THE ROLE OF EDUCATION IN THE DIGITALIZATION OF THE HOME INDUSTRY AS A SOLUTION TO UNEMPLOYMENT IN THE ERA OF SOCIETY 5.0

1st Mohammad Zaini
UIN Kiai Haji Achmad Siddiq Jember
Jember, Indonesia
mohamadzaini12345@gmail.com

2nd Machfudz
UIN Kiai Haji Achmad Siddiq Jember
Jember, Indonesia
machfudz.kemenag@gmail.com

3th Hilda Yulianti
UIN Kiai Haji Achmad Siddiq Jember
Jember, Indonesia
hildayulianti73@gmail.com

Abstract*— Unemployment is one of the main challenges faced by Indonesia in facing the Society 5.0 era which is characterized by digitalization and advanced technology. To overcome this problem, digitalization of the home industry has been identified as one of the promising solutions. This article aims to examine the very important role of education in the process of digitalizing the home industry as a solution to unemployment using a qualitative case study approach. The research method used is a case study approach and literature analysis. This research aims to understand the relationship between education which acts as a link between traditional skills and increasingly digital market needs. The collected data was analyzed using a qualitative analysis approach to identify patterns, themes and relationships between education, digitalization adoption and unemployment reduction. The findings of this research show that the role of education in digitalizing the home industry has a positive impact in reducing the unemployment rate. Adoption of digital technology increases production efficiency, product quality and access to wider markets. Case studies show that home industries that adopt digitalization have succeeded in creating new job opportunities and reducing the unemployment rate in the surrounding environment. However, there are challenges that must be overcome in implementing home industry digitalization, such as limited access to technology, lack of digital knowledge, and infrastructure problems. Therefore, collaboration between government, the private sector, and educational institutions is needed to create supportive policies, digital skills training, and adequate financing. Based on these findings, the author recommends increasing efforts in creating policies that support the adoption of home industry digitalization, strengthening digital training and education programs, as well as increasing collaboration between industry players and related stakeholders. It is hoped that the widespread implementation of home industry digitalization can make a significant contribution to overcoming unemployment and encouraging economic growth in Indonesia

Keywords*— *Digitalization of home industri, unemployment, Society 5.0

I. INTRODUCTION

Unemployment in the era of society 5.0 is increasing. This is proven by data according to the central statistics agency which records that unemployment in Indonesia reached 8.42 million people in August 2022 and West Java is the province that contributes the most to unemployment. Meanwhile, according to databox, the unemployment rate in Indonesia in February 2023 was 5.45 percent, there were 3.60 million people of working age who were affected by Covid-19. [1]

Research conducted by Yudistia states that the Covid-19 pandemic has very clearly affected Indonesia's economic growth. The increase in unemployment is the impact of the implementation of the PSBB or lockdown as a form of government anticipation to prevent widespread transmission, but in reality it actually has an impact on national economic growth, one of which is an increase in the unemployment rate.[2]The solution put forward by Faisal is that MSMEs are a form of business that can survive the economic crisis. The presence of MSMEs is able to reduce unemployment through improving and enhancing the economy both in the city and in the region.[3]

According to Annisa, the MSME strategy that is usually used by Indonesian people to reduce the number of unemployed in Indonesia is establishing a home industry. The home industry is like the plastic bottle waste recycling industry. The aim or target of home industry is to be able to create jobs for themselves and for many people and work on time, apart from that, it also does not differentiate between job seekers and the conditions of workers.[4] In the era of society 5.0, according to research by Moh. Sulchan said the government has a digital-based National Economic Recovery (PEN) program in the context of economic stimulus affected by the Covid-19 pandemic. This is done in order to increase competitiveness and remain able to survive against the onslaught of technology.

