

# Implementation of Digital Literacy in Education and MSMEs to Support SDGs 2030

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## Abstract

The education sector and Micro, Small, and Medium Enterprises (MSMEs) have an important role that is the basis for achieving various goals in the Sustainable Development Goals (SDGs). This important role can be realized, one of which is by utilizing technological advances properly. So it is important to conduct a deeper study of the implementation of digital literacy in the fields of Education and MSMEs in contributing to the achievement of SDGs. The author uses an experimental method to analyze the implementation of digital literacy in the field of Education, and a qualitative method to study the implementation of digital literacy in MSME actors. The results of the study show that the use of digital media in the learning process can improve the quality of education, this can be seen from the increased critical thinking skills that can support students' readiness to enter the workforce. The results of the study on the implementation of digital literacy in MSME actors show that utilizing digital devices and tools can have a positive impact on the ease and expansion of marketing, more efficient costs, and increased sales volume so that it can increase income. It is even becoming one of the strategies for maintaining a business in a pandemic. It can be concluded that the implementation of digital literacy in the field of education and MSME actors can support the achievement of the sustainable development agenda, especially in achieving the goals of quality education and economic growth.

**Keywords:** Digital Literacy, Education, MSMEs, SDGs

## 1. Introduction

Sustainable Development Goals (SDGs) are a global agenda designed to address the world's greatest challenges, such as poverty, inequality, and climate change, with the hope of creating a more inclusive and sustainable future for all. In line with this, Indonesia has mainstreamed and integrated the SDGs into national and regional development plans and priorities. The SDGs are targeted to be achieved in 2030, and they include 17 goals. Among the 17 goals, the Education element has an important role in supporting the achievement of various SDGs goals.

The main driver of sustainable development is quality education. The key role of education is vital in forming values that support sustainable development, and in consolidating a sustainable society [1]. The Education element in the Sustainable Development Goals (SDGs)

makes a major contribution to the achievement of other elements. Because quality education can eradicate ignorance, poverty, and also economic development. The urgency of SDGs in education is related to the goals of SDGs, namely ensuring equal distribution of education and increasing learning opportunities so that quality education can be realized [2].

Education can influence the achievement of sustainable development. The purpose of education is used as a basis for encouraging the goals and targets of this SDGs program, improving education in Indonesia will spur the achievement of the targets of the 17 SDGs points, one of which is the effort to build a quality country through quality and decent education [3]. Quality education will create a society that is able to free itself from ignorance and poverty, and also strengthen the political participation of the community to support democratic life.

Through education, humans will be more helped to achieve a decent and prosperous life. In addition, good education will strengthen the country's economic development. In addition to the education sector, Micro, Small, and Medium Enterprises (MSMEs) also have an important role in helping to achieve the goals of the SDGs. MSMEs play a vital role as the backbone of the Indonesian economy. The latest data from the Ministry of Cooperatives and MSMEs shows that in 2023, MSMEs contributed 61.1% to Gross Domestic Product (GDP), 97% of national workforce absorption, and 15.7% contribution to exports. MSME businesses can absorb a large workforce, meaning that MSME businesses also help reduce unemployment, which has an impact on reducing poverty rates. Decreasing the unemployment rate or increasing the employment rate will greatly assist the government in reducing poverty rates which have always been a burden on national development. Reducing unemployment and increasing real GRDP has been proven to reduce poverty [4,5]. This means that the goal of eradicating all forms of poverty leads to the first SDGs goal.

At the plenary session of the Indonesian national commission for UNESCO in 2023, the SDGs goal regarding the quality of education became a special concern. There still needs to be an accelerated effort to encourage the competitiveness of Indonesian human resources. The results of a survey on the secondary education system in the world 2018 issued by PISA (Program for International Student Assessment) in 2019, Indonesia was in a low position, namely 74th out of 79 other countries in the survey. In other words, Indonesia is in the 6th lowest position compared to other countries [6].

In addition, it was also conveyed that the quality of education still needs to be improved both in terms of curriculum development and qualifications and competencies. In line with this, Indonesia is ranked 11th in terms of the quality of education among ASEAN countries, so through the SDGs program this can be improved [7]. Regarding the skills that need to be improved, the current job market increasingly requires critical thinking skills in the workforce, but there is still a gap between the demand for critical thinking skills and the readiness of college graduates.

In the business world, the MSME sector also still faces significant challenges, especially in terms of access to capital, management, and technology adoption. Technology has the potential to increase productivity for MSMEs in Indonesia. At the same time, the profile of MSME actors is very diverse, including actors whose digital literacy and digital finance are still quite low. Information technology is the second most important issue for MSMEs [8]. In line with this, when they want to adapt to the impacts of climate change, MSMEs need large investments in terms of expertise and technology adoption [9].

