



LIBERTY INNOVATION (INFORMATION TECHNOLOGY-BASED LITERACY) AS A SCHOOL LEARNING TOOL AT STATE MIDDLE SCHOOL 2 CISAUK, TANGGERANG REGENCY

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Abstract

This research is about a digital innovation called LIBERTI (Information Technology-Based Literacy) as a school learning tool at SMP Negeri 2 Cisauk. This study was conducted by the Regional Government of Tangerang Regency. This research is important and relevant because it looks at the condition of students at SMP N 2 Cisauk, Tangerang Regency. In addition, this research is a form of local government efforts in improving the quality of education in the era of the Industrial revolution 4.0. It is hoped that it will facilitate the way educators teach and learn how to learn. The population in this study are regions that have implemented policies or innovations in the digital and education fields. While the sample in this study is the innovation "LIBERTI" (Information Technology-Based Literacy). The results of the activities that have been implemented from the utilization of LIBERTI literacy include: every day in all subject hours can be effective, change the mindset of students to be more independent in learning, solve problem solving in learning models and limitations in appropriate use, provide experience about resources good technology together with mentoring, looking for scientific information according to the subject visually and non-visually, providing good habits to use social media appropriately and according to needs as well as being a repository of accurate scientific information.

Keywords : Innovation, Digital Literacy, LIBERTY, Students.

I. INTRODUCTION

This research examines a digital innovation called LIBERTI (Information Technology-Based Literacy) as a learning tool at SMP Negeri 2 Cisauk. The study was conducted by the Tangerang Regency Government.

The Industrial Revolution 4.0 era is characterized by a constant connection between human life and technology and information. It's called the digital revolution because of the proliferation of computers and the automation of record-keeping across all sectors. Industry 4.0 is considered an era of technological disruption because automation and connectivity in a given sector will disrupt the movement of the industrial world and make job competition non-linear. A unique characteristic of Industry 4.0 is the application of artificial intelligence (Tjandrawinata, 2016) .

In today's digital era, the development of digital media and information technology presents challenges for users in accessing, selecting, and utilizing them appropriately. Quality education plays a crucial role in creating individuals with character, intelligence, and the ability to compete. Literacy is a means for students to recognize, understand, and apply the knowledge they have acquired both at school and at home. (Astini, 2019)

The problem found among students at SMP N 2 Cisuak, Tangerang Regency, is their lack of positive response to digital systems and technology. Several contributing factors include the lack of use of internet search engines to access information and understanding of website content, the lack of ability to find clear information sources, and inadequate internet connections. This situation is the reason why a digital media literacy program is essential to enable users to know what they need, develop strategies for searching for relevant information sources, and evaluate, use, and disseminate them correctly. To realize this in the world of education, a digital innovation called LIBERTI (Information Technology-Based Literacy) was created as a learning tool or medium in schools (Sarizan, 2011).

The aim of this study is to describe the efforts of schools and local governments to improve the latest learning facilities in accordance with the current digital era.

This research focuses on an innovation implemented by SMP N 2 Cisuak in collaboration with the Tangerang Regency government. The "LIBERTI" (Information Technology-Based Literacy) innovation is used as a learning tool at the school, making it easier for students to find knowledge resources for independent learning in the digital 4.0 era.

To date, there has been a considerable amount of research examining digital-based information literacy. One such study is by Krisdiantoro et al., 2022, which examined improving literacy programs through library management at SMP Negeri 2 Ciawi. This management encompasses: library collection and facility procurement programs, the implementation of digital or computer-based systems, the maintenance and upkeep of library collections and facilities, including building expansion, the provision of in-library services,

and the reintroduction of mandatory library visits.

However, existing research focuses more on improving school facility management. This study, however, focuses on improving students' literacy and ability to use digital technology through LIBERTI as a learning tool. Creating an effective social environment, providing opportunities for students to compete and seek knowledge according to the limits and capacities of students.