According to Muhammad As'ary, marketing your home industry in the era of society 5.0 can be done through online media, which will be a big opportunity to develop the sales market. Apart from that, innovation from sellers can also be enjoyed by various groups.[5] As business people, of course entrepreneurs want to always achieve profits in every product they produce. This must be adapted to the current 5.0 era which prioritizes digitalization, one of which is through

D. Pristine Adi et al. (eds.), *Proceedings of the 2nd Annual Conference of Islamic Education 2023 (ACIE 2023)*, Advances in Social Science, Education and Humanities Research 809,
https://doi.org/10.2991/978-2-38476-182-1_8

marketing on social media. There are very significant changes in the era of society 5.0 where digital strategies are more promising than conventional ones.[6]

Education has an important role as a bridge connecting traditional skills with increasingly digital market demands. This home industry is a good solution to help reduce unemployment in Indonesia, where digitalization of the home industry can provide benefits, namely as a job creator by involving individuals or small business groups in the production and marketing of products, can increase household income by selling processed products Of course, it will be useful for meeting daily needs and improving the standard of living. In this way, digitalization of the home industry can act as a driver of the local economy, creating jobs, increasing household income, supporting verified local products, encouraging community empowerment and promoting environmental sustainability.[7]

The objectives and hypotheses of this research consist of analyzing the role of education in digitalizing home industry as a solution to unemployment in Indonesia in the Society 5.0 era, identifying the benefits obtained from adopting home industry digitalization in reducing unemployment and economic growth, analyzing challenges and obstacles in implementing home industry digitalization in Indonesia, as well as formulating policy recommendations and solutions to encourage the digitalization of home industry as a solution to unemployment in Indonesia.

II. METHOD

The research used is a case study approach and literature analysis. This research aims to understand the relationship between education in the digitalization of home industry and its consequences for unemployment levels in Indonesia. First of all, secondary data will be collected from various sources such as statistical institutions, government reports, and previous research. This information will include data on unemployment levels in Indonesia, industrial developments, and digitalization trends in home industry. This secondary data will be analyzed statistically to identify patterns or relationships that may exist between digitalization and unemployment. Not only that, literature analysis will be carried out to collect thoughts contained in the literature regarding the influence of digitalization on unemployment. Researchers want to explore theories that support or criticize this relationship. This literature analysis will help build a solid theoretical foundation and provide the necessary context for the research.

Case studies of the role of education and home industry in Indonesia which have practiced digitalization will also be analyzed. Information regarding the changes that occur in their business after practicing digitalization will be taken from various existing sources. This will help illustrate how the role of education in home industry can influence unemployment levels. By combining secondary information analysis, literature analysis, and case studies. This research will provide a comprehensive explanation of how digitalization of the home industry could be a potential solution to unemployment in Indonesia in the Society 5.0 era. Interpret the findings of this research by formulating the main findings that emerge from the analysis of the case study data. This interpretation will provide a deeper understanding of the role and effects of home industry digitalization as a solution to unemployment in Indonesia. By using a qualitative-based case study research method, this research will be able to explore an in-depth understanding of the real experiences of home industry players in adopting digitalization and its impact on unemployment. The case study will provide specific and detailed insight into the role of education in digitalizing the home industry to overcome unemployment.

III. RESULTS AND DISCUSSION

A. The Effectiviness of Education in Digitalizing Home Industry to Overcome Unemployment

Education has an important role in the digitalization process of home industry. Through proper education, people can gain the skills needed to develop a home industry business. Home Industry here is a small-scale business unit that operates in a particular industrial field which is run by one or more individuals without requiring large amounts of capital.[8] Home industries that utilize digital technology can provide benefits for the Indonesian people to reduce unemployment with online businesses. The decline in unemployment rates among Indonesian people occurred because the majority of Indonesian people realized that work was not focused on certain agencies and companies. However, they can now take advantage of developments in digital technology as capital to open up job opportunities for themselves. Online work is a solution movement to build and revive the people's economy. Especially reducing the unemployment rate of the Indonesian people. As seen in the graphic image below, the unemployment rate in Indonesia from February 2019 – February 2023:

Figure. 1. Number of Open Unemployment Rates in Indonesia

February 2023 the number of unemployed people in Indonesia reached 7.99 million people, a decrease of around 410 thousand people compared to February 2022. Then the Open Unemployment Rate (TPT) in February 2023 reached 5.45%, also down compared to February last year which was

still 5.86 %.[9] This is the result of the use of digitalization which allows home industry to be more efficient in production and business management. Automation of manufacturing processes using technology such as 3D printers or CNC machines can increase productivity and reduce production costs. Digital inventory management systems also help in optimizing inventory of raw materials and finished products, reducing waste and increasing efficiency. All this can create opportunities for home industry to grow and employ more workers, thereby reducing the unemployment rate on a local scale. By providing sufficient training and understanding, education can help reduce resistance to change and encourage people to utilize new technologies more effectively.

