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Research Article

Technological Education and Its Influence on Digital Economic Readiness during the COVID-19 Pandemic

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Abstract

Consumer behavior changes in the COVID-19 pandemic situation require businesses to switch to an online economic system. To market products appropriately according to the target market, entrepreneurs need to increase literacy in e-commerce activities. This study aims to determine the effect of the level of technological education on readiness of community level for 2020 digital economy at Batik Small and Medium-sized Enterprises (SMEs). This study uses a quantitative approach with purposive sampling technique which determines 65 respondents in the Masaran, Sragen, Central Java Batik SMEs who have marketed the products through online using social media. The questionnaire was used to retrieve data. Descriptive analysis techniques and multiple linear regression were used to process the data. The results of the descriptive analysis show that the technological education level of the majority of Batik SMEs entrepreneurs is in the low category. The regression results indicate that technological education has a positive effect on the readiness of community level for 2020 digital economy with the level of gender, educational background, and internet networks as control variables, the higher technological education level owned by business people, the higher the community readiness to join the digital economy era which requires have the skills to use digital media also increase. The implication of this research is that the low level of technological education which is marked by a lack of understanding of accessing the internet by entrepreneurs can be a strategic step for the government to improve the information technology capabilities of the community by providing intensive training for Batik business groups to be able to compete in the digital market.

Keywords

Technological education, Digital Economic 2020, COVID-19, Small and Medium-sized Enterprises, Batik SMEs

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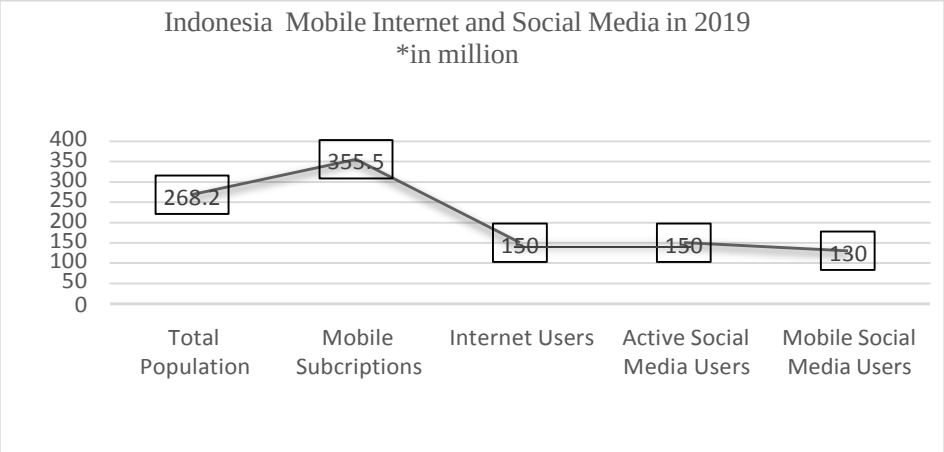
Introduction

Changes in human behavior patterns in the 4.0 industrial revolution which was marked by the shift in life activities to the online system made Indonesia the country with the largest growth in internet users in the world. The rapid growth of Indonesian internet users is supported by the fact that smartphone sales as a medium for accessing the internet in Indonesia have increased. The results of the We Are Social web (Valencia & Layman, 2021) analysis show that with a total population of Indonesia 268 million, the number of mobile ownership reaches 355 million, while internet users are half of the total population, which is around 150 million. The number of internet users is equal to the number of active social media users, and 130 million access social media using mobile devices. (Chart 1).

Chart 1. The Indonesian Internet Users



Source: www.WeAreSocial.com

Indonesia has the fourth largest number of startups in the world, this large number of startups is an indication that the sector that drives economic growth in Indonesia in the next era will be driven by the digital economy. This digital economy prediction is increasingly influencing people's economic life with the COVID-19 pandemic. The 2019-nCoV infection is an epidemic of disease with a low to moderate mortality rate, until now there is no standard treatment and proven drug to cure sufferers of the disease, supportive treatment and self-awareness for recovery are the only strategies, despite many experimental trials. is being carried out by a team of experts from various countries but the best way we can do for now is preventive measures, such as preventing the 2019-nCoV outbreak from spreading by wearing masks and not being in a large crowd outside the home. Stay at home is a slogan during the pandemic that has hit the entire world (Wu, Chen, & Chan, 2020). The COVID-19 pandemic has paralyzed the physical activity of the Indonesian economy because it has prohibited the world's people from leaving their homes. All activities during a pandemic that are controlled from home provide opportunities for startups to develop online businesses without having to meet face to face.

