from one source with another.

RESULTS AND DISCUSSION

Courses and training are non-formal education that requires face-to-face learning. Learning must be located during the current pandemic conditions, from face-to-face to online learning. Managers are technically aware of the support from the government for non-formal educational institutions realized by distributing learning quotas for students for free but not optimally (Kang & Kim, 2020). The course institution's assign-

ments plan recommends that the learner verify his academic level, subjects and grades to their graduate, presence and credit hours (Tilahun & Sekeroglu, 2020).

This learning quota program is considered a form of government support for educational institutions (both formal and non-formal) to introduce and facilitate online learning for students. Government policies governing the management of non-formal educational institutions during the pandemic, especially, are not yet available. Similarly, the operational standards of educational institutions in the pandemic era of professional organizations and internal institutions also do not exist. Nevertheless, different countries and cultures have well received the course. An editorial highlights the role of the course in the development of personal skills, strengthening community action (Bollig et al., 2021).

Therefore, the managers of non-formal educational institutions develop strategies as objectively as possible so that learning is still carried out. Alternative to the implementation of learning during the pandemic to keep going, management refers to the SOP made by the government before the pandemic. Managers and tutors then modified the internal SOP from the government by tightening health protocols, namely 5M. In general, institutional governance and learning still refer to the existing curriculum, but tutors modify the learning patterns in two types: online and offline learning. To avoid closure and bankruptcy, course and training institutions take learning strategies that use two alternatives combining online and offline learning. This learning must pay attention to health protocols. What is needed in face-to-face intense between instructors and learners. Learning includes socio-emotional, cognitive, language, motor, and adaptability to life (Rogers et al., 2020).

As a result of the report of COVID-19 cases in Tasikmalaya City that were under control, the manager tried to divide learning into two methods, namely online and offline. Online learning is carried out at the beginning until the introductory material is completed. Then, in contrast, it is carried out face-to-face or offline concerning health protocols for practice. Examples of online and offline learning adaptations carried out by research institutions are in Table 1.

Table 1. Research Results

Learning Activities	Adaptation of Learning Done
Online	The online learning meeting schedule is done 3x meetings in 1 week Develop interesting learning methods during online learning Utilizing the available learning technology to make it easier for citizens to learn Utilizing social media as an additional learning medium

Offline / Face-to-face	Developing available learning media, following the material needs and abilities of citizens to learn For recruitment of prospective citizens to learn institutions. Utilizing social media as a promotional medium Schedule face-to-face meetings 1x in 1 week 1x maximum meeting 50 minutes in 1 JP the learning system rotates according to the number of learners The manager prepares a learning place in facilitation by completing health protocols, which instructors and learners will use (for example, providing hand washing in running water, health soap, hand sanitizer, and mask supplies) Modifying pre-existing government learning guidelines tailored to the current learning environment situation Motivating learning citizens to be able to access and make the best use of learning media
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Based on the table above, information was obtained that the adaptation of online learning in the path and training institutions of Tasikmalaya City during the COVID-19 pandemic was carried out in two ways, namely online and offline learning. Online learning uses available learning technologies such as zoom, Google meet, internal websites for meetings, and Google classroom for tasks. The benefits of the high flexibility of form adaptability, structural integrity, and excellent mechanical stability are realized through easy-to-apply technology (Dong et al., 2020). In comparison, offline learning (face-to-face) is done with many provisions (for example: requiring tutors and learning residents to follow health protocols, limiting the number of learning residents present, reducing lesson hours, dividing classes into two study rooms). These two learning alternatives are strategies considered quite effective by institution managers in continuing education services for the community. This strategy is designed with various considerations for the sake of institutions. Strategy is used to maintain the quality of graduates despite the vigilance of the spread of COVID-19.

Online Learning

The existence of an online learning system is one of the solutions to problems related to the imbalance of educational resources and Internet technology, which contributes greatly to this imbalance (Evangelista, 2021). Online learning uses available learning technol-

ogies such as zoom, Google meetings, online meetings, and Google classroom for tasks. Online meetings are focused on providing material or theory so that face-to-face learning is focused on practice or practice. In our survey, learning citizens were asked about their attitudes towards various online learning, including their satisfaction with the organization and institutions' support after cancelling classes at educational institutions (Aristovnik et al., 2020). The benefits of learning technology make it easier for learning residents. The manager also teaches tutors to actively use social media as a medium for institutional promotion to recruit prospective learning citizens (such as FB, WA, IG, internal websites, YouTube, and TikTok). The manager acts as director, supervisor, and tutor leader in carrying out learning. Many managers direct tutors to develop interesting learning methods during online learning, utilize available learning technology, utilize social media as other learning media, and develop available learning media according to citizens' material needs and learning abilities. In addition, the manager also teaches tutors to be active in utilizing social media as a promotional medium for institutions to recruit prospective learning citizens (such as FB, WA, IG, internal websites, YouTube, and TikTok).

