



Digital Learning Culture in The Pandemic Period for Adults at The Community Learning Center

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Abstract

The Community Learning Center (CLC) as a community education unit, has a local, participatory approach to program requirements and implementation. During the COVID-19 pandemic, all educational learning unit activities in Bandung were directed using distance learning channels, utilizing the internet as a learning channel. However, this pandemic is a global problem with fluctuating and urgent developments, so the readiness of educational units is a problem because most of the population studying CLC are adults of school age. This research used a quantitative descriptive approach with a survey method to 43 CLC institutions in Bandung City with 228 people as research respondents. The research results show that CLC has facilitated citizens' learning to discuss by providing Zoom meetings, Google Meet and WhatsApp services as learning channels. In their learning system, digital-based adult learning education has been implemented in CLCs throughout Bandung City. However, several CLCs are still needed in line with digitalization readiness. The inhibiting factor is that residents studying in the adult digital immigrant category still need help from someone close to them to operate digital devices. This research implies that technology is not only used by the digital native generation (17-34 years), but also by the digital immigrant generation (45-65 years old), even though they must be accompanied by someone close to them.

INTRODUCTION

The digital era has media that have made it easier for people to receive information faster (Kimme Hea, 2014; Tennant, 1998). The increasingly sophisticated digital technology makes major changes to the world, with the birth of various kinds of digital media that are increasingly emerging. Various groups have been facilitated in accessing information through many ways, and can enjoy the facilities of digital technology freely and in control. The application of the ALE (Adult Learning and Education) model is mostly carried out by community education units, namely as learning innovations by utilizing digital access.

The implementation of community education is carried out at the Community Learning Center or what we know as CLC, or known as Pusat Kegiatan Belajar Masyarakat (PKBM) in Indonesia, which was present amid the national socio-economic crisis in 1998. The presence of CLC has a fairly long background. The facts show that formal education and the school system are

insufficient to answer the various problems the community faces. This can be seen from the low level of public education, the high level of illiteracy for adults, the high unemployment rate, the high poverty level, and so on. The White Paper on adult education consider public education as an ideology, namely "a process of communal education towards empowerment, both at the individual and collective levels. It is an interactive process, not only in terms of content, but also in terms of methodology and decision making" (Connolly, 2003)

However, at this time a more in-depth study is needed about how the transformation of conventional learning culture towards digital can be implemented effectively, especially during the pandemic (Christopoulos & Sprangers, 2021; Sarfraz et al., 2022). The Community Learning Center as a community education institution needs to understand the digital learning climate in providing easy access to the community itself. To make these changes, contributions from experts and related parties are very much needed.

The specific objectives of this study

include: 1) Analyzing the digital literacy of students in the community education unit, 2) Describe the implementation of the andragogy approach that is integrated with digital learning in the community education unit 3) Describe the supporting and inhibiting factors for the implementation of the Andragogy approach that is integrated with digital learning in the community education unit. community education unit. This research was conducted for 6 months by applying a descriptive quantitative approach with a survey method. The implementation of public education in the context of digital literacy needs to be explored more deeply.

METHODS

This study uses a descriptive quantitative approach with a survey method to 43 CLC institutions in the city of Bandung with a total of 228 learning citizens as respondents. The method applied in this research is the survey method. Survey research examines large and small populations (universes) by selecting and examining selected samples from that population, to find the incidence, distribution, and relative interrelation of the variables (Guillemette, 2003). Used to solve actual large-scale issues with a very large population, so a large sample size is needed. But the measurement of the variables is simpler with a simple and short instrument. In this study, a descriptive survey was used to determine the implementation of Adult Learning Education (ALE) in the digital era by the community education unit.

This research was carried out at a community empowerment institution, namely CLC institutions in Indonesia, especially in the city of Bandung, West Java. The research subjects consisted of program managers, instructors and learning residents, from 43 CLC in the city of Bandung. Research informants the considerations of the researcher in determining these participants include: 1) knowing or familiar with community empowerment programs in their area, being able to describe the empirical conditions surrounding the program, 2) familiar with minimal smartphone technology, 3) mastering the management of community empowerment programs. Data collection techniques for the initial study and research implementation used included 1) participation observation, 2) interviews, 3) documentation studies, 4) questionnaires (Lune & Berg, 2017)

RESULTS AND DISCUSSION

The CLC program in the city of Bandung tends to organize community education programs that have opportunities for industrial and urban needs. Some examples of program implementation in urban-based CLC are equality education, sewing training, culinary training, bridal makeup, hairdressing, women's empowerment training, Community Reading Gardens, industrial training, waste management and others.