The large potential number of Indonesian internet users brings innovation opportunities from entrepreneurs to take advantage of the internet network to get bigger income. The Micro, Small and Medium Enterprises (SMEs) sector is one of the most important elements in Indonesia's economic development. This SMEs activity is one of the businesses that can survive and revive the economy due to the monetary crisis in various economic sectors, the intense competition is what requires SMEs to think creatively and innovatively in their micro, small and medium enterprises. According to Washington , the SMEs sector in Indonesia is divided into 9 sectors; Agriculture, livestock, forestry and fisheries, mining and quarrying, industrial processing, electricity, gas and clean water, buildings, trade, hotels and restaurants, transportation and communication, finance, leasing and corporate services, and services. One of the problems faced by SMEs in Indonesia is the marketing sector because most business actors do not have marketing skills, so their development (Syuhada & Gambett, 2013). Based on the distribution of islands, SMEs which are the largest internet users are in Java Island, amounting to 68.00 percent, the province with the largest number of SMEs using the internet is East Java Province at 101.32 thousand (23.41 percent), Central Java province amounting to 72.53 thousand (16.76 percent), and West Java province by

70.11 thousand or 16.20 percent (Purnomo, 2021).The results of these statistics conclude that the use of the internet to support the activities of micro and small industries is still low, only 10.15% of SMEs use the internet to support their business. Apart from capital, the main problem that often becomes an obstacle to the growth of micro and small enterprises (SMEs) is marketing, because SMEs not only produce but also must be responsible for smoothing the demand for their products.Purnomo (2021) also mentioned that the lack of internet use in SMEs due to the low level of education of entrepreneurs, most of whom only graduated from junior high school, is the reason why marketing in micro and small businesses is still traditional in nature. Various micro and small business sectors in Central Java Province also have obstacles in marketing that have not utilized digital information technology and are not followed by an increase in product quality.
In addition to banking credit, the presence of an online marketplace as a place to buy and sell online, brings solutions for SMEs to improve conventional marketing and expand market share. Online marketplaces in Indonesia that can be used to buy and sell products online are presented in the table below:

Table 1.
The 2020 Most Popular Products Categories on E-Commerce Platform in Indonesia

	Blibli	**Bukalapak**	**JD.ID**	**Lazada**	**Shopee**	**Tokopedia**
Mobile & Electronics	21%	25%	15%	20%	13%	22%
Fashion	17%	16%	11%	19%	24%	12%
Beauty	4%	4%	11%	9%	12%	5%
Health & Wellness	3%	2%	3%	3%	5%	5%
Mom & Baby	8%	4%	10%	8%	8%	4%
Toys	5%	5%	5%	5%	5%	9%
Groceries	17%	9%	19%	10%	11%	11%
Lifestyle and Hobby	8%	10%	7%	7%	8%	10%
Home and Living	7%	8%	10%	9%	8%	9%
Sports	4%	6%	3%	4%	3%	4%
Travel	5%	3%	3%	2%	2%	3%
Automotive	0%	7%	2%	3%	1%	4%
Others	0%	1%	0%	1%	1%	2%

Source: ecommerceIQ E-Matketplace Indonesia Survey

The table above represents the products most popular with buyers in online buying and selling platforms or e-commerce in Indonesia in the 1st quarter of 2020, apart from electronic goods, fashion needs are still buyers' favorite. National economic recovery through the e-commerce trend is currently the choice of society. Kusumawati and Rahayu (2020) through research results show that around 28% of consumers in Southeast Asia have just tried e-commerce and made digital payments for the first time during the COVID-19 outbreak. Of course this is an opportunity for micro and small entrepreneurs who need markets to market their products without meeting physically during the ongoing COVID-19 pandemic, Batik SMEs were no exception, which was included in the textile industry category. Apart from the best-selling products, the table above also concludes that the e-commerce platforms Bukalapak, Tokopedia, Shopee, JD.ID, Lazada and Blibli still dominate the Indonesian online market.
Efforts to reduce poverty rates in Indonesia and Central Java Province in particular are closely related to the success of Micro Small and Medium Enterprises. Based on Purnomo (2021) the existence of micro and small businesses contributes around 50% in improving the economic conditions of people in Central Java (jatengprov.go.id, 2020) this figure is comparable to a reduction in the poverty rate of 63,380 people. Based on data from the Ministry of Industry (Hamdani, Chanifah, & Anwar, 2020), the existence of the batik industry growing in Indonesia contributed to an export value of IDR 251.86 billion during the first semester. The batik industry is dominated by small and medium size enterprises (SMEs) which are spread across 101 centers in Indonesia. The total number of businesses there is 47,000 business units and is able to absorb a workforce of more than 200,000 people.

