

Digital Learning Literacy Training and Mentoring using ADDIE Model

Dedi Kuswandi^{1,*}, Hutkemri Zulnaidi², Citra Kurniawan¹, Fikri Aulia¹,
Zahid Zufar At Thaariq¹, Dhimas Adhitya Wijanarko¹,
Muhammad Zidni Ilman Nafi'a¹, Lu'luil Maknuunah¹

¹ Department of Educational Technology, Faculty of Education, Universitas Negeri Malang, Malang, Indonesia

² Department of Mathematics and Science Education, Faculty of Education, University of Malaya, Malaysia

*Corresponding author. Email: dedi.kuswandi.fip@um.ac.id

ABSTRACT

The learning paradigm using a digital technology base is now inevitable. The development of the times demands professional improvement for all professional audiences, no exception for teachers. Because the teacher was an educator who taught students as a subject of learning. Students are a new generation who will face challenges in the future. So, to answer these needs, the implementer held training and mentoring related to digital learning literacy for teachers located at Wahid Hasyim Junior High School, Malang. This training and mentoring aims to improve digital-based literacy competencies for teachers as part of their professional development which will be useful to apply in classroom learning. The development model used in this training and mentoring uses ADDIE which consists of Analysis, Design, Development, Implementation, and Evaluation. This training and mentoring were expected to improve the performance of digital-based learning literacy for teachers at Wahid Hasyim Junior High School.

Keywords: digital Learning Literacy, ADDIE, Competency Development

1. INTRODUCTION

Indonesia is facing the rapidly changing dynamics of a world full of "reality" to tend to lead to a "virtual" world. Face-to-face meetings are conducted many restrictions through various policies that have been applied before, such as Social Distancing, Large-Scale Social Restrictions (PSBB), Enforcement of Restrictions on Community Activities (PPKM) until now applied new normal policy (New Normal). No one can say for sure what the consequences of this pandemic are in 6 months, let alone 6 years or 60. Some "new normal" may appear, where new systems and assumptions will replace many others that have long been considered commonplace. But at this early stage, it is more honest to frame the new post-COVID-19 normal not as a prediction, but as a series of options. In particular, pandemic nominates at least 6 care properties for long-lasting changes such as tempo, standards, working conditions, proximity, readiness,

and equality [1]. Pacheco [2] says various "texts" about the consequences of this pandemic are emerging at high speed, with constant coverage by news outlets, as well as philosophical, historical, and sociological reflections by public intellectuals around the world. The ripples of the current state of emergency have spread to the personal, social, and economic fields. But is there continuity too? Is the pandemic creating a "new normality" in education or simply emphasizing what has become a normal accelerating trend towards technology? This trend presents important challenges for education, which requires a critical vision of the post-COVID-19 curriculum.

Pinar [3] thinks the curriculum is a complicated conversation. At the heart of the complicated chatter is climate change which urges the need for learning for prolonged development and the care of a new global society with a prolonged lifestyle and maintenance of areas worth exemplifying [4]. Daniel [5] notes that "many institutions have plans to better utilize technology in

teaching, but the COVID-19 outbreak means that changes intended to occur for months or years should be implemented within days.". Institutions, teachers, and students will continue to look for flexible ways to repair the damage caused by COVID-19 disruption to learning paths. While it has the potential to level access, the use of digital technology in learning also has gaps in it. Digital gap refers to the gap between those who own and do not have access to computers and the internet, which is a term that develops over time and appears in a new form[6]. While the idea of human inequality is not limited to the digital form (never existed), today's digital gap has threatened the rest of the world [7].

2. METHOD

This training and mentoring is a manifestation of efforts in empowering teacher competence. In the process, the instructor is involved as a presenter in the training and the facilitator as a companion to the training activities. Activities from training and mentoring are conducted virtually and face-to-face. The participants of this training were teachers at Wahid Hasyim Junior High School, Malang. Wahid Hasyim Junior High School is a school located in Malang that also conducts digital learning. This digital use aims to support online learning. Based on observations made by [8] it was found that teachers still do not have the "power" to learn. After the training

from [9] showed a 15 percent increase in teacher competence. However, there are still additional notes related to teacher empowerment that needs to be improved, including digital learning literacy. Therefore, this training and mentoring is a manifestation of the follow-up plan after the implementation of various previous devotions [10]. In this training and mentoring will be held materialized digital learning literacy. This material is considered important considering the needs of the digital world are very complex as well as students who are a new generation who are familiar with the digital world.

This series of activities was developed using the ADDIE model consisting of Analysis, Design, Development, Implementation, and Evaluation [11]. At the analysis stage, the service conducted observation activities to find information about field needs from teachers at Wahid Hasyim Junior High School. Furthermore, at the Design stage, the service designed a learning pattern to support the training used which includes the design of the instructor who will train, the design of the schedule of activities, the design of the media to be used, the design of teaching materials and the design of learning activities. At the Development stage, the service carries out development activities such as developing modules or teaching materials and developing learning media tailored to the results of the design, as shown at Figure 1.