The CLC philosophy in a nutshell is from, by and for the community. This means that CLC is a Community Based Education Institution. The definition of community-based education, that is a process that is planned, carried out with the motto of, by, for and with the community aimed at responding to challenges, opportunities that exist in the community and tends to be futuristic (Fahimah et al., 2023; Santoso et al., 2023). This can be interpreted that education from, by, for and with the community is the foundation as well as the principle in community-based education. Researchers assume that what becomes a guide or guide in the implementation of programs that are born from, by and for the community always departs from the needs and desires of the community, not the government's decision.

By acronym CLC means Community Learning Center. The meaning of this name can explain the philosophy of CLC. This can be explained in more detail as follows: a) Community, means that CLC is a joint effort of a community to advance itself together in accordance with the standards of society's own idealization of the meaning of life. Thus, the characteristics of a community will be very thick in coloring a CLC both in terms of its objectives, the choice and design of programs and activities carried out, as well as the culture that is developed and inspired in its leadership and institutional management. b) Learning means that various activities held in CLC must be activities that are able to create a transformation process and increase the capacity and behavior of community members in a more positive direction. Learning can be done by everyone throughout his life at every opportunity. c) Center, means that the implementation of CLC must be well managed and institutionalized. This is very important for the effectiveness of achieving goals, the quality of implementing programs, efficient use of resources, synergy between various programs and the sustainability of the existence of CLC itself.

Based on the CLC conditions mentioned

above, research related to the digitalization of andragogy aims to determine the profile of the use of technology used by adults. The total number of institutions that were sampled were 43 institutions and 228 learning residents, as follows.

CLC for the sake of efficiency and effectiveness of implementation, the practice is not rigid, it can be more flexible. The word 'community' is also to distinguish dichotomously with government. This means that CLC should belong to the community, not to the government. The government's contribution in supporting and facilitating the sustainability and development of CLC may be much larger than the community's contribution in terms of quantity, but all of them must be positioned within the framework of support, not taking over the responsibility of the community.

Profile of learning citizens using technology in CLC

General description of respondents can be seen in the visualization of Figure 1 as follows.

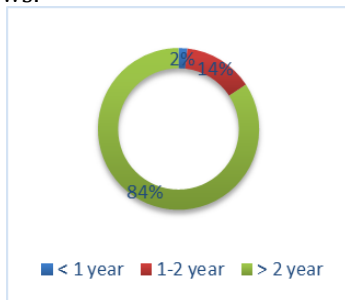


Figure 1. Technology User Profile Based on Internet Access Duration

Based on Figure 1, the profile of technology users based on the duration of accessing the internet, the majority have been for a long time or more than 2 years. Thus, learning residents have become accustomed to using the internet for their daily needs, although there are some adult learning residents who easily adapt to new technology, or vice versa.

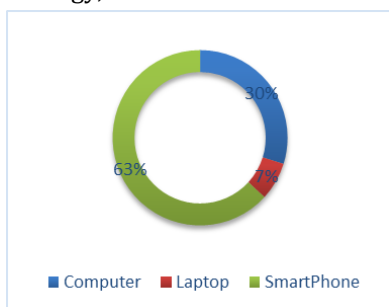


Figure 2. Technology User Profile Based on Internet Access Media

Based on Figure 2, profiles of technology users based on internet access media, the majority use smartphones (63%) and computers (30%). So, learning residents have used smartphones a lot for various needs and activities, including studying at CLC. Learning activities can be integrated more functionally if they are *compatible* with smartphones.