Offline Learning

Offline learning is adjusted to many provisions, requiring tutors and residents to learn to follow health protocols, limiting the number of learning citizens who attend, reducing lesson hours, and dividing classes between two students. In face-to-face (offline), learning is carried out with various considerations related to local government policies, namely social distancing. Face-to-face learning is arranged to follow the recommendations of health protocols from the government. Online learning design approaches have been operationalized in various systems and models, drawing on various design principles. Studies show various benefits, limitations and recommendations for online learning during the COVID-19 pandemic (Mukhtar et al., 2020; Rapanta et al., 2020). Courses are learning designed to be face-to-face, so most of the implementation of learning is practice. In the classroom, the manager arranges the presence of learning citizens in one meeting, reduces the duration of lesson hours to 50 minutes at each meeting, divides the class into two rumbles. Two online and offline learning strategies are presented due to the consequences of school delays. Educational institutions worldwide are tasked with implementing alternative interventions to continue the teaching-learning process amid school closures. One of the crisis management plans made by internal courses and training institutions in Tasikmalaya City resulted from mapping related to the initial strategy in dealing with the crisis. The manager's role in mapping these two strategies is quite large because, indirectly, they are actors in the learning adaptations carried out. The

manager conducts various cooperations so that learning is still carried out despite facing various obstacles. At the pandemic's beginning, they agreed to follow government policies that eliminate all learning. However, in honing the learning skills of students of exchange rate institutions and training institutions, offline and online learning activities are still carried out because this skill is needed. Not only is that, the efforts made by managers in overcoming the crisis to strengthen the understanding of the current conditions,

The socio-economic impact of the COVID-19 pandemic on the implementation of non-formal education and the consequences of non-formal educational institutions' response to policies remain unknown.

The impact of this pandemic on education has not been widely documented by literature, especially in non-formal educational institutions. However, managers of non-formal educational institutions can respond responsively to this problem. In addition to building the cohesiveness of the institution's internal team by improving its tasks and functions, learning remains optimal. Managers build many communication networks with fellow managers, professional organizations, and governments to understand how technical learning is suitable for the pandemic.

Furthermore, agency managers continue to make improvements related to facilities and infrastructures that support learning, so it is expected that when the pandemic ends, the institution will be ready with all existing changes without disrupting the course of learning. For the community can be used. However, in practice, it requires the ability to adapt to new circumstances (Mölder et al., 2021).

The COVID-19 pandemic has led to dramatic changes in the way it teaches. Many unplanned and unprecedented educational changes have changed the work of many teachers in many aspects. Teachers need to find ways to connect with the student and quickly switch to an unfamiliar mode of teaching, which can be called distance, online, or virtual learning. Teachers are challenged to provide a meaningful educational experience to all their students (Kaden, 2020). In meeting social distancing and diverse learning needs, different modes of teaching and learning have been adopted. At this time, all formal and non-formal educational institutions have used digital media to carry out online learning directed by age tutors to build more interactive learning and build feedback in learning. However, some tutors who do not understand technology (IT Savy) choose to use digital media that is easier to use, such as instant messengers such as WhatsApp or Telegram, in providing learning (Chung et al., 2020). Learning is centred on problems and supported by clear explanations. Mention that teaching presence has been found to affect learner learning positively. For example, tutors try to take advantage of the available learning technology to make it easier for citizens to learn (video tutorials and recording teaching materi-

als). Video tutorials and recordings of this teaching material can be replayed by study residents, thus allowing them to practice in their respective homes. It illustrates that all parties involved in learning are both citizen tutors learning and managers are cooperative in engaging themselves in online learning so that this can encourage the success of online learning. In line with previous findings by Jia et al. (2020), who reported that five key factors are driving their involvement in online reverse classes, namely: interaction, active learning with feedback, problem-focused learning then supported by clear explanations and real-life examples, teaching variations, and teacher attributes (such as humour, care, commitment, and knowledge).

Learning in the pandemic era inevitably requires managers and tutors to be creative and innovative in directing digital media to learn and promote so that the content presented can attract students and the public to learn. All participating institutions' use of digital media illustrates that the managers of non-formal educational institutions in Tasikmalaya City are already digital literacy literate. Therefore, they are not so difficult in carrying out online learning. In addition, they also agreed that obstacles in carrying out online learning are always related to signal and quota interference. In line with Kern et al. (2018), digital literacy is a way of reading, writing, and communicating using digital technology (for example, using tools and devices). The meaning of literacy is also experiencing literacy development from literacy to information literacy or digital literacy. UNESCO (2011) divides literacy into five types: basic literacy, library literacy, technological literacy, media literacy, and visual literacy. Overall, the results of this study show that the adaptations made by institution managers and tutors should be appreciated. However, the changes made are mostly to maintain the teaching plan established before the pandemic, then utilize learning technology as an alternative.

