

## DIGITAL LITERACY TRAINING FOR TEACHERS OF ENGLISH TO SUPPORT 21<sup>ST</sup> CENTURY LEARNING

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**Abstract:** Digital technologies have become an integral part of human's activities. Therefore, it is imperative that digital literacy becomes the focus of 21<sup>st</sup> century education. The shift to online teaching during the pandemic has intensified the use of digital tools and online sources in learning. Despite the necessity to incorporate digital technologies and the teaching of digital literacy skills in the classroom, many teachers are not equipped to do this. This community research project focused on providing a training on digital literacy for 85 teachers of English who taught in the secondary and high schools in various regencies within the South Sumatra Province. After being involved in virtual training and teacher study group, the teachers showed higher perceived digital literacy ability and intention of use in their classrooms. Implications of this training includes the importance of professional development in digital literacy which allowed teachers to have a hands-on training and collaborative learning within a supportive teacher study group.

**Keywords:** *digital literacy, teacher professional development, 21<sup>st</sup> century learning, collaboration*

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### INTRODUCTION

The vast technological development in the past decades, also well-known as industrial revolution 4.0, has changed the way people communicate and interact. The availability of digital technologies has offered myriad opportunities as well as challenges (Silvhiany, 2019). Teachers play a crucial role in supporting students to develop the ability to evaluate online sources which has become more and more urgent in the age of Internet-based information (Silvhiany, et.al. 2021). Current research has informed us that students were easily deceived by the information they received online (McGrew, et.al. 2018; Prawira, et.al. 2020; Silvhiany, et.al. 2021).

Understanding how to evaluate online sources is only one of the many aspects of digital literacy. Buckingham (2015) proposed a conceptual map of digital literacy which includes the aspects of representation, language, production, and audience. Representation concerns with the claims of truth, the presence or absence of particular point of view, the reliability and bias of online sources, and the implicit values and discourse of the web content. The language aspect concerns with the use

of visual and verbal in the design and the kind of interactivity offered to the readers. The production aspect includes for example, the technologies and software used to disseminate materials on the web, the nature of the web authorship, and the significance of commercial influences. The final aspect, the audience, involves how the web is used to gather consumers' data, how individuals and groups use particular website, and the public debates concerning internet safety.

As teachers face the demand of preparing students to live in the 21<sup>st</sup> century, teachers need to understand the changing nature of students' literate lives and how to incorporate culturally and technologically relevant teaching. Education advocates emphasizes that classroom teaching should engage students in the learning of the 21<sup>st</sup> century skills which include, for example, critical and problem solving skills, cross cultural understanding, creativity and innovation, information, communications, media literacy, computing and ICT literacy. Yue (2019) proposes ten components of effective teacher professional development in higher education institution, which consist of need assessment, peer-mentoring, building collaboration, create positive school culture, developing 21<sup>st</sup> century skills, instructional strategies for active learning, embedding core values, continual professional development, research-based projects, and integrated ICT teaching.

Cirocki & Farrel's research on (2019) the Indonesian secondary EFL teachers showed five different ways the teachers conceptualized professional development: (1) school based-learning, (2) an academic undertaking, (3) a professional pursuit outside of the school environment, (4) a government scheme, and (5) self-directed learning. Meanwhile, Rachmajanti, et.al. (2020) focused on how the Indonesian EFL teachers at lower secondary school viewed professional development. The teachers in this study considered being up to date with current trends in ELT and curriculum, communicating in English, having good personality, and being pedagogically, professionally, personally, and socially competent as the most important attributes of a professional ELT teachers.