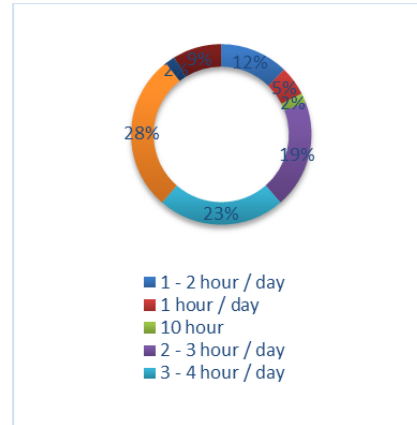


Figure 3. Technology User Profile Based on Average Length of Internet Access/Day

Based on Figure 3, the profile of technology users based on the average length of internet access / day shows the most time is 10 hours / day (28%), then 3-4 hours / day (23%) and 2-3 hours / day (19%) . So, if you look at the duration of using the internet or accessing the internet, learning residents are included in the frequent category, because the duration of time is quite long in using or utilizing technology.

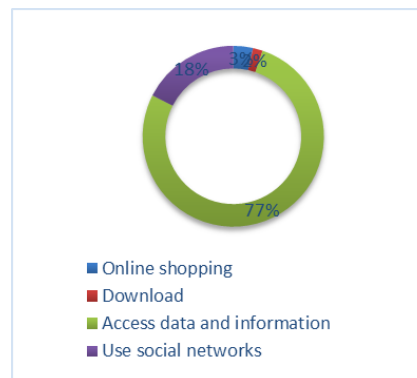


Figure 4. Technology User Profile Based on the Priority of Internet Access Needs

Based on Figure 4, profiles of technology users based on priority needs to access the internet are used to access data and information (77%) and use social networks (18%). So, the need for learning is very appropriate if it is integrated with internet access and its application, because learning residents are used to it.

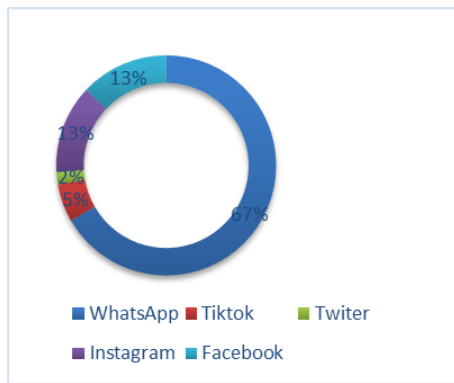


Figure 5. Technology User Profile Based on Social Media Account Ownership

Based on Figure 5 shows that the profile of technology users is based on the ownership of social media accounts whatsapp (67%) and Instagram (13%). Whatsapp as a social media application that can be used in independent learning for learning citizens, because it is available for sending files, texts, videos and can be integrated with other features such as google form, file links etc.

Integrated andragogy approach with CLC digital learning

The measure used in this study is a measure of central tendency in the form of a summary number that represents one value in the distribution of scores. The data used is the Mean to describe the responses of all respondents to the items on the instrument, namely through the total score divided by the number of scores. In addition, the scores that appear most frequently are displayed in the score list. This research was conducted at a community education institution, namely CLC throughout the city of Bandung with a total response of 228 learning residents from 43 CLC. The instrument used was a questionnaire distributed to 43 CLCs to measure the application of learning in CLC. Then the interview technique was carried out to support the depth of the qualitative research results.

Then tabulated and the results are summarized in the form of interval distance with the formula below:

$$\begin{aligned} \text{Minimum Score} &= \text{Minimum Score} \times \text{Number of Respondents} \\ &= 1 \times 228 \\ &= 228 \end{aligned}$$

$$\begin{aligned} \text{Maximum Score} &= \text{Weighted score} \times \text{Number of Respondents} \\ &= 5 \times 228 \\ &= 1140 \end{aligned}$$

$$\text{Difference} = \text{Maximum Score} - \text{Minimum Score}$$

$$\begin{aligned} &= 1140 - 228 \\ &= 912 \\ \text{Distance Interval} &= \text{Interval: Level (4)} \\ &= 912 : 4 \\ &= 228 \end{aligned}$$

Interval distance for 228 respondents. The minimum score (minimum score x number of respondents) is 228. Meanwhile, the maximum score (weighted score x number of respondents) is 1140. There is a difference (maximum score - minimum score) of 912, while for the interval distance (interval: level) is 228.