Today, especially in developed countries, teaching is increasingly delivered asynchronously through online learning. Educators face new challenges and find ways to maintain the rigour and quality of the content (Scutelnicu et al., 2019). Online learning educators can devise strategies to resize groups to promote social presence in asynchronous online discussions (Wang, 2021).

Asynchronous learning is independent learning based on text without having to be attended directly by tutors, and there are no restrictions on time, place and class (Mullen, 2020). While synchronous e-learning is hands-on, real-time learning is facilitated through the Web and learning-oriented interactions. Online learning in developing countries still finds a variety of obstacles, so learning still prioritizes conventional teaching. Initially, online is felt to add another level of cognitive load if a person has to relearn how to access the course component while studying. However, this burden can be alleviated when course components are

consistently presented and designed. Such a universal course framework can benefit learners and instructors in several ways. First, the course template created can increase the learning and satisfaction of learning residents because the online environment is well organized and easy. As a result, students stay organized in learning and increase student engagement and completion. Second, online courses can balance the technical skills possessed by instructors and learners who have the potential to increase satisfaction and high student performance. Third, the existence of online courses can contribute to creating an online learning community where a consistent course structure can build expectations and narrow space to exchange ideas.

Offline learning is designed as an alternative to learning related to the quality of graduates is also related to the limitations of knowledge in utilizing technology. The limitations of knowledge in utilizing technology affect the involvement of learning citizens in learning. According to Hew (2018), student engagement is necessary to promote positive student learning. Therefore, continuous adaptation is needed to improve the approach andragogically further, considering that adults dominate residents studying at LKP (Institute of Courses and training). Most citizens studying in the course program are adults with stronger participatory desires than adolescent learning citizens.

The COVID-19 pandemic has expanded and increased, causing economic and social losses. Structural changes in education will occur as one of the impacts of this pandemic (O'Shea et al., 2021). In the aspect of education, it is closely related to the form of learning activities carried out. The form of pandemic learning activities is divided into two types, namely online learning, and offline learning. Moorhouse (2020) mentioned that learning is delivered online and offline as an alternative to the suspension of offline classes caused by the COVID-19 pandemic. Course and training institutions must provide ITE training to tutors to support online learning. This requirement is useful as a form of preparation to face the challenges of online learning in the future. The change supports previous findings that training should be given to tutors to master ITE so that they are prepared to give online courses in the event of a health emergency. Although online teaching is not a new way of delivery, there is always the possibility that some teachers who are not tech-savvy will not be able to cope with this mode. Before the pandemic, several studies reported the difficulties teachers faced in creating and implementing courses online. Course learning and training are designed to be face-to-face so that face-to-face learning is carried out while still paying attention to environmental conditions and government policies during the pandemic. Courses are formed to be delivered face-to-face with tutors acting as facilitators in dialogically conducted classes. Course learning and training require face-to-face methods to build communication and participation

between learning citizens and tutor-learning citizens. Communication between learning citizens who are present through two different learning methods is a challenge for all parties, including learning citizens. There are times when offline attendance (face-to-face) is more in demand by the learning citizens who are present than in online learning. Students who participate in online learning are relatively experiencing technical problems such as weather, signals, and quota crises. On the other hand, students appreciate that leaders provide various factors to strengthen offline learning services.

CONCLUSION

Adaptation of online learning in the course and training institutions during the COVID-19 pandemic is carried out in two ways, namely online and offline learning. Online learning uses available learning technologies such as zoom, Google meet, internal websites for meetings, and Google classroom for tasks. In comparison, offline learning (face-to-face) is done with many provisions (for example: requiring tutors and residents to learn to follow health protocols, limiting the number of learning residents attending, reducing lesson hours, dividing classes into two study rooms. Stakeholders and the community also have a role in reinforcing managers of non-formal educational institutions at the regional level to continue to provide educational services in the pandemic era. The adaptation of online and offline learning as an alternative to learning during the pandemic is considered effective in providing educational services amid the limitations of various policies. So that the implementation of education to support lifelong learning can be realized without significant obstacles. This strategy is expected to be evaluated and possible so that future exploration strategies can be seriously designed. The picture of learning strategies contained in the results of this study is expected to be used as reference material for education policymakers, institution managers to tutors to have readiness in dealing with the COVID-19 pandemic or other health emergencies. Recommendations on the research include (1) Adaptation of online learning in non-formal educational institutions is important to continue to be fostered and supported through various policies from the government so that managers of non-formal educational institutions survive in facing the crisis due to the COVID-19 pandemic. (2) There need to be specific guidelines for implementing learning in the pandemic era so that managers do not have difficulty determining learning strategies by the needs of learning citizens and graduate users (industrial world). (3) Information Technology training is needed for tutors and managers of non-formal educational institutions as reinforcement in designing and utilizing digital media as a learning resource.

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