In accordance with Fernanda's opinion about the benefits of digitalization technology, the trade sector is considered very important to minimize operational costs and to reach more consumers. By utilizing existing platforms such as online stores (ecommerce), business actors can reach more consumers from various regions at a cost that is not too expensive. The use of social media is also beneficial for business people as a medium for marketing or advertising products so that many people know about them.[10] In the era of society 5.0, of course many Indonesians are using technology, especially in product marketing. This can provide new opportunities for people to provide jobs, thereby reducing the unemployment rate in Indonesia. Apart from providing great business opportunities, technological innovation also plays an important role in increasing productivity and efficiency. This can reduce production costs, speed up product delivery times, and allow businesses to compete more effectively in the global market.

One of the advantages of education in digitalization is that education can influence the level of technology adoption in the home industry, which can enable MSMEs to expand market reach through digital marketing. MSMEs can create websites, use social media, or marketplaces to promote their products and services to a wider audience. In this way, MSMEs can reach more potential consumers and expand their market size. In accordance with Febrianto who stated that the benefit of digitizing information is that it can create an information society, meaning that with digital information, it becomes easier for people to get the information they want so that the information society continues to grow, and has the potential to expand market reach.[11]

In conclusion, education can give birth to a generation of digital entrepreneurs who have the vision and skills to develop a home industry business. Digitalization has great potential in overcoming unemployment in home industry. By utilizing digital technology to expand market reach, increase production efficiency, and create business growth opportunities, home industry can have a positive impact on the local economy and unemployment rates. However, supporting measures such as adequate technological infrastructure and training for business actors are also very important in achieving optimal results.

B. Educational Challenges and Obstacles in Implementing Home Industry Digitalization

Education in the implementation of digitalization in home industry brings great potential to increase efficiency, quality and market access for micro and small business actors. Most home industry business actors apply digitalization to face challenges in terms of lack of resources, cultural changes and lack of knowledge.[12] However, as with any technological change, there are challenges and obstacles that need to be overcome for this implementation to run smoothly and successfully.

One of the main challenges in adopting digitalization in home industry is a lack of technological understanding. Many small-scale businesses may have limited skills and knowledge in terms of information technology and computers. This can hinder the adaptation process to new software or systems needed in the digitalization process. Training and technical assistance efforts need to be carried out to ensure that homeworkers are able to use digital tools effectively. Research conducted by Wimber also suggests that the transformation to digital media is not going smoothly because not all business actors are ready to run a digital business, for several reasons, namely not being able to use digital media, poor telecommunications infrastructure, lack of knowledge to run a business using digital media, etc. unpreparedness of human resources to use digital media.[12]

Apart from that, infrastructure problems can also be a serious obstacle. Slow or unstable internet connections can hinder access to digital platforms, impacting order execution, inventory management and customer interactions. Especially in areas with low connectivity, efforts need to be made to improve technological infrastructure in education to support digitalization in home industry. Digital security aspects are also an important concern. Many home industries may not have adequate protection against cyber threats such as hacking or data theft. Securing sensitive information such as customer data, production methods, and other business information becomes critical in the digital environment. Ensuring that appropriate security systems are implemented and businesses are trained in cybersecurity practices will be an important step. Jack Ma provides some thoughts on the importance of global connectivity in overcoming digitalization challenges in home industry. He may emphasize that a strong and stable internet infrastructure is a major factor in enabling home businesses to connect with global markets. Good connectivity will open up greater expansion opportunities and help overcome local market limitations.[13]

Ultimately, changes in culture and attitudes towards technology can also become obstacles. Some businesses may be hesitant or reluctant to adopt new technology due to discomfort or distrust of the change. Communicating the

long-term benefits of digitalization and embracing cultural change will be important factors in overcoming these obstacles. In facing these challenges and obstacles, it is important for the government, educational institutions and the private sector to work together to provide education, training and technical support to home industry business actors. In this way, the implementation of digitalization in home industry can run more smoothly and provide significant benefits for local economic growth.

C. The Role of Government and Other Stakeholders

The government's role in creating policies that support education in the digitalization of the home industry as a solution to unemployment is that the government can issue policies that encourage the integration of digital technology in the education curriculum holistically. This includes developing educational programs that include digital skills training, digital business management knowledge, and developing talent interest in technology.