This research is also considered important and relevant because it examines the conditions of students at SMP N 2 Cisuak, Tangerang Regency. Furthermore, this research demonstrates the local government's efforts to improve the quality of education in the era of the Industrial Revolution 4.0. LIBERTI's digital innovation is expected to simplify teaching methods for educators and student learning.

II. METHOD

This research uses the literature review method. According to (Efron & Ravid, 2018) A literature review is a systematic examination of scientific literature on a topic. It critically analyzes, evaluates, and synthesizes research findings, theories, and practices by scholars and researchers related to the focus area. A literature review provides an overview of the development of a particular topic (Cahyono et al., 2019).

This research was conducted by describing the digital innovation "LIBERTI" (Information Technology Based Literacy) by SMP N 2 Cisuak, Tangerang Regency. and its benefits , systematically compiled. The population in this study is regions that have implemented policies or innovations in the digital and education sectors. The sample in this study is the "LIBERTI" (Information Technology-Based Literacy) innovation .

In this study, data collection was also conducted through searching various sources, which were then processed and described in narrative form according to data requirements. The data used came from reports, journals, scientific articles, and literature reviews containing the concepts being studied.

III. RESULTS AND DISCUSSION

In the global era, development prioritizes the utilization of science and technology and innovation. According to Law Number 23 of 2014 concerning Regional Government, innovation is a crucial element in the implementation of regional government. Innovation determines the high competitiveness of a region or country. In response, Regional Governments are tasked with building and strengthening the Regional Innovation System (SIDa) as a foundation for innovation-based development performance. The education sector, through the Ministry of Education and Culture, in collaboration with the Ministry of Communication and Informatics, is actively improving digital literacy in the community. This aims to enable the public to use the internet and electronic devices correctly and with dignity (Jatinika, 2017). One effort of this digital literacy movement is to familiarize students in schools with the skills to carry out digital literacy activities.

A. Problems Found at State Junior High School 2 Cisauk, Tangerang Regency

Problems in choosing Information Technology-Based Literacy (LIBERTI) innovations include: a lack of technological knowledge, and limited and outdated learning and literacy resources. For example, literacy scores are still in the red on the education report, indicating a lack of reading literacy at SMP Negeri 2 Cisauk.

B. LIBERTI Digital Innovation

The LIBERTI (Information Technology-Based Literacy) digital innovation was established at SMP Negeri 2 Cisauk. The initial step in implementing the LIBERTI innovation among students is to involve all components of the school community. Collaborating with the LIBERTI Innovation Team under the coordination of the Principal, the process is as follows:

- 1) Holding meetings with the teachers' council as an effort to implement the initial literacy program for all subject teachers.
- 2) Then provide usage information and allocate time to carry out literacy.
- 3) Providing options for students who already have mobile phones (Android) to

read and search for sources of knowledge from books or from their Android.

- 4) Teachers for each subject record the students who choose Android and choose books for LIBERTI literacy.
- 5) The team documented the results of LIBERTI Literacy in a report.
- 6) The team made an evaluation of the students for the results for 2 weeks.
- 7) All homeroom teachers also carry out supervision during meetings with students.
- 8) The team reported the results of the LIBERTI Innovation to the Bapeda Innovation Team organizers as the beginning of the formation of innovation at SMP Negeri 2 Cisauk.

Some of the uses of digital innovation at SMP Negeri 2 Cisauk that have been implemented for school promotional media include the use of Google Maps as directions and YouTube which is used for visual learning media, introducing the school environment, uploading student activities, etc. which can be seen in the image on the next page.