Since online teaching is relatively new in Indonesian contexts, particularly at the K1-12 levels, educators and parents have not been familiar with the requirements and situational needs of online teaching. The abrupt shift to online teaching during the pandemic school closure have also provided little room for teachers to adjust with the new mode of teaching and to learn the new digital learning tools. Many teachers faced criticisms over their online teaching, particularly from the parents who were dissatisfied with the kinds of learning their children received during the school closure. This situation has become a new stressor for teachers to deal with in their profession (Allen, Rowan, & Singh, 2020; MacIntyre, Gregerson, & Mercer, 2020). To prepare teachers to face the possible criticism concerning their online teaching, Rice and Deschaine (2021) proposed two possible solutions. The first one is to prepare teachers to advocate for online learning. This should be addressed early in teacher education program. Teacher educators play a crucial role in advocating online learning by exposing practicing teachers to various types of online learning, such as emergency remote learning and structured-online learning, and multiple digital tools to support online learning. The second solution is to introduce teachers to the effective communication and relationship building. Professional development and learning should include the learning of a wide range of strategies and practices of effective communication. These include synchronous and asynchronous communications.

The needs for professional development has been intensified in this pandemic era as teachers faced the challenges of shifting to online learning. Research has suggested that Indonesian teachers were not ready to manage online learning. Churiyah, et.al. (2020) found that teachers, especially those teaching in the rural areas, could not deliver the online teaching. Instead, they were more oriented to providing assignment without the necessary guidance and explanation. School from home (SFH) has challenged teachers in terms of technical obstacles, students conditioning, students' participation, and online teaching experience (Rasmitadila, et.al., 2020). Teachers need institutional supports to cope with this challenges. Unfortunately, most of the available support is only found in the higher education. Educators who teach at the college level have a higher chance to receive training to manage and teach online classes (Junus, et.al., 2021)

The purpose of this training was to introduce the teachers of English to the conceptual knowledge of digital literacy, to provide digital tools for online learning and collaboration, and to introduce teachers with HOTS-based literacy assessment.

## **METHODOLOGY**

Considering the limitation of doing face to face interaction during the pandemic lockdown, the training was conducted virtually. This online mode was actually suitable for the topic of digital literacy training in which the trainers and the participants engaged in the digitally mediated collaboration. The training was comprised of synchronous as well as asynchronous sessions. The synchronous session was facilitated by Zoom meeting while the asynchronous sessions were conducted through WhatsApp teacher study group and Google form. The training was conducted for two weeks.

### **Participants**

Participants of the study were recruited through invitation sent to the MGMP (English Teacher Working Group) and to the local English Teacher Association. 85 teachers who taught in secondary and senior high schools from various regencies in South Sumatra voluntarily joined the training. High school teachers were the dominant group of participants, which include both the general and the vocational high school teachers. Most of them were female teachers. Table 1 and 2 and the pie chart describe the backgrounds of the participants.

Table 1. Participants based on the school location

City/Regency	Participants
Palembang	14
Ogan Ilir	7
Banyuasin	34
Muratara	2
Muba	4
PALI	3
Ogan Komering Ilir	5
Ogan Komering Ulu	5
OKU Timur	2
Musi Rawas	2
Muaraenim	3

Lahat	2
Lubuk Linggau	2
Total	85

Table 2. Participants based on the school level

City/Regency	Participants
Secondary School Teachers	21
High School Teachers	54
Vocational School Teachers	10

Figure 1. Participants based on the gender

### Design and Procedures

The digital literacy training was designed to address the need to provide teachers with professional development to support the integration of digital literacy in the teaching of English as a Foreign Language at the secondary and high school level. The training was conducted for two weeks or equal to 36 hours of professional development. It was comprised of five (5) main topics:

1. Conceptualizing Digital Literacy
2. Creating Digital Literacy-Based Communicative Tasks
3. Tools for Visual Learning Media
4. Tools for Creating Learning Video
5. HOTS-based Assessment

Before the synchronous meeting, participants were introduced to foundational concepts of digital literacy and some examples of implementations as shown in the selected teaching and empirical research articles given to the participants. The participants were required to read the texts and participated in the discussions in the WhatsApp group.

The synchronous meeting focused on demonstration of how to use digital tools for teaching. The Community Service Team introduced various tools and provided examples of how to use them for teaching language.

After the synchronous meeting, the teachers were required to choose one or some of the digital tools to use or integrate into their teaching. Some of them work individually and some decided to work collaboratively.