Table 2.
The Number of Batik Entrepreneurs in Central Java

No.	Cities / Regency	Total of Medium Entrepreneurs
1	Pekalongan City	1,100
2	Pekalongan Regency	168
3	Surakarta City	670
4	Sragen Regency	157
5	Semarang city	89

Source: The Office of Cooperatives and SMEs of Central Java Province (2019)

The recognition of Indonesian Batik from UNESCO as a world heritage in 2009 added value to the development of batik, especially the micro and small industries in the Masaran batik centers (Pilang, Kliwonan and Jati) which number more than 1,000 craftsmen. Masaran Batik Center is the largest batik producer cluster in Central Java for the Solo-Yogyakarta region. But opportunities in the digital economy require good technological education skills. With the technological education of Masaran Batik SMEs entrepreneurs, the level of readiness to face challenges and opportunities to participate in the digital economy era can increase. Technological education is defined in the Ministry of Education and Culture (2017: 8) as knowledge and skills to use digital media, communication tools or networks in finding, evaluating, using, making information and utilizing it in a healthy, wise, intelligent, thorough, precise, and obedient manner. Based on several previous studies and the problems that occurred during the COVID-19 pandemic, this study aims to analyze whether the level of technological education owned by entrepreneurs at Masaran Batik SMEs affects the perception of readiness regarding the 2020 digital economy.

Literature Review

Fishbein and M Fishbein and Ajzen (1975) assume Theory of Reasoned Action (TRA) which focuses on behavioral interests and ignores other behaviors that are spontaneous, impulsive and habitual. Theory of Reasoned Action (TRA) is behavior under the control of the individual himself. Sometimes a person's behavior becomes uncontrollable due to a limitation such as ability, to overcome this, Fishbein and (Martin Fishbein & Ajzen, 1977) modify TRA to become Theory Planned Behavior (TPB) which is an extension of the theory of reasoned action, and makes it necessary by the limitations of the original model in dealing with behaviors in which people have incomplete will control. According to Sommer (2011) human behavior can be caused by several different possibilities, the research indicates that background, age, gender, experience, educational background, environment and knowledge affect a person's beliefs which in turn influence a person's decision to behave. (Altounjy, Alaeddin, Hussain, & Sebastian, 2020)The new literacy covers Internet networks and other Information & Communication Technology (IT) has elements consisting of the skills, strategies and dispositions needed to successfully achieve, use and adapt to technology in the context of information and communication that is changing rapidly and always emerging with novelty. In our world until it ultimately affects all areas of our personal and professional life. This new literacy in the digital world enables us to use the Internet and other forms of ICT to identify important questions, seek information, evaluate the usefulness of information, synthesizing various information that has been obtained to answer questions and then communicating the answers to other people who have a relationship with the topic being solved. (Leu et al.). Technological education provides broad access to increase knowledge. The sophistication of today technology also provides a platform to speak up and get your views heard. For women in developing countries, the internet is an open door to real benefits; develop business, education and job opportunities to improve the community economy.Hansen (1995) technological education is defined as the ability to understand and use information in various forms from a very wide variety of sources accessed via computer devices.Bawden (2001) offers a new understanding of technological education rooted in computer literacy and information literacy, technological education is more associated with technical skills in accessing, compiling, understanding, and disseminating information. So that technological education demands to have the ability to use various multimedia sources more effectively and related to knowledge, understanding and skills in using mass media.Littlejohn, Beetham, and McGill (2012); (Verhoef & Bijmolt, 2019)classified technological education elements are as follows, 1) Information literacy

concerns how capabilities find, interpret, evaluate, manage, to share the information, 2) Digital scholarships include active participation in academic activities, for example in research practice, 3) Learning skills covers all-effective learning technology that has complete features for engagement both formal and informal teaching and learning processes, 4) ICT literacy or information technology literacy and communications that focus on how to adopt, adapt and use good digital devices applications and services, 5) Privacy management how to manage the online identity, 6) Communication and collaboration covers active participation in the digital network for learning and research,7) Media literacy or media differentiation includes critical reading and creative communication skills academics and professionals in a variety of media.(Li, Kim, Lang, Kauffman, & Naldi, 2020)