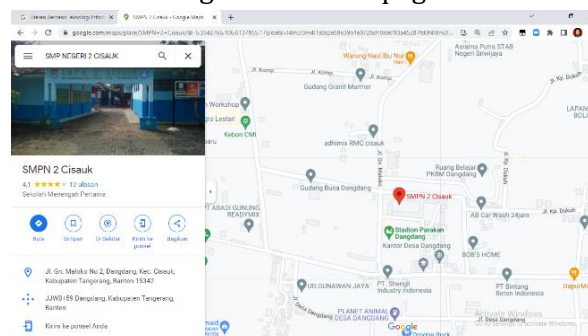


Figure 1. Location of SMP Negeri 2 Cisauk on Google Maps

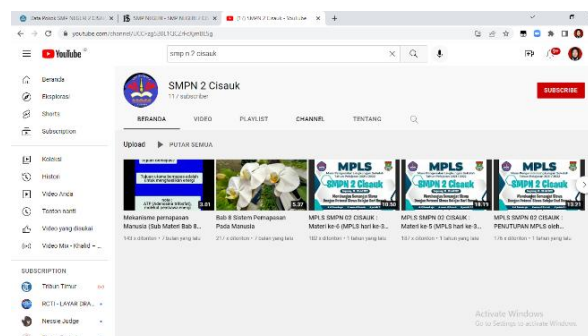


Figure 2. Youtube of SMP Negeri 2 Cisauk

However, SMP Negeri 2 Cisauk still needs to develop many digital technologies, such as the school's digital library facilities.

C. Results of Innovation Implementation

- 1) Utilizing LIBERTI literacy every day throughout all classes can be effective because some students are technologically challenged and don't fully understand the functions of gadgets and computers in the school environment. By creating a habit before each lesson, such as reading verses from the Quran on a mobile phone, each student is required to choose between using a mobile phone or a book.
- 2) The use of LIBERTI literacy can change students' mindsets to be more independent in learning, solving *problems* in learning models, and the limitations in appropriate use.
- 3) Providing experience about good technology sources with guidance from teachers who provide the right way to find scientific information according to the subject, both visually and non-visually.
- 4) Socialize students with the use of appropriate technological tools such as mobile phones and computers so that the teacher's role can be to guide students appropriately.
- 5) Facilitate by making the school a literate academic environment.
- 6) Helping students to create a physical environment that is friendly to digital technology literacy by providing free Wi-Fi as needed for those who do not have a quota due to areas with poor signal.
- 7) Provide good habits for using social media appropriately and according to needs.
- 8) LIBERTI Literacy becomes a repository of accurate scientific information in schools with a fast method and a variety of features.

IV. CONCLUSION

Entering the Industrial Revolution 4.0 era, where human life is inextricably linked to technology and information, the development of digital media, information technology, and quality education play a crucial role in creating individuals with character, intelligence, and the ability to compete.

innovation is a learning tool or medium at SMP Negeri 2 Cisauk. It is a digital literacy improvement program to address student issues at the school, including the lack of internet search engine usage in accessing information and understanding website

content, the lack of ability to find clear information sources, and inadequate internet connectivity.

innovation was created with the hope that students can make maximum use of technology, hone their abilities and skills, know what they need, explore relevant information sources, consider, use and disseminate information technology correctly.

The results of activities that have been implemented from the use of LIBERTI literacy include: every day in all subject hours can be effective, changing the mindset of students to be more independent in learning, solving *problem solving* in learning models and limitations in appropriate use, providing experience about good technology sources with assistance, searching for scientific information according to their subjects visually and non-visually, helping students to condition the physical environment that is friendly to digital science technology literacy by providing free wifi as needed for those who do not have a quota due to areas with difficult signals, providing good habits for using social media appropriately and according to needs and LIBERTI Literacy becomes a warehouse of accurate scientific information in schools in a fast way and with the appearance of various features.

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VI. BIBLIOGRAPHY

- Astini, NKS (2019). The Importance of Information and Communication Technology Literacy for Elementary School Teachers to Prepare the Millennial Generation. *Proceedings of the Dharma Acarya National Seminar*, 1 (2018), 113–120.
- Cahyono, EA, Sutomo, & Harsono, A. (2019). Literature Review: Writing and Compilation Guide. *Nursing Journal*, 12.
- Darmalaksana, W. Library, PD (2020). Pre-print Digital Library UIN Sunan Gunung Djati Bandung, 2020, 1–6.