### **Data Collection and Data Analysis**

Data for this article was collected through observation, survey, and artifact of teachers' digital project. Observation field notes were conducted in the synchronous meeting and the asynchronous interactions that occurred in the Teacher's Study Group in the WhatsApp. The survey regarding teachers' perception of their digital literacy ability and use was distributed to the teachers after the professional development program completed.

Data analysis include thematic analysis (Saldana, 2016), frequency analysis of the survey, and qualitative content analysis (Selvi, 2019). The thematic analysis was employed to analyze the observation notes. Meanwhile, the artifacts of teachers' digital project were analyzed using the qualitative content analysis.

### **FINDINGS AND DISCUSSION**

This section describes three aspects related to the results of the teachers' professional development program on digital literacy. The first section describes the focus of the professional development program and the projects the participants completed. The second section describes the teachers' perceived digital literacy ability and intention of use.

#### ***Teachers' Engagement with the Digital Literacy Training***

Teachers who were involved in this training were varied in age: between the age of 23 to 57. As the following graph shows, there is hardly any dominant age group. The highest number (7.1%) was age 35 and 37. However, it did not represent a dominant group. In other words, the training involved a diverse age group of teachers. It did not attract only the younger or novice teachers but also teachers of almost all range of age. This might be because digital literacy has been a necessity to teach in the age of online learning.

*Figure 2.* The age of the teachers joining the digital literacy training

Regardless of their age, the teachers acknowledged that they needed to upgrade their ability to use digital tools to support their work. As the demand of online

learning increased during the pandemic, teachers need different pedagogical and instructional knowledge and strategies. Insufficient preparation to teach online classes may negatively impact the learning process. In fact, the sudden shift to online teaching left many Indonesian teachers overwhelmed, especially teachers in rural areas (Aditya, 2021; Atmojo & Nugroho, 2020; Fuad et.al., 2020).

This training was intended to introduce the concept of digital literacy for 21<sup>st</sup> century learning as well as to equip teachers with the knowledge and skills to use digital tools for teaching online. They learned the hands-on skill of designing visual learning media and video creation. In addition to these practical aspects of using digital literacy, the teachers admitted that they learned the foundational knowledge about digital literacy. The introduction to NCTE's definition of digital literacy had opened up a deep discussion of multifarious concepts of digital literacy. The teachers learned new aspects, such as digital literacy that promoted culturally sustaining communication and the examination of ethical implications of the use and creation of information.

Teachers have tried on the various digital tools to use for their teaching. They particularly interested in using the digital tools to create content for their teaching. Teachers practiced using Canva™ to create various texts, such as procedure texts, label texts, recount texts, recount texts, and conceptual text.

*Figure 3. Procedure texts*

*Figure 4. Biography as an example of recount text*

Figure 3 and 4 are examples of the teachers' use of visual tools to create the teaching materials for their classroom. After learning how to use Canva™ in the synchronous, the teachers tried the software to help them create engaging materials for their online learning. The teachers believed that creating their own material allowed them the flexibility to include variety of content that served their instructional purposes. The digital tools also provide interesting visuals that might attract students to pay attention to the content.

Besides the two dimensional content, the teachers also showed that they could practically apply the training on creating video for learning. In one of the sessions, teachers learned about using Kinemaster and other video editing tools to create teaching videos. Some teachers created a simple video of them explaining the content while others used more sophisticated visual compositions to teach concepts and language aspects.

Overall, the introduction to visual and multimodality in the training have provided teachers with the tools to prepare for their online classes. These tools will also be useful even after their classes move to face to face meetings.

### ***Teachers' Perceived Digital Literacy Ability and Use***

Digital literacy survey was given to the participants after the training was completed. The survey was intended to find out how the teacher perceived their literacy ability and their willingness to use digital tools in their classroom.

The first question deals with the teachers' perception of the ease in adapting digital technology. The majority of the participants (36.5% and 35.3) considered it easy to adept the digital technology in the classroom.