Readiness is a person's condition as a whole which can make him ready to be able to respond or answer in a certain way to a situation he is facing. Then someone will adjust to these conditions and will influence or have a tendency to respond (Hariri, 2021). There are different types of readiness viewpoints related to the role of society and IT. Parasuraman and Colby (2015) defines readiness that involves technology as the tendency to use new technology to accomplish the goals of various jobs both at home and at work. The concept of technological readiness focuses on the openness of society to new technological information and its usability aspects. According to (Asrianti, Baas, Elihami, & Yusfika, 2021) revealed that the readiness factor consists of internal factors which include health, intelligence and talent, interests and motivation as well as external factors which include family, school, community, and the surrounding environment. Community readiness not only measures a person's mental condition and courage to face something, but also involves intelligence readiness which is defined as a person's ability to understand using intelligence, brain and mind to be more active and able to adapt to the surrounding environment.Wahyuningtyas (2021) measuring the level of community readiness for industrial economic activities using the Community Readiness Model (CRM) which uses primary and secondary data with the following indicators; businesses owned by the community, knowledge of activities, leadership, community conditions, knowledge of current issues and sources of problems.The 2020 digital economy is the basis for the government to make it the largest digital economy in Southeast Asia which focuses on development in the digital sector. In preparation for the digital economy competition, the government also targets e-commerce transactions to reach US $ 130 billion and create 1000 technopreneurs with a business value of US $ 10 billion by 2020 (Margiansyah, 2020). To achieve this target, access to various business sectors including SMEs is needed to strengthen the building of the digital economy ecosystem. However, there are quite a lot of problems in achieving this target, including changes in business models in various sectors from conventional to digital. The research results of Erlanitasari, Rahmanto, and Wijaya (2019) conclude that the government needs to socialize through the Go Online Indonesia SMEs movement by forming sustainable government and e-commerce collaboration as a strategic step to face digital energy competition of Asia in 2020, similar things are also recommended by Damarwulan, Ramdansyah, and Lutfi (2021) who explained that virtual technology was a solution to prevent the economic crisis during the COVID-19 pandemic.Rejeki (2020) and Fitriya and Suwarni (2020) also stated that technological education plays an important role in women's activities to support the economy in small and medium industries Anggraini and Supriyanto (2019) state that strategic steps for strengthening MSMEs can be taken through increasing the frequency of training, comparative studies and intensifying assistance to groups regarding digital knowledge. Based on several studies and theoretical studies, the following hypothesis can be formulated:(Ismail, Abd Aziz, Arsani, & Harun, 2021)

H1 : Technological education has a significant positive effect on the digital economy readiness of Masaran Batik SMEs entrepreneurs

H2 : Gender affects the digital economy readiness of Masaran Batik SMEs entrepreneurs

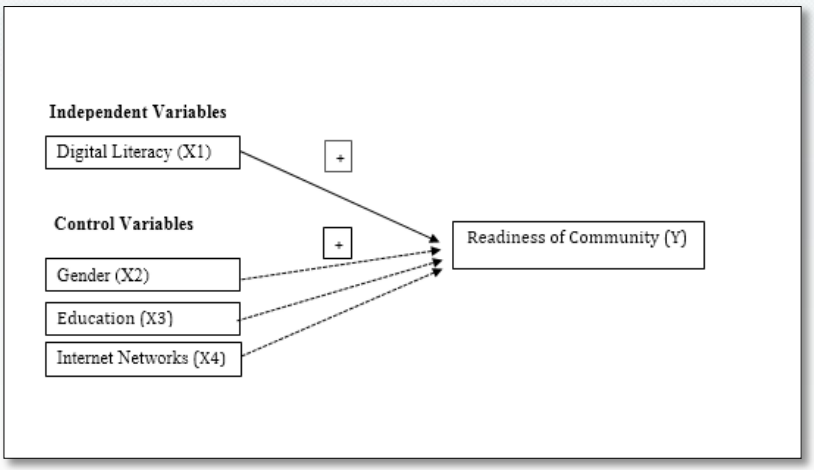
H3 : Educational background affects the digital economy readiness of Masaran Batik SMEs entrepreneurs

H4 : Internet Networks affect the digital economy readiness of Masaran Batik SMEs entrepreneurs

Research Methods

Research Design

Figure 1. The Research Framework



The design is quantitative research. The independent variables consist of the Technological education (X1) while the Readiness of Community (Y) is the dependent variable. Gender (X2), Educational Backgrounds (X3) and Internet Networks (X4) are the control variables. Research location in Masaran district, Sragen, Central Java, Indonesia and the research was conducted in August -September 2020.

Population and Sample

The population was all entrepreneurs who are members of Batik SMEs in Masaran sub-district, Sragen, Central Java. The sample is part of the population studied, so that it uses a purposive sampling technique that takes into account certain considerations according to the objective to be achieved (Arana-Barbier, 2020). The criteria used in determining the sample are Batik producers in Masaran Sragen cluster who have social media and use media digital as a marketing strategy. Based on the sampling technique, obtained 65 respondents from the villages of Pilang, Kliwonan, and Jati.