This research on the application of digital-based adult learning education obtained 228 respondents from 43 CLC in the City of Bandung. Researchers made several indicators to achieve research objectives related to the implementation of digital-based adult learning education in Indonesia. There are several ALE-based learning indicators proposed by Driscoll (2010) those shown in Figure 6 below:

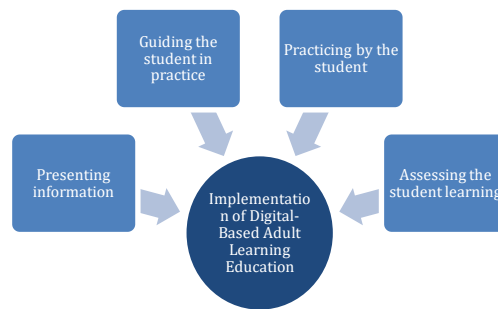


Figure 6. Adult-Based Learning Indicators

With an interval of 228 in each category, the following is an illustration of the distribution of the total score of respondents regarding presenting information on digital-based adult learning education in the form of a continuum line in Figure 7 below:



Figure 7. Total Score of Presenting Information Responses

Based on the results of calculations by looking at the continuum line in Figure 7, the average score of respondents' responses regarding presenting information is obtained a value of 820 and in the classification of intervals the score is in the good category. Respondents considered that CLC had provided material according to the needs of the learning community. The learning process takes place cooperatively, participatively, and

collaboratively.

Further data from the results of interviews with CLC managers, learning materials provided in CLC are adjusted to the learning needs of the community. This is obtained from the results of the learning needs analysis conducted through interviews with every learning citizen who wants to register himself to CLC. The results of the interviews also show that educators involve learning citizens in the learning process with a digital approach. The digital approach was carried out as a result of adaptation to the Covid-19 pandemic. The digital approach taken is like a long-distance communication medium between educators and learning citizens.

Then the next indicator is guiding the student in practice in digital-based adult learning education in the total score of respondents' responses in the form of a continuum in Figure 8 below:



Figure 8. Total Score of Guiding the Student in Practice Responses

Figure 8 shows the average score of respondents' responses regarding guiding the student in practice, obtained a value of 846 which is included in the classification of the entry score interval in good. CLC has facilitated the citizens of learning to discuss. CLC also provides interesting exercises and quizzes digitally.

Interviews about guiding the student in practice in the learning process at CLC, often found learning residents who have difficulty in the digital learning process. In overcoming this, various ways are carried out such as conducting training. Not all CLC conduct training, but more direct assistance during the learning process. However, it is quite time consuming.

During the digital learning process, meeting time is limited. So that educators provide exercises and quizzes digitally through the Google Forms application. But at the time of the practice and quiz process is not supervised directly by educators. In addition, the use of exercises and quizzes through the Google Forms application is considered less attractive due to the limited design.

Next is the indicator practicing by the student in digital-based adult learning education. The following is the total score of respondents' responses in the form of a

continuum in Figure 9 below:



Figure 9. Total Score of Practicing by the Student

Based on the results of interviews, the learning process is almost the same as in formal education schools in general. Educators explain learning materials by means of face-to-face directly, usually using written media such as blackboards. As for the Covid-19 condition that forces learning to be carried out online, educators deliver material accompanied by Power Point which designed according to the material to be delivered so that learning is more interesting for learning citizens. Learning in CLC throughout the city of Bandung is more focused on delivering theory. Meanwhile, to support CLC skills, it is focused on skills course programs, while during the Covid pandemic, skills activities are not well controlled and even experience difficulties.

The total score of respondents' responses in the form of a continuum on the last indicator, namely assessing the students learning is shown in Figure 10 below:

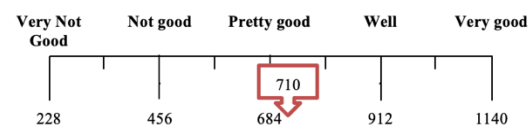


Figure 10. Total Score for Assessing the Students Learning Responses

Figure 10 shows that the average score of respondents' responses regarding *assessing the students learning* obtained a value of 710 which is included in the classification of the interval scores in the fairly good category. Respondents were considered quite satisfied with the learning and learning facilities in CLC.