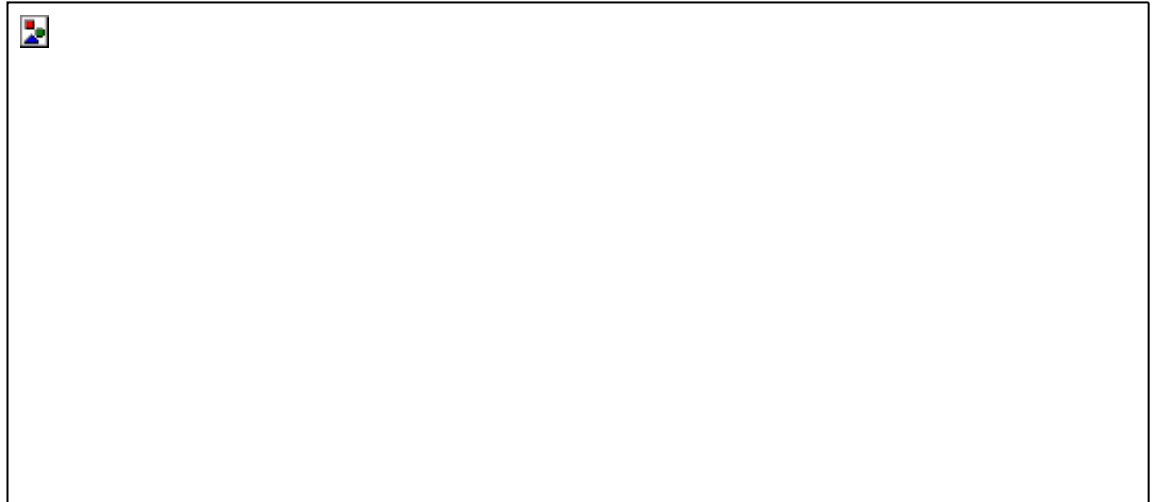
*Figure 5. Teachers' perception of their ability to adept digital literacy in their teaching*

The introduction of digital literacy in the training and the collaboration and discussions facilitated in the Teacher's Study Group have provided them with the knowledge and skills to use digital technology for their instructional purposes. As shown in figure 6, many teachers agreed that they had sufficient knowledge to use digital technology. Over 44% of them agreed while 27% of them strongly agreed that they had sufficient knowledge to be able to use digital technology.

*Figure 6. Teachers' perceived knowledge of using digital technology*



Not only did they have the sufficient knowledge, the teachers also believed that they could teach their students how to use digital technology for information seeking, communication with other people, developing creativity, and learning. Figure 7 shows that over 60% of the teachers were confident that they have sufficient knowledge to facilitate students to achieve these purposes.



*Figure 7. Teachers' belief about their ability to teach their students the use of digital technologies for various purposes*

The sufficient knowledge of digital literacy was not the only reasons the teachers wanted to use digital tools in their teachers. Supports from the authorities, particularly the ones at their school, have encouraged teachers to incorporate digital technologies. As shown in figure 8, many teachers received institutional supports and provision of tools that allowed them to teach with digital tools.

*Figure 8. Supports for the use of digital technology in the school*

Teachers believed that digital technology facilitated their pedagogical ideas. As shown in figure 9, approximately 75% of the teachers perceived digital tools could support their ideas in teaching the content.

*Figure 9.* Teachers' use of technology to support their pedagogical ideas

Teachers also believed that digital tools could facilitate the assessment of their students' learning. As shown in figure 10, 54.1% of the teachers strongly agreed and 31.8% agreed that digital tools would help them assess their students.

*Figure 10.* Teachers' use of digital tools for assessment

The training on digital tools for assessment had provided teachers with various options to do assessment. During the online learning, assessment had to be adjusted to accommodate the reality of online learning.

## **CONCLUSION AND SUGGESTION**

Results of the interviews, observation of teachers' involvement during the training, and the artifacts of their digital projects have indicated the positive effect of the literacy training. The discussions of conceptual framework of digital literacy coupled with hands-on practice of using digital tools have inspired teachers to incorporate various aspects of digital literacy to facilitate their students' learning. They seemed to be comfortable with new digital tools to support their instructional purposes. Implication of this training includes the importance of professional development in digital literacy which allowed teachers to have a hands-on training and collaborative learning within a supportive teacher study group.

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