Data Collection Technique

The data were collected using test and questionnaires where the respondents only chooses the available answer. Questionnaire technique was applied by giving respondents a set of written statements and question to answer. The measurement of technological education (X1) used a five-point Likert scale (5 to 1) from "strongly agree" to "strongly disagree", the number of point is counted and divided by all questions then multiplied by 100%. Respondents literacy were divided into three categories, high (more than 80%), given a score of 3, moderate (60-80%) given a score of 2 and low (<60%) given a score of 1 (Chen & Volpe, 1998).
All data on control variables were collected using a questionnaire that provide two answer, the respondents only chose the checklist (v) on the appropriate statement. While the level of community readiness is measured using 18 statements are only provided with two options "care" will be given point 1 and "don not care" will be given point 0, the readiness score in percentage is calculated by dividing the total points by all items then multiplied by 100%. Next uses the Community Readiness Model and to assess the community readiness factor using multiple regression methods. Before, the instruments were subjected to validity and reliability testing. The validity testing results show that all instruments were valid and had reliability coefficients > 0.7.

$$CR = \sum XBR1 + XBR2 + XBR3 + XBR4 + XBR5 + XBR6 / 65$$

Notes:
CR : Readiness of Community Score
R1 : Community Enterprises
R2 : Knowledge of Activities
R3 : Leadership
R4 : Community Condition
R5 : Knowledge of Activity Issues
R6 : Sources Related to Problems
65 : Total Respondents

Research Instrument

The following are indicators of each variable adopted from previous studies.

Table 3.
The Research Instrument Indicators

Operational definition		Indicators	Items	References
Technological education (X1)	Refers to an individual's ability to find, evaluate, and compose clear information through writing and other media on various digital platforms	1. Information literacy 2. Digital scholarship 3. Learning skill 4. ICT literacy 5. Privacy management 6. Communication and collaboration 7. Media literacy	18 items	Atkinson and Messy (2015); Littlejohn et al. (2012)
Gender (X2)	Refers to theory of most cultures currently construct their societies based on the understanding of gender binary –two gender categorizations	1. Male (Dummy=0) 2. Female (Dummy=1)	-	Nadal (2017)
Educational Backgrounds (X3)	Based on formal education classification in Indonesia, divided into three levels: primary, secondary and tertiary education	1. Primary education (Dummy=0) 2. Secondary & Tertiary education (Dummy=1)	-	UU RI No. 20 th 2003 tetang Sistem Pendidikan Nasional
Internet Networks (X4)	Refers to definition of internet as a global system to link various types of electric devices worldwide	1. Available (Dummy=1) 2. Not Available (Dummy=0)		Oxford English Dictionary (2005)
Readiness of Community (Y)	Refers to how community prepared to take action to face a particular problems	1. Community enterprises 2. Community Knowledge 3. Leadership 4. Community condition 5. Knowledge of activity issues 6. Sources related to problems	18 items	Wahyuningtyas (2021)

Source: Literature Review (2020)

Data Analysis Technique

The data obtained from the tests and questionnaires were then analyzed using descriptive statistics with the IBM SPSS Statistics 17 for Windows. The next analysis carried out was a regression analysis with the following structural equations:

$$Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + e$$

Notes:

Y	=	Readiness of Community Scores
X_1	=	Technological education Scores
X_2	=	Gender
X_3	=	Education Backgrounds
X_4	=	Internet Networks
α	=	Constant
e	=	Error term which shows the uncertainty

Results and Discussion

Results

Table 4.
Respondent Characteristics

Characteristic	n	%	Characteristics	n	%
Level of education (n=65)			Age (n=65)		
Primary education	22	33.85	31 and below	5	7.69
Secondary & tertiary education	43	66.15	32 and above	60	92.31
Gender (n=65)			Marital status (n=65)		
Male	25	38.46	Single	0	0.00
Female	40	61.54	Married	65	100.00
Average Income- Covid-19 (n=65)			SME'S Category (n-65)		
< 1.000.000 /day	55	84.62	Micro	52	80.00
>1.000.000 /day	10	15.38	Small and Medium	13	20.00
Media Utilization Periods (n=65)			Internet Networks (n=65)		
< 1 year	0	0.00	Available	56	66.15
> 1 year	65	100.00	Not Available	9	13.85
Social Media Trends (n=65)			E-Commerce Trends (n=65)		
WhatsApp	65	100.00	Tokopedia	12	18.46
Facebook	54	83.08	Shopee	20	30.77
Instagram	26	40.00	Bukalapak	11	16.92
Twitter	11	16.92	Lazada	7	10.77
Youtube	9	13.85	Blibli	5	7.69
Web & Blog	6	9.20	Others	24	36.92