The competitiveness of MSMEs can also be improved through digital innovation. In order to be competitive in this era, MSMEs need to adjust their performance patterns, both business processes and services, so that they can be faster, more effective, and more efficient. To strengthen MSME participation in the digital economy ecosystem, the Government has provided convenience, including through licensing, fiscal incentives, market access, and access to raw materials. In addition, in the scope of e-commerce, strengthening the MSME ecosystem is carried out through aspects of creating a healthy business climate, digital payments, logistics, personal data protection, implementation of electronic systems and transactions, and digital infrastructure. To overcome this problem, it is necessary to increase their insight into digital technology literacy because there are still quite a lot of related MSMEs that have not mastered digital technology massively [10].

Based on the description above, it can be concluded that it is necessary to improve students' critical thinking skills in efforts to improve the quality of education. In this study, a deeper analysis will be carried out regarding the use of digital comic media for Accounting based on Problem-Based Learning (PBL) in efforts to improve critical thinking skills. Comics presented digitally contain material that is directed at a problem-based learning process. In addition, analysis of the implementation of digital literacy in MSME actors is also very important to be studied further.

## **2. Method**

This study uses a mixed-method approach. The mix method research design approach is a process of collecting, analyzing, and combining quantitative and qualitative research results in one complete study [11]. The mixed method is designed simultaneously to obtain data and obtain questions and answers from a study. It is also emphasized that the mixed method is a research method that integrates quantitative and qualitative side by side to obtain comprehensive, valid, reliable, and objective data [12]. The role of quantitative data in this study is to measure descriptive data. Furthermore, qualitative data plays a role in deepening, developing, and expanding the quantitative data obtained previously.

In this study, quantitative data is used to see the impact of using PBL-based digital accounting comic media to improve students' critical thinking skills. Quantitative data was obtained through the distribution of questionnaires to UNU Purwokerto accounting students. The data analysis technique uses qualitative data to analyze the impact of implementing digital media on MSMEs in efforts to support the achievement of SDGs 2030. Qualitative data was obtained through interviews with MSME actors who have used digital media, namely Alzky Wedding and Decoration.

### 3. Results and Discussion

#### 3.1. Digital Literacy in Education

The experimental procedure for using PBL-based digital comic media will produce data on critical thinking skills in the experimental group and the control group. Based on the results of the study, it is known that there was an increase in critical thinking skills in both the experimental and control groups. In the experimental group, the average critical thinking skills which were originally 48.7 increased to 82.5, so the increase that occurred was 33.8. Meanwhile, in the control group, the average value of critical thinking skills which were initially 48.5 increased to 65.7, so that the increase that occurred was 17.2. Based on these data, it is known that the increase in critical thinking skills in the experimental group was higher than in the control group.

Hypothesis testing was carried out using the t-test, this was done to test the effectiveness of PBL-based accounting digital comic media on increasing critical thinking skills with the following research results:

Table 1 T-Test Pretest-Posttest Critical Thinking Skills Experimental Group

Paired Samples Correlations			
	N	Correlation	Sig.
Pair 1 pretest & posttest	48	.927	.000

Source: 2024 Data Processing Results

Based on the table above, it is known that the significance value of  $0.000 < 0.05$ , then there is a relationship between students' critical thinking skills before and after using PBL-based digital comics. Furthermore, if the correlation value ( $r$ ) is squared, it shows the contribution of PBL-based digital comic media to improving critical thinking skills. The correlation value of  $0.9272 = 0.86$  shows that the contribution of PBL-based digital comic media to improving students' critical thinking skills is 86%. To prove whether there is a significant difference between critical thinking skills before and after using PBL-based digital comics, it is presented in the following table:

Table 2 T-Test (Paired Sample Test) Pretest-Posttest Critical Thinking Skills Experimental Group

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	pretest - posttest	-9.667	3.389	.565	-10.813	-8.520	-17.114	35	.000

Source: 2024 Data Processing Results

Based on Table 4, it is known that the significance value of the t-test (paired sample test) is 0.000. This shows that the significance value is less than 0.05, so  $H_0$  is rejected and  $H_1$  is accepted. Thus, it can be said that there is a significant difference between students' critical thinking skills before and after using PBL-based digital accounting comic media.

Based on the results of this study, it is known that the use of digital media in the learning process can improve the quality of education, this can be seen from the increasing critical thinking skills of students. Increasing students' critical thinking skills can support students' readiness to enter the workforce. This is in line with the results of research [13], which states that in this era, college graduates need critical thinking skills to meet the demands of the growing labor market. With these critical thinking skills, both prospective workers and those who are already working can face and adapt well to various challenges in the world of work.