The results of interviews that have been carried out with CLC managers, although there has been a change in the system due to the Covid-19 Pandemic which has caused adjustments to learning, there are positive things because of the digitalization of the application of *adult learning education*. The learning process is even more varied because digitalization forces educators to be even more creative in presenting material for their learning citizens. However, there are still some CLC that are not ready for more sophisticated changes, so they still carry out semi-conventional learning, for example through WhatsApp groups without streaming.

Information and Communication Technology (ICT) in a short period of time has become one of the foundations for modern society, inseparable from the world of education. CLC in Greater Bandung City has adapted to the conditions of the Covid-19 Pandemic so that learning prioritizes the use of the digital ICT world from the learning system. The learning curriculum developed by CLC must be able to contribute to the development of the competencies of educators currently stated by (Dasli, 2019), namely: 1) understanding of ICT in education; 2) curriculum and assessment; 3) pedagogy; 4) information and communication technology; 5) organization and administration; and 6) professional teacher learning.

According to (Farmer, 2013; Parker, 2012; Wang et al., 2011) technology can strengthen and enhance adult learning education, providing a learning environment with resources and tools that can be explored by learning citizens so as to encourage more independent and adult-centered learning. CLC throughout the city of Bandung has utilized technology as a support for the sustainability of adult learning education. The CLC learning community was also helped by this because learning was considered more cooperative, participatory, and collaborative.

Learning in CLC which is based on digital adult learning education is the first step in revitalizing learning (Galustyan et al., 2019; Sharp, 2018). The implementation of the learning program is packaged by educators to encourage the transition from the context of pedagogical practice to learning based on digital adult learning education. Based on the findings of research conducted by several researchers, (Decelle, 2016; Farmer, 2013; Zuckerman-Parker, 2008) it shows that adult learning education is one of the strategic approaches in digital learning. Digital-based adult learning education has been implemented in CLC throughout the city of Bandung. However, there are still 20% of CLC that are not ready to digitize adult learning education.

Factors in the implementation of the andragogy approach that is integrated with digital learning

1. Supporting factors

(a) There is a permit from the head of the institution and the Education Office

The government has provided flexibility for education units in the formal and non-formal education channels. The rules of the education office regulate the number or

students who enter, in addition to strict health protocols. The permit is in the form of three pandemic development conditions, if the pandemic number increases significantly (red area) then full online learning, if the pandemic is in the yellow area, then learning is in blended form and the number of attendances is limited, and if the green area is face-to-face learning as usual with Pay attention to health protocols.

(b) Online learning support tools

Some CLCs have provided online learning facilities, namely providing desktop computers provided in institutions. However, there are also those who provide credit quota facilities for tutors to use in their respective homes.

(c) Online learning resources

The availability of learning resources can be developed more, especially using the internet. Some tasks are directed at finding sources of information and data from the internet, while some modules or teaching materials are converted to pdf or other files for easy sending to smartphones.

(d) Online learning app

Online learning applications can take advantage of free or paid facilities, such as google classroom, google meet, zoom meet, Edmodo. Some of these learning facilities provide virtual classrooms, several interactions can be carried out such as chatting, sending files, quizzes, assessments, assignments, face-to-face online.

(e) Online learning facilities

Online learning facilities, several institutions have provided specifically for teachers who will go online. Residents of learning can enjoy online learning facilities from their homes, but also provided by the Institute if they do not have internet access.

2. Obstacle factor

(a) Limited device facilities and quotas for learning residents

The learning conditions show that not all learning residents are ready and there are gadget facilities or quotas available. On average, those who become citizens studying at CLC are not yet earning, so it is most likely that they attend CLC or complete their tasks together with other friends.

(b) Tutor's ability to use technology

Not all tutors can use technology, especially tutors who belong to the generation of technology immigrants. Some learning facilities such as Edmodo and Google Classroom are still not able to use. At least you can only use the WhatsApp application.

(c) Discipline of learning citizens in participating in online learning

The difficulty of monitoring learning residents during online meetings. For example, when zooming, google meet, not everything can be controlled through the camera because it is offcam. Full learning activities are done at home, making it difficult for tutors to find out the guarantee of materials and assignments that can be done by him and on time.