- Efron, S. E., & Ravid, R. (2018). *Writing the Literature Review A Practical Guide*. Guilford Publications .
- Fitriyadi, H. (2013). *Integration of Information and Communication Technology in Education: Potential Benefits, Knowledge-Based Society, Values Education, Implementation Strategy and Professional Development*. *Journal of Technology and Vocational Education*, 21(3), 269–284.
- Intan, A. (2018). *Digital Learning Process in the Era of the 4.0 Revolution*. Director General of Learning and Student Affairs. Ministry of Research, Technology, and Higher Education.
- Jatnika, Y. (2017). "Digital Literacy for National Progress". *Family Education Magazine* . Ministry of Education and Culture, 2015. 2013 Curriculum Implementation Training Module
- Krisdiantoro, WT, Rangkuti, YY, & Maryani, N. (2022). *Library Management in Improving Student Literacy Programs*. *Tadbir Muwahhid* , 6 (1), 77–93. <https://doi.org/10.30997/jtm.v6i1.5498>
- Maryland State Department of Education. (2005). *Maryland Technology Education State Curriculum*. [On line]. Available at marylandpublicschools.org
- Mugara, R. (2011). *Improving teacher competence through mastery of information and communication technology (ICT)*. Curriculum Development Study Program. Indonesian University of Education. Sunan Kalijaga: Yogyakarta
- National Academy of Engineering and National Research Council of The National Academics. (2006). *Tech Tally: Approaches to Assessing Technological Literacy*. [On line]. Available at http://download.nap.edu/cart/download.cgi?&record_id=11691&free=1
- Rahmah, E., Marlina, & Erlianti, G. (2019). *Library Management (Implementation of TQM and CRM)*. Depok: Rajawali Pers.
- Sarizan. (2011). *Innovation report, 1945 (Amendment IV)*, 1–7. Retrieved from http://habinovasi.mampu.gov.my/laporan_inovasi/328-alat-pembawa-dan-pembentang-hos-hantaran.pdf
- Saputri, Fitriani Eka Annisa, Kusnandi. 2018, *Development of Science Learning Media Using Android-Based Augmented Reality (AR) for Grade III Students of Sdn 015 Tarakan*, *Widyagogik*, Vol. 6. No. 1 July-December 2018
- Suhendra, A. (2021). *Electronic Licensing as a Solution to Licensing Process Problems in Siak and Karo District*. *International Journal of Regional Innovation* , 1(3),1-7. <https://doi.org/10.52000/ijori.v1i3.19f>
- Suhendra, A., Radianto, I., Setia, A. (2019) Pusat, J., Perdesaan, I., Sosial, I., ... Kebijakan, I. (nd). *Social Interventions Of Regional Governments In Building Rural Innovation In Hulu Sungai Selatan Regency*, South Kalimantan Province.
- Stukalenko, N.M., Zakhina, BB, Kukubaeva, AK, Smagulova, NK, & Kazhibaeva, G.K. (2016). *Studying Innovation Technologies in Modern Education*. *International Journal of Environmental & Science Education*, 11(15), 7297–7308.
- Tjandrawina, RR (2016). *Industry 4.0: The industrial revolution of this century and its impact on the fields of health and biotechnology*. *Jurnal Medicinus*, Vol 29, Number 1, April Edition.
- Triandini, E., Jayanatha, S., Indrawan, A., Putra, GW, & Iswara, B. (2019). *Systematic Literature Review Method for Identifying Platforms and Methods for Information System Development in Indonesia*, 1(2). Law of the Republic of Indonesia Number 23 of 2014 concerning Regional Government Republic of Indonesia Law Number 20 of 2003 concerning the National Education System Article 3.
- Wiedarti, P., & Indonesia. Directorate General of Primary and Secondary Education. (2018). *Master design of the movement*