One important step that the government can take is to facilitate cooperation between educational institutions, industry and local communities. Apart from that, the government can also create adequate technological infrastructure, including fast and affordable internet access in all regions. This will help home businesses access digital platforms, interact with global markets, and optimize their business processes. Additionally, governments can provide tax incentives or financial assistance to businesses that adopt digital technologies, encouraging them to invest in the necessary equipment and systems.

This is in line with research conducted by Anindita that the government as a policy maker needs to continue to stimulate MSME business actors to continue to be able to survive and grow in the face of internal problems in the development of MSMEs as well as external problems which do not rule out the possibility of occurring, such as the nation's economic condition in an economic crisis or situation. a nation that is in a pandemic era. Problems in the development of MSMEs as well as the condition of the economy and the nation really make a significant contribution to the development of MSMEs themselves and here the role of the government in various programs, coaching, mentoring, is really needed by MSME players to be able to survive and continue to develop in all situations for their contribution to the economy.[14]

The government also has a role in developing training and education programs to improve the digital skills of homeworkers. This will help them adapt to new technologies and maximize the potential of digitalization. In addition, the government can form partnerships with private education and training institutions to create programs that are relevant to industry and market needs. In creating policies that support reducing unemployment, the government can encourage the growth of new economic sectors related to digitalization, such as application development, e-commerce and technology-based services. Support for start-ups and innovation can also help create new jobs. In addition, the government can facilitate collaboration between industry and educational institutions to identify skills needs in the digital labor market and direct educational programs according to market demand.

It is important to note that the success of government policies in supporting the digitalization of home industry and reducing unemployment requires a holistic approach, cross-sector collaboration, and a rapid response to technological changes. With the right steps, the government can act as a catalyst in realizing the full potential of digitalization in the home industry sector and create new jobs for the future.

D. Social, Economic and Environmental Implications

The adoption of digitalization in the home industry has had a significant impact both from a social and economic perspective. The increased use of digital technology in production and business management has resulted in a number of positive effects that have a broad impact on society and the economy as a whole. As can be seen in the graphic image below, technology is widely used in digital marketing:

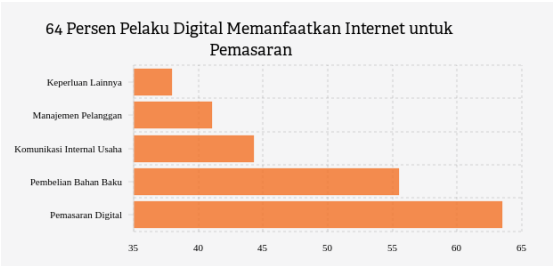

Figure. 2. Use of The Internet by Digital Business Actors

Based on the 2021 E-Commerce Survey conducted by the Central Statistics Agency (BPS), as many as 63.52% of e-commerce business respondents have utilized internet services for digital marketing, either through social media or marketplaces.[15] Era The digital economic era has an impact on changes in people's lifestyles, including the transaction methods used by the public. The way to shop no longer has to go to a shop but can be done through an online shop. In accordance with Astuti's research, with the existence of social media which is based on technology, it is possible to easily obtain information and make direct transactions remotely and easily about the products being bought and sold so that it can make it easier for consumers to carry out economic transactions which will benefit the producers or main players. economy with today's transaction system.[7]

Through the use of digital technology, by promoting humanity and justice, it is possible to create prosperity that is relatively more evenly distributed, reaching the dominant lowest groups of society wherever they are in this global village.[16] With that, education in the digitalization home industry has greater access to global markets through online platforms and social media. This opens up new opportunities

to sell their products on a national and international level, which in turn can increase revenue. In addition, by using technology to optimize production and distribution, production costs can be reduced, allowing businesses to offer more competitive prices.

The role of education in digitalizing the home industry not only impacts business owners, but also local workers. Expanding businesses through online platforms often requires additional workforce in areas such as digital marketing, e-commerce management, and logistics. With these new job opportunities, unemployment can be reduced and people have the opportunity to develop skills that suit market demand. It is hoped that these assets will be able to create new jobs and help the community's economy.[17] Digitalization can help reduce economic inequality by enabling more equitable access to markets and business opportunities. Home industries that were previously limited by geographic limitations can now compete more fairly with big players. In the digital ecosystem, creativity and innovation are key factors in achieving success, so that home industries that have innovative ideas can gain greater profits.