In addition to being able to support the achievement of SDGs in the goal of improving the quality of education, the use of digital media in the learning process can also support the achievement of the first SDG goal, namely reducing poverty. One way to alleviate poverty is by empowering social workers so that the goal of empowerment is achieved, social workers must be able to solve problems [14]. This can be achieved by increasing the individual's ability to solve problems, namely with critical thinking skills [15]. Critical Thinking not only stimulates problem-solving skills but also facilitates effective communication, fosters independent and holistic thinking, and supports decision-making and active citizenship [16].

Based on this description, it can also be seen that by using digital accounting media in the learning process, it can also support the achievement of the tenth SDGs goal, namely Reducing inequality. In the tenth goal indicator regarding reducing inequality, there is an aspect of reducing the percentage of the poor, where this can be realized by empowering social workers who have critical thinking skills. Critical thinking skills can be developed through quality learning using digital media [13].

Work readiness resulting from the impact of using digital media that can improve critical thinking skills can also support the achievement of the eighth goal, namely Decent work and

economic growth. Workers who have good critical thinking skills and can adapt to demands and solve work problems, in addition to reducing unemployment rates, increasing the proportion of employment will also ultimately increase the productivity and profits of a business. So that it will have an impact on the rate of good GDP per capita growth.

### **3.2. Digital Literacy in MSMEs**

#### **3.2.1. Sustainable Strategy**

Sustainability strategy is something that is very much needed in the business world today. Sustainability strategy is the steps taken by companies or business actors to continuously improve their business. Sustainability strategy can usually be in the form of marketing and product innovation. As done by Alzky Wedding and Decoration, they have a sustainability strategy by collaborating with local vendors and service providers such as the best local videography and photography fields, this is to increase the interest of potential clients because apart from good make-up results, photo and video results are also the most important assessment of potential clients. Wedding and decoration package services that suit the needs of various types of weddings, this aims so that all people can use the services of Alzky Wedding and Decoration because as we know in Indonesia itself there are many tribes and cultures and this is also related to their wedding culture. The existence of various wedding and decoration packages also expands the market share of the business. And the next sustainability strategy, the use of the latest technology follows the existing trend to carry out digital marketing, this is done so that the marketing carried out by Alzky Wedding and Decoration can be accepted by all groups.

*"Our documentation of several vendors, taking it to external vendors like Motorika, and Malika, which ones are empty, but, we choose the good ones, not all of them, which meet the criteria. That's in terms of cooperation. Then, the wedding package service is also adjusted to what the client wants. And most in terms of marketing that passes".*

#### **3.2.2. Impact of the Pandemic on Business Activities**

The COVID-19 pandemic is a major outbreak that is directly felt by the Indonesian people and has an impact on the national economy. Even the economy such as Micro, Small, and Medium Enterprises (MSMEs), for example, Alzky Wedding, has also been affected by the outbreak. The impacts that can be felt include restrictions on economic activities and decreased income. By government regulations that enforce the Enforcement of Community Activity Restrictions (PPKM) policy, Alzky Wedding has finally limited its economic activities by not implementing its services as usual. Usually, Alzky Wedding provides services with a large concept or can be attended by everyone, but during the pandemic Alzky Wedding itself uses or offers a minimalist package that is more themed intimate wedding. By implementing the intimate wedding concept, Alzky Wedding continues to run its business but also does not violate the regulations given by the government. However, on the other hand, the restrictions or changes in the wedding concept also affect its business income. From Alzky Wedding, which usually produces high turnover, it suddenly becomes low due to the COVID-19 outbreak and also the implementation of the PPKM system recommended by the government. With the decline in

turnover, Alzky Wedding's business continues to run because there are still clients who continue to use Alzky Wedding's services even though the pandemic is still ongoing.

*"It has an impact but we have been shifted to a minimalist package so we have another solution because in the past we were not allowed to be big because the police raided us, then we used to rotate the package but became minimalist like the one at home, the marriage contract at home, it still runs but it's just a minimalist package, not a big one, there is a difference in income" (UKM Alzky Wedding).*

### 3.2.3. Utilization of Technology in Creating Sustainable Business

Along with the rapid development of technology today, business actors also use technology in their marketing. The use of digital technology in marketing certainly brings many benefits that are felt by business actors, especially Alzky Wedding. The use of digital technology makes Alzky Wedding's marketing reach wider so that the income obtained also increases. In addition, the use of digital in marketing opens up unlimited communication, thus facilitating collaboration between stakeholders, both with business partners and with clients.

*"wide reach, so after posting on IG, it won't be long before you get a lot of WA messages, new numbers, often like that even though you don't post, sometimes because there's already a number in the bio, so people ask questions there, sometimes DMs don't even get replied to, there's already a lot of them, then people immediately divert to the bio, those who WA them immediately ask questions there, it affects sales, if there's already a banner at that location, the number and IG are already listed, so if you don't know Alzky Wedding, you can immediately find out through there" (UKM Alzky Wedding).*

### 3.2.4. Social Media Platform

A social media platform is a digital space created to connect people without direct physical contact. In addition to being a means of interaction, social media platforms can also be used to help digital marketing. With the presence of digital platforms such as Facebook, Instagram, TikTok, and WhatsApp, they can be used to build a portfolio and branding of a business to promote its products. Like Alzky Wedding, which uses the platform to create interesting content so that it can attract clients to use the services provided by Alzky Wedding.