Source: SPSS (2020)

Based on the characteristic table of respondents, it can be seen that the gender of female respondents is 61.54% while male respondents are 38.46%, the education level of most respondents is the secondary and tertiary level (SMP / SMA / SMK) of 66.15%. The availability of internet network is also in the range of 66.15%, the majority of the respondents are over 32 years of age and all of them are married. Total 80% of respondents manage a Batik SMEs business in the "micro" category, while 20% of respondents manage a "small and medium" scale business. The average income of batik entrepreneurs on a micro and small scale is <1,000,000 IDR during the COVID-19

pandemic. All respondents have used digital media for more than one year.
The social media trend is dominated by Whatsapp which is 100% used by the batik entrepreneur community in Masaran Sragen. Then the Facebook application was 83.03%, Instagram 40.00%, Twitter 16.92%, Youtube 13.85% while the last ranking was Web & Blog only around 9.20%. The general description of the tendency of the e-commerce platform used by the Batik Masaran entrepreneur community is still low, the percentage of online shopping application users who provide opportunities for batik producers to market their products has not been able to reach 50%. The highest e-commerce ranking achieved by Shopee was only 30.77%, followed by Tokopedia, Bukalapak, Lazada and Blibli in the last position at 7.69%. Meanwhile 36.92% of respondents are still random in choosing and using various e-commerce platforms available in Indonesia such as JD.ID, OLX, Elevania, Blanja dan Matahari Mall.

Table 5.
The Respondents' Technological education (Agreement Responses)

Technological education Aspects	Scores	Personal Technological education Level (%)		
		Low	Medium	High
Information literacy	3.09		61.85	
Digital scholarship	2.81	56.10		
Learning skill	3.04		60.77	
ICT literacy	2.54	50.87		
Privacy management	2.62	52.31		
Communication and collaboration	3.93		78.62	
Media literacy	2.38	47.54		
Mean correct responses all aspects		58.29		

Source: SPSS 2020

Table 6.
The Personal Technological education Level

Category	Respondents	Percentage (%)
Low	38	58.46
Medium	27	41.54
High	0	0
	65	100%

Source: SPSS (2020)

Based on the results of the descriptive analysis of table above, it is found that the overall technological education level of the Masaran Batik SMEs entrepreneur community is still at a low level, especially aspects of media literacy, privacy management, ICT literacy, and digital scholarship. This presents that the batik entrepreneur community has not been able to filter information on social media and maintain social media privacy properly. It can be said that aspects such as optimizing the use of digital devices and the use of various digital practical applications have not been maximized. However, awareness of seeking information through the internet, frequently accessing news online, and using chat & video call applications that are more efficient have been able to be implemented by the Batik SMEs. This is evidenced by the score for the aspects of communication and collaboration, information literacy and learning skills which are at the medium level. While the technological education level of respondents when viewed from the aspect of personal literacy was 58.46% in the low level and 41.54% in the medium level (Table 6). It can be concluded that none of the batik entrepreneurs in Masaran SMEs have a high technological education level.
Table 7 demonstrate that the aspect of community business in dealing with digital economy issues is in the medium level (65.13%), the knowledge aspect of the community is at a low level (48.46%), the aspect of leadership is related to the care and support of leaders at the medium level, aspects of community conditions what the Masaran batik community cares most about are the obstacles and challenges related to the 2020 digital economy issue. The results of the analysis also describe that the level of public knowledge about the availability of information is still low. Meanwhile,

indicators of community support and evaluation of digital economy problems are aspects that the Masaran batik community cares about. Overall, the readiness level of the Masaran Batik SMEs regarding digital economy issues is still low (55/98%), this proves that there are still many indicators regarding digital economy issues that are not understood by the public. About 55.38% of Masaran batik entrepreneurs do not care about the essence of the digital economy, while 44.62% have a fairly good level of concern about digital economy issues. (Table 8)