Digitalization of the home industry allows local business actors to continue operating in their own environment because they already have sufficient skills. This has had a positive impact on economic and social empowerment in the region, minimizing mass migration to big cities in search of work. Developing home industry can also help maintain and preserve local culture and traditions, which in turn strengthens community identity. With digitalization, home industry can access online training and education to improve their skills and knowledge. This helps improve the quality of the products and services they offer, and helps drive innovation in production.

Thus, the adoption of digitalization in home industry not only has the potential to increase income and welfare, but also has a wider impact on society, including in terms of job creation, reducing economic inequality, and empowering local communities. However, it is important to remember that to achieve maximum impact, support from the government and other stakeholders is needed in the form of appropriate regulations, adequate digital infrastructure and relevant skills training.

E. Limitations and Recommendations for Further Research

1) Research Limitations

In conducting this research, several important limitations need to be acknowledged that may affect the interpretation of results and generalization of findings:

a) Limited number of case studies: This research may have limitations in the number of case studies involved. A research involving more case studies could provide a more comprehensive view of the role of education in digitalization across different contexts and industries.

b) Time and resource limitations: This research may be limited by time and resource limitations. Limited time can affect the depth of analysis and understanding of various aspects of social and economic impacts. Future research that has more time and resources can carry out a more in-depth analysis and be more specific to the education that will be researched.

c) Data limitations: Limited data available, especially in terms of historical or longitudinal data, may limit the ability of this study to observe long-term trends in the impact of digitalization on the home industry.

2) Research Recommendations

Based on the above findings and limitations, further research can consider the following recommendations:

a) Expanding the number of case studies: Future research could involve more case studies from different industry sectors and geographic regions. This can provide broader insight into the various impacts of digitalization on the home industry.

b) Involving more variables: Adding more variables to the analysis, such as social and cultural factors, environmental impacts, and gender aspects, can provide richer insights into the effects of digitalization on the home industry.

c) Expanding geographic coverage: Research may consider expanding geographic coverage, including home industries in rural or less developed areas.

IV. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusion

After analyzing and discussing research findings, the following are several points that can be concluded in this research: (1) Education has an important role in digitalizing the home industry in the era of society 5.0. Through the adoption of digital technology, home industry can increase production efficiency, expand markets, and create new job opportunities (2) Case studies show that education involving training in the field of home industry digitalization can prepare individuals to work in an increasingly digitally connected industrial environment (3) Although digitalization of the home industry offers opportunities, there are challenges that need to be overcome. These challenges include limited access to technology, lack of digital knowledge, and infrastructure problems. Collaborative efforts are needed between the government, the private sector and educational institutions to overcome these challenges (4) The government has an important role in creating policies that support the digitalization of home industry, including providing access to technology, digital skills training and providing incentives for home industry players (5) Collaboration between home industry players, government, the private sector and educational institutions is the key to encouraging widespread and sustainable adoption of digitalization. They can work together to develop education and training programs that follow technological developments and market needs.

B. Suggestion

Based on these conclusions, here are several suggestions for further action: (1) The government needs to increase efforts in creating policies that support the adoption of home industry digitalization, including adequate resource allocation, establishing clear regulations, and providing the necessary infrastructure (2) Program digital training and education needs to be strengthened, both by the government and educational institutions, to provide the skills and knowledge needed for home industry players in adopting and optimizing digital technology (3) Collaboration between home industry players, industry associations and research institutions can be improved to share knowledge, experience and resources in encouraging the adoption of digitalization and strengthening the home industry ecosystem (4) Home industry players need to explore the potential for inter-industry collaboration and increasing competitiveness through digital platforms and business networks. This can open up new opportunities in marketing products, gaining access to global markets, and increasing the scale of production (5) Further research needs to be carried out to identify the long-term impact of the role of education in the digitalization of home industry on reducing unemployment and improving the overall economy. Further studies could also focus on the role of specific technologies, such as artificial intelligence or the Internet of Things, in increasing the effectiveness of home industry digitalization. By implementing these suggestions, it is hoped that digitalization of the home industry can be an effective solution in overcoming unemployment in Indonesia in the Society 5.0 era, as well as having a positive impact on economic growth and social welfare.