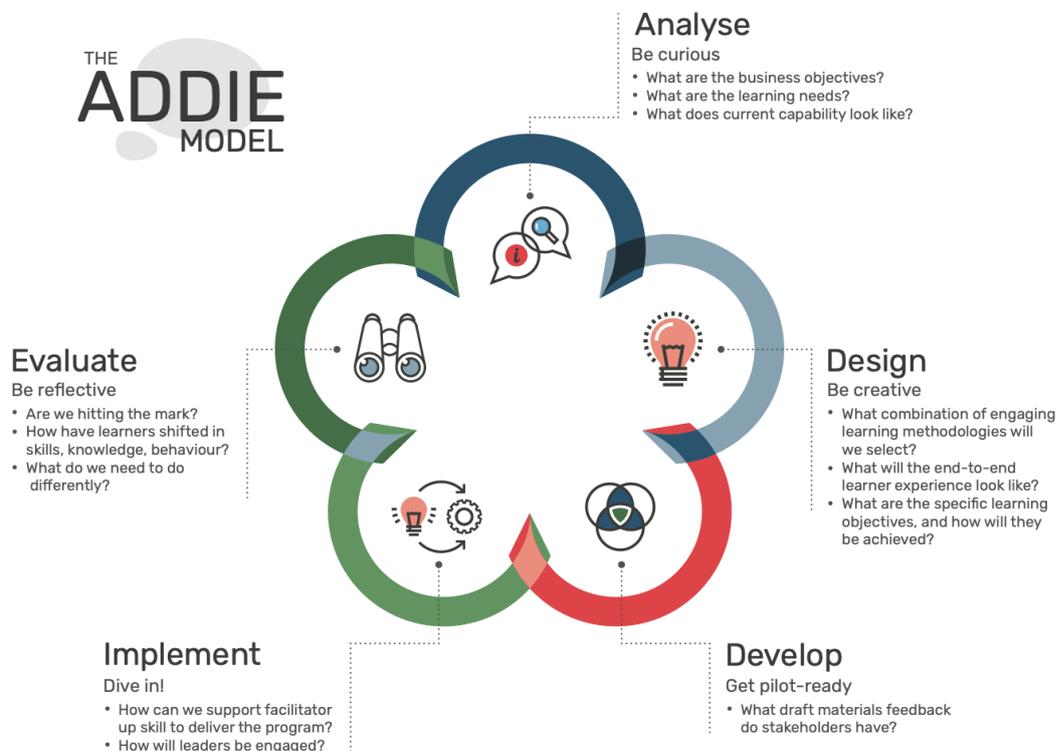


Figure 1 ADDIE Model [12]

3. RESULT AND DISCUSSION

Educational technology can be said to be a science in solving educational problems. When viewed from a definition point of view according to AECT, educational technology is a practical study and ethic in facilitating learning and improving performance through a series of activities of creation, use, and regulation of processes and technology resources [13]. The keywords "facilitate learning" and "improve performance" are worth juxtaposing with the role of educational technologists in improving the quality of human resources. Seels & Richey [14] suggest that in areas in the field of educational technology there are 5 kinds, namely (1) design, (2) development, (3)

utilization, (4) management, and (5) evaluation. So, in this process of mentoring and training, the five areas have been fulfilled.

The model used in training and mentoring this time using ADDIE. This model consists of the stages of analysis, design, development, implementation, and evaluation. The terms and concepts of ADDIE appear in the images in a monograph distributed by the American Society for Training and Development (ASTD) on the basics of instructional system development, but none in the monograph of the acronym ADDIE itself is given [15]. The ADDIE model is widely used by educators in learning design around the world [16].

Table 1 Training and Mentoring based on the ADDIE Model

	Analyze	Design	Develop	Implement	Evaluate
Concept	The gap occurred due to the lack of empowerment of teachers at Wahid Hasyim Junior High School	Wanting a conceptual and practical understanding of the development of digital learning media	Produce a training program with the support of a product in the form of Hyper content-loaded Teaching Book	Preparing the training environment	Assessing the quality of the training process that has been taking place
General Procedures	<ul style="list-style-type: none"> • Validate performance gaps Review learning objectives • Confirm the intended audience (goal) • Identify the necessary resources • Define potential delivery systems (including estimated costs) • Create a project management plan 	<ul style="list-style-type: none"> • Perform task preparation • Develop training performance objectives • Generate strategies in testing 	<ul style="list-style-type: none"> • Generate learning content • Selecting or developing supporting media • Develop guides for participants (teachers) • The instructor develops articles for presentation materials • Make formative revisions • Conduct a trial 	<ul style="list-style-type: none"> • Preparing participants (teachers) • Preparing the instructor 	<ul style="list-style-type: none"> • Define evaluation criteria • Choose an evaluation tool • Evaluate

Sources: adapted from Branch (2009) [11]

The analysis phase, although one of the most important in the ADDIE model, is often overlooked. Like other important projects, the joy of starting often goes beyond methodical planning, and the desire to see

completed results can jeopardize relevance and quality. Doing something involved like developing an online class demands careful analysis [17]. In this case, the servant found the learning conditions in