(d) Lack of learning citizens learn

Learning activities at home, causing residents to learn more activities to work or earn income. This is because the pandemic condition makes it difficult to find work and some learning residents who work are being sent home (losing their jobs).

DISCUSSION

UNESCO data states that there are about 750 million adults in the world who do not yet have basic reading skills. Meanwhile, as many as 264 million children and adolescents do not benefit from education in schools. Furthermore, international surveys show that a large proportion of the adult and adolescent population worldwide, including developed countries, are not sufficiently equipped with the basic digital skills needed to function fully in today's society and workplace. In this context, the position and role of ALE is needed to narrow the gap. Information and communication technology can create opportunities to overcome challenges. Digital tools can expand access to learning and improve its quality. Digital tools have the power to reach the unreached, improve literacy progress monitoring, facilitate skills assessment, and make management and governance of systems more efficient. Digital technology is important to incorporate into literacy teaching as a necessary tool for literacy in the digital age (Abima et al., 2021; Lee & Desjardins, 2019). Many digital tools have the potential to support adults in practicing literacy skills and provide feedback that supports learning.

ICT literacy is the use of digital technology, communication tools, and/or networks to access, manage, integrate, evaluate, and create information to function in a knowledge society (McGarr & Engen, 2022; Metcalfe, 1994). This definition is also important because it contains five important components of ICT literacy. The five components represent a set of skills and knowledge presented in an order that indicates increasing cognitive complexity. After discussion of the types of tasks each component represents, the panel agreed on

the following definitions: 1) Access, know and know how to collect and/or retrieve information; 2) Manage, apply an existing organizational or classification scheme; 3) Integrate, interpret and represent information. It involves summarizing, comparing and contrasting; 4) Evaluate, make judgments about the quality, relevance, usefulness, or efficiency of information; 5) Create, generate information by adapting, implementing, designing, creating, or providing information.

Digitally literate people will know how to use digital technology and what to do with it. Together with digital fluency, digital literacy describes the learner's ability to use digital technology to achieve the desired learning outcomes. Digital literacy competencies for the community, namely a) Information and Data Literacy, Browsing, searching and filtering data, information and digital content; b) Communication and Collaboration, To interact through various digital technologies and to understand the appropriate means of digital communication for a particular context; c) Digital Content Creation, To create and edit digital content in different formats, to express oneself through digital means; d) Safety, to protect digital devices and content, and to understand the risks and threats in the digital environment. To know about safety and security measures and to pay attention to reliability and privacy; e) Problem Solving, to identify technical problems when operating the device and using the digital environment, and to solve them (from troubleshooting to more complex troubleshooting) (Vuorikari et al., 2016).

Adult Education generally has a diverse target group of adults, both age and level of education. The social environment, the lessons and others. For example, functional literacy education consists of adults who are illiterate and often are economically poor. Adult education or in other terms Andragogy comes from the Greek words *aner* which means adults, and *agogos* which means to lead. So literally andragogy means art in teaching adults, in contrast to pedagogy which means the art and knowledge of teaching children. This definition is in line with Knowles' thinking which states that: andragogy as the art and science to help adult a learner (Declaration et al., 1997; Gray et al., 2012). The basic functions of adult education are instruction, counseling, and program development and administration. The program development process involves assessing the learner's needs, making and executing the necessary decisions in learning activities to position and evaluate outcomes.

CONCLUSION

The results of the research conducted on 228 responses of learning residents from 43 CLC throughout the city of Bandung show the following: 1) CLC has provided materials according to the needs of learning residents with a cooperative, participatory, and collaborative learning process; 2) CLC has facilitated its learning citizens to discuss and provide interesting training facilities and quizzes digitally; 3) CLC has provided material at the time of learning that is in accordance with what the learning community wants; and 4) The learning community is satisfied with the learning and learning facilities in CLC. Digital-based *adult learning education* has been implemented in CLC throughout the city of Bandung in the learning system, although there are still some CLC that need to be accompanied by their readiness to digitalize.

There are several suggestions that are intended for further researchers and for managers at CLC. Suggestions from the results of this study are: a) Further research is needed that discusses the depth of andragogy in practice at the institution; b) Need to re-examine the use of technology as part of their daily needs or generate financially, for example digital marketing technology.

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