REFERENCE

[1] B. P. Statistik, "Tingkat Pengangguran Terbuka," 2022.

[2] Y. Teguh Ali Fikri, "Analisis Peningkatan Angka Pengangguran akibat Dampak Pandemi Covid 19 di Indonesia," *J. Bus. Anal.*, vol. 1, no. 2, p. 107, 2021.

[3] Syairozi and Susanti, "Analisis Jumlah Pengangguran dan Ketenagakerjaan Terhadap Keberadaan Usaha Mikro Kecil dan Menengah di Kota Medan," *J. Samudra Ekon. dan Bisnis*, vol. 2, no. 2, p. 71, 2016.

[4] A. Fachratun Zaen, "Strategi Tokoh Masyarakat Dalam Meminimalisir Angka Pengangguran Melalui Home Industri Daur Ulng Limbah Sampah Botol Plastik," IAIN Purwokerto, Purwokerto, 2019.

[5] A. Muhammad, Mugini, F. Fakhrurozi, Sugiarti, F. Utami, and R. Hapsari, "Optimalisasi Potensi Home Industry Melalui Digitalisasi Marketing (Kasus, Produksi Emping Rumahan Kampung Pangutan, Desa Sukakerta, Cianjur," *J. Pus. Inov. Masy.*, vol. 6, no. 1, p. 941, 2021.

[6] S. Muhammad, Z. Maslihatin, and Yulikah, "Peran Digitalisasi Bisnis Terhadap Pemulihan Eknomi dalam Meminimalisir Pengangguran di Indonesia," *Pros. Semin. Nas. Manag. Ekon. dan Akunt.*, vol. 6, no. 1, p. 941, 2021.

[7] F. Al fauzan *et al.*, "Pengembangan Potensi Ekonomi Home Industri," *J. Pendidik. Geogr. Unpatti*, vol. 2, no. 1, pp. 66–77, 2023.

[8] E. Oktaviani, A. Ahmad, and S. Muharam, "Meningkatkan Pendapatan Masyarakat melalui Home Industri di Masa Pandemi Covid-19 Increasing Community Income Through Home Industry during the Covid-19 Pandemic," *UIN Sunan Gunung Djati Bandung*, vol. 1, no. 36, pp. 109–126, 2021.

[9] A. Ahdiat, "Jumlah dan Tingkat Pengangguran Terbuka di Indonesia (Februari 2019-Februari 2023)," *databoks*, 2023.

[10] F. Adista B, "Manfaat dan Pentingnya Digitalisasi di Era Saat Ini," 2021.

[11] F. M. T and A. D, "Pemanfaatan Digital Marketing Bagi Usaha Mikro, Kecil Dan Menengah Pada Era Masyarakat Ekonomi Asean. JMD:," *J. Ris. Manaj. Bisnis Dewantara*, vol. 1, no. 2, p. 61, 2018.

[12] W. J. Panjaitan, "Penerapan Tranformasi Digital dan Hambatannya Pada Industri Kuliner di Indonesia," vol. 1, no. 2, p. 280, 2023.

[13] T. Alibaba News, "Mendorong Penggunaan Teknologi Untuk Mengubah Dunia, Jack Ma: Masa Depan Dimulai dari Hari Ini," *Alibaba News*, 2019.

[14] A. T. Novitasari, "Kontribusi UMKM Terhadap Pertumbuhan Ekonomi Era Digitalisasi Melalui Peran Pemerintah," *J. Appl. Bus. Econ.*, vol. 9, no. 2, pp. 184–204, 2022.

[15] F. R. Humaira, "Pemanfaatan Internet oleh Pelaku Usaha Digital," *databoks*, 2022.

[16] N. L. W. S. Telagawathi, N. M. Suci, and K. K. Heryanda, "Implikasi Kewirausahaan Terhadap Digitalisasi Ekonomi dan Ekonomi Kemanusiaan UMKM Kerajinan Tenun di Provinsi Bali," *J. Ilm. Manaj.*, vol. 11, no. 2, pp. 228–240, 2021.

[17] P. Komunitas and K. Taruna, "Digitalisasi Home Industri Desa Samberan," vol. 1, no. 1, pp. 22–27, 2020.