Table 7.
The Batik Masaran Community Readiness for Digital Economic 2020 Scale

		Personal Readiness Level (%)		
Community Readiness for Digital Economic (ED) 2020 Aspects	**Caring Scores**	**Low**	**Medium**	**High**
Community concern for 2020 DE	59			90.77
Community understanding for 2020 DE	38	58.46		
Duration of community program	30	46.15		
Mean correct responses "Community enterprises" aspect			65.13	
Community awareness for 2020 DE	36	55.38		
Community knowledge for 2020 DE	27	41.54		
Mean correct response "Community Knowledge" aspect		48.46		
Role of the leader /government in digital activities	25	38.46		
Involvement of leader in relation activities	36	55.38		
Support from leader to an activity	40		61.54	
Mean correct responses "Leadership" aspects		51.80		
Community contribution for 2020 DE	36	55.38		
Obstacle activities inside for 2020 DE	43		66.15	
Community attitudes towards 2020 DE	30	46.15		
Mean correct responses "Community condition" aspects		57.30		
Availability of information related 2020 DE	34	52.31		
Availability of data related 2020 DE	34	52.31		
Public knowledge about 2020 DE	29	44.62		
Ease of getting information related 2020 DE	36	55.38		
Mean correct response "Knowledge of activities" aspect		51.20		
Community attitudes related 2020 DE issues	35	53.85		
Public support related 2020 DE	42		64.62	
Problem evaluation discussion about 2020 DE	45		69.23	
Mean correct responses "Sources related to problems" aspects			62.60	
Mean correct responses all aspects		55.98		

Source: SPSS (2020)

Table 8.
The Personal Readiness Level

Category	**Respondents**	**Percentage (%)**
Low	36	55.38
Medium	29	44.62
High	0	00
	65	**100%**

Source: SPSS (2020)

From the regression test table, it can be seen that the R square value of 0.582 reveal that the technological education variable affects the community variable readiness 58.2%, while 41.8% is influenced by other variables that are not used as determinants in the study. The F statistics value of 20.843 with a significance level of 0.000 explains that simultaneously the technological education variable, gender, education and internet networks have an effect on the Batik SMEs readiness variable in the 2020 digital economy. This means that the technological education level of the Batik SMEs entrepreneur has a significant positive effect on the level of community readiness to participate in the 2020 digital economy. The results of this regression test accept the formulated hypothesis. While the coefficient value of the gender variable is 0.226, education 0.443 and internet networks of 0.372 with a significance level of <0.05, it can be explained that all control variables are able to control the relationship between the independent variable and the dependent variable. This displays that there are other variables that affect the level of readiness of the community in 2020 digital economic activities besides the technological education variable. The negative constant value -0.242 has the interpretation that if there are no technological education, gender, education and internet networks variables, the readiness level of the Batik SMEs community will decrease. The regression equation model in this study is as follows: Y = -0.242 + 0.180 X1 + 0.226 X2 +0.443 X3 + 0.372 X4 + e.

Table 9.
Results of Regression Analysis

Variable	Standardized Coefficients Beta	Std. Error	t-statistic	Sig.
Technological education	0.180	0.047	2.151	0.035
1. Gender	0.226	0.514	2.467	0.016
2. Education	0.443	0.523	4.896	0.000
Internet Networks	0.372	0.685	4.308	0.000
Unstandardized Coefficients				
(Constants)	-0.242			
Constant	-	2.575	-0.094	0.925
R-square	0.582			
Adjusted R-square	0.554			
F-Statistic	20.843			
Sig. F- statistic	0.000			
Note: Dependent variable: SMEs Batik Community Readiness				

Source: SPSS (2020)

Discussions

The regression test table demonstrates that the coefficient of the independent variable is positive, it can be explained that technological education has a positive effect on the readiness level of entrepreneurs who are members of Masaran Batik SMEs. The higher skills of entrepreneurs in various digital aspects will lead to a higher level of readiness to face digital economy issues in the Covid-19 pandemic which has changed people's behavior to be online-based, including in marketing and distribution of goods. If respondents have knowledge of media, learning, information, communication, technology, and the internet, their level of concern for digital economy issues will increase. This concern refers to their understanding of the opportunities, obstacles, weaknesses and strengths that will be faced when the digital economy becomes a new culture in people's lives. This research confirms Damarwulan et al. (2021) who explains that virtual technology in SMEs is a solution to overcoming the economic crisis during the Covid-19 epidemic in Indonesia. These results also support the research of Rodrigues and Franco (2021) that technological education has a positive effect on SMEs entrepreneurs.Rejeki (2020) also explained that technological education that focuses on female gender is able to bring change to the economy. Apart from gender and educational background the internet network also controls the entrepreneurs who are members of Masaran Batik SMEs for communicate in multimedia and try to involve digital media to market products, its users can exchange messages in the form of text, visual, audio, to audio-visual (video). Through the internet too, information can spread faster and wider than the media predecessor. An information that occurs in a part of the world, can recognized quickly by people in other parts of the world. Technological education provides broad access to increase knowledge. The sophistication of today's technology also provides a platform to speak up and

get your views heard. For women in developing countries, the internet is an open door to real benefits; develop business, education and job opportunities to improve the community economy. (Kesuma, Purwanto, Putranto, Rahmani, & Santi, 2020)