Wahid Hasyim Junior High School that everything has changed. The school has changed the dedication performed by Thariq et al in 2020. The previous devotion in the form of mentoring digital learning media such as WordPress as the main digital learning source and other supporting media such as Microsoft PowerPoint, Google Form, Google Classroom, Quizizz, and so on. But around December 2020, some platforms started charging a fairly high price, so the school decided to simply use Microsoft PowerPoint, Google Classroom, Google Form, and Edmodo. One teacher revealed that during this time learning with some of these platforms tends to "less" give interest to students in learning. In addition, the principal has a special request to the service to be able to conduct training related to Microsoft Teams, due to the advice of the relevant education office. This is what makes a "gap" because of the new demands that teachers must meet.



Figure 2 Initial Coordination and Consultation with The School

The Design phase involves using the output of the Analysis phase to plan strategies for developing instructions. During this phase, the implementer outlines how to achieve the instructional objectives specified during the Analysis phase and expands the instructional foundation. Some elements of the Design Phase may include writing the target population, description, performing learning analysis, writing objectives and test items, choosing a delivery system, and sorting messages [18]. In this case, the servant begins to design what materials to be presented, the purpose of competence, the instructor, the media and teaching materials to be used, the schedule of activities, and the design of the mode of activities to be carried out. The service decided to present materials (1) introduction to 21st-century learning, (2) characteristics of 21st-century learners, (3) digital assessments using Microsoft Form, (4) Digital presentations using Microsoft PowerPoint, and (5) implementation of learning management system (LMS) using Microsoft Teams. The objectives

achieved are based on the emphasis on constructivist paradigms. It means that each implementation prioritizes the achievement of the process in it [19]. The instructor in this activity is a team of internal service who have competence in it. In its implementation will use Microsoft PowerPoint as its message delivery channel that is assisted by Zoom as a web meeting. It was originally planned to take place on July 15, 2021. However, in response to the emergency PPKM policy from July 3 to 20, 2021, the schedule was advanced to July 27, 2021. In addition, at first, the mode of activities is done face-to-face. But as a result of PPKM policy, its activities are conducted online and also strengthened face-to-face with strict health protocols. Therefore, the application is called blended training [20]

The development, the stage is the preparation phase of the elements specified in the design phase [21]. The servant began to develop his learning media and teaching materials that were used to facilitate teachers in delivering the materials delivered. The media developed is Microsoft PowerPoint for its message channels. While the assessment initially used Microsoft Forms to conduct testing. The teaching materials developed in the form of handouts co-authored by the service team related to the materials presented. In addition, armed with the competence of digital technology, devotees also began to practice and try various media that will be delivered.



Figure 3 Handout Materials developed

At the implementation stage, that means applying what has been designed and developed previously to participants and using evaluation instruments to investigate the achievements that have been done [22]. Instructors begin delivering materials that are by the design set. While the participants listened to the material from introduction to practical. This training was conducted online using Zoom media as an intermediary.



Figure 4 One of the materials provided

In addition to conducting virtual training, the service also conducts mentoring to teachers face-to-face to strengthen what has been previously delivered online. This strengthening is done by simply delivering materials and continued practical assistance by facilitators in a comprehensive manner. This is also done at the request of the school to achieve maximum empowerment of teacher competence.



Figure 5 Facilitator is delivering mentoring materials

The evaluation stage consists of two parts, namely formative and summative. Formative evaluation is the measurement of learning outcomes during the learning process, and summative evaluation is the measurement of learning outcomes after learning as the last stage [23]. In this case, the service conducts a summative evaluation by conducting testing to participants through Microsoft Form. This test is conducted to inform the extent to which participants can understand the material that has been given. The materials tested concerning 21st-century learning, learning characteristics, digital assessment, digital presentation, and LMS.

The participants, none other than Wahid Hasyim Junior High School teachers were happy with this training and mentoring. In addition, in the activity, it appears from the participants so enthusiastically follow it from start to finish. This is also evidenced by the response expressed by the teacher who welcomed positively from the training and mentoring conducted.

“The training has been very good because it has added to my knowledge and competence in using digital learning media.” said one of the teachers.

This means that the implementation of training and mentoring has been running successfully and smoothly by the design that has been set and adapted to the ongoing PPKM policy. Because basically, training is functioned to improve one's competence. Training using a blended training model is proven to improve the learning outcomes of the participants [24].

4. CONCLUSION

Armed with the needs of digital learning literacy and the challenges of online learning, this devotion resulted in (1) the finding that the needs of teachers in improving their digital literacy to maximize the learning activities they manage, (2) the finding that participants are so enthusiastic in attending training and mentoring, (3) findings that participants are happy with the materials presented and (4) the expectations of participants for the holding of training again to maximize that it has. Recommendations that can be given from the devotee is that participants can apply the material that has been presented by trying it directly and slowly but surely related to digital literacy that has been delivered.

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