*"Initially, I think it was WA, then Ig, At most, that's it, and now I often make TikTok content, In the past there was Facebook and I often posted small pamphlets on Facebook, like pamphlets for marriage contracts and so on, Now it's still like that, but in the past, Ms. Fia had it on her personal Facebook. Often endorsed because Ms. Fia had a lot of friends" (UKM Alzky Wedding).*

### 3.2.5. Digital Marketing Risks

The use of digital technology in marketing can provide benefits and risks. The risks that may arise from the use of technology include tight competition, negative comments that can affect public perception, fake orders and fake payments. From the many business actors who have implemented digital-based marketing, business actors must be creative and innovative to survive the many competitors. On the other hand, negative comments on Alzky Wedding itself such as accusations by certain individuals regarding the use of mystical beliefs because there is rapid business development in a short time. Meanwhile, Alzky Wedding has never experienced fake orders and payments.

*"Because the competition is now tight, so the name is differentiated so that it (the Wedding Organizer Instagram account) stands alone but is still under the auspices of Alzky" (UKM Alzky Wedding).*

*"If there are negative comments, there must be some, it's impossible not to have them, but thank God they can be overcome, most complaints about the decoration, for example, when it's busy, maybe there's a gap that's left behind, the client will immediately contact the admin and oh yeah, it will be delivered right away, thank God the response so far has been good, there's nothing special, and the make-up is also thanked God everyone is satisfied" (UKM Alzky Wedding).*

*"...Thank God there was no help from a shaman or anything that people slandered, it was purely my effort, working hard from morning until night" (UKM Alzky Wedding).*

*"Thank God there aren't any fake orders, but there are some that are late because we were pegged at H+1 but there were some that were 2 or 3, but thank God they still paid off" (UKM Alzky Wedding).*

Based on the results of the description of the five topics, it can be concluded that the use of digital literacy in MSME actors provides many benefits, including ease and expansion of marketing, more efficient costs and increased sales volume so that it can increase income. It even becomes one of the strategies in maintaining a business in a pandemic situation. The implementation of digital literacy in the field of MSME actors can support the achievement of several SDGs goals, namely regarding the first goal regarding poverty alleviation, the eighth goal regarding decent work and economic growth and the tenth goal in reducing the level of inequality. This is in accordance with the results of research [8, 10], that digital literacy and entrepreneurial orientation have a positive and significant effect on the performance of MSME businesses.

#### **4. Conclusion**

The results of the study indicate that the use of digital media in the learning process can support the achievement of several SDGs 2030 goals. The use of digital accounting comic media in the learning process can improve students' critical thinking skills which support students' readiness to enter the workforce. This can be a contributor to the achievement of several SDGs



goals, namely the first goal in poverty alleviation, the fourth goal of quality education, the eighth goal of decent work and economic growth, and the tenth goal of reducing inequality.

The results of the study on the implementation of digital literacy in MSME actors show that utilizing digital devices and tools can have a positive impact on the ease and expansion of marketing, more efficient costs, and increased sales volume so that it can increase income. It even becomes one of the strategies for maintaining a business in a pandemic situation. The implementation of digital literacy in the field of MSME actors can support the achievement of several SDGs goals, namely the first goal regarding poverty alleviation, the eighth goal regarding decent work and economic growth, and the tenth goal in reducing inequality.

If the use of digital literacy is truly applied to the field of education and MSME actors optimally, then the achievement of several SDGs goals in 2030 will be easier. The analysis conducted in this study is only limited to one subject, both in the analysis of the field of education and MSME actors. With the great impact given in the world of education and MSME actors, it is hoped that further research will expand or increase the scope of subjects not limited to one subject. The author suggests the need for further research so that the results of the analysis are deeper and more beneficial.

## **5. Conflict of Interest**

In the study of Alzky Wedding and Decoration Business, the researcher stated that no conflict of interest influenced the process or results of this research. The researcher has no personal, professional, or financial relationship with the UMKM actors who are the subjects of the research. In addition, this research was conducted independently without influence or pressure from external parties, such as sponsors, government agencies, or certain business stakeholders.

This research aims purely to identify sustainable strategies, conditions, challenges, utilization of technology, and opportunities faced by Alzky Wedding and Decoration and provide objective recommendations for the development of their business. Every data collected has been obtained transparently and validly, without any manipulation efforts to support the interests of certain parties. Thus, the results of this study can be relied on and trusted as a reflection of actual conditions in the field.

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