Conclusion

Based on the analysis that has been carried out, it can be concluded that technological education has a positive effect on the readiness of the community in facing the 2020 digital economy issue at Masaran Sragen Batik SMEs, the low level of technological education of entrepreneurs in Batik SMEs is directly proportional to the level of entrepreneurial readiness which is still low. The relationship between technological education variables and community readiness is controlled by the variable gender, educational background, and the internet network. The implication is that it is very important to increase digital capabilities and knowledge for Small Medium-size Enterprise (SMEs) entrepreneurs to be able to compete in a digital economy that requires everything to be online based, especially during the Covid-19 pandemic. Measuring the level of readiness in research still has weaknesses, for further research it is suggested to improve the limitations of research by adding variables that are thought to have a strong influence on people's readiness to face the digital economy by using the interview method so that research data is more accurate.

References

Altounjy, R., Alaeddin, O., Hussain, H. I., & Sebastian, K. (2020). Moving from bricks to clicks: Merchants' acceptance of the mobile payment in Malaysia. International Journal of eBusiness and eGovernment Studies, 12(2), 136-150. doi:https://doi.org/10.34111/ijebeg.202012204

Anggraini, O., & Supriyanto, S. (2019). Literasi Digital. Paper presented at the Seminar dan Lokakarya Kualitatif Indonesia 2019.

Arana-Barbier, P. J. (2020). The quantitative and qualitative scientific production: A bibliometric study of the five main Asian economies in R&D. Malaysian Journal of Library & Information Science, 25(2), 95-109.

Asrianti, A., Baas, I. B., Elihami, E., & Yusfika, Y. (2021). Islamic Monumental Works is important for politic and educational psychology: Key Issues and Recent developments in Indonesia. EduPsyCouns: Journal of Education, Psychology and Counseling, 3(1), 146-153.

Atkinson, A., & Messy, F.-A. (2015). Financial education for migrants and their families. 43. doi:https://doi.org/10.1787/20797117

Bawden, D. (2001). Information and digital literacies: a review of concepts. Journal of documentation, 218-259. doi:https://doi.org/10.1108/EUM0000000007083

Chen, H., & Volpe, R. P. (1998). An analysis of personal financial literacy among college students. Financial services review, 7(2), 107-128. doi:https://doi.org/10.1016/S1057-0810(99)80006-7

Damarwulan, L. M., Ramdansyah, A. D., & Lutfi, L. (2021). Peningkatan Kekuatan Jejaring Wirausaha dan E-Marketing UMKM di Banten dalam menghadapi dampak Pandemic Covid-19. Journal of Education, Humaniora and Social Sciences (JEHSS), 3(3), 1113-1123. doi:https://doi.org/10.34007/jehss.v3i3.495

Erlanitasari, Y., Rahmanto, A., & Wijaya, M. (2019). Digital economic literacy micro, small and medium enterprises (SMES) go online. Informasi, 49(2), 145-156. doi:https://doi.org/10.21831/informasi.v49i2.27827

Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention and behavior: an introduction to theory and research.

Fishbein, M., & Ajzen, I. (1977). Belief, attitude, intention, and behavior: An introduction to theory and research. Philosophy and Rhetoric, 10(2), 177-189.

Fitriya, D. A., & Suwarni, E. (2020). Mapping potential sectors based on financial and digital literacy of women entrepreneurs: A study of Palembang City, Indonesia. CURRENT ISSUES IN ENTREPRENEURSHIP AND BUSINESS, 203.

Hamdani, Chanifah, S., & Anwar, Y. (2020). The importance of socializing Indonesian financial accounting standards for SMEs (small and medium, enterprise) in increasing accounting understanding and its implementation. Technium Soc. Sci. J., 13, 131.

Hansen, R. E. (1995). Teacher socialization in technological education. Volume 6 Issue 2 (spring 1995), 34-45.

Hariri, B. (2021). THE EFFECT OF PHYSICAL EDUCATION LEARNING SCHEDULE, FACILITIES, AND MOTIVATON ON LEARNING OUTCOMES OF EIGHTH GRADE STUDENT. Gladi: Jurnal Ilmu Keolahragaan, 12(02), 128-137. doi:https://doi.org/10.21009/GJIK.
122.05

Ismail, N., Abd Aziz, M. K. N., Arsani, Z., & Harun, M. H. (2021). National Education Philosophy: A Review of Its Application in Malaysia's Education System. ZAHRA: Research and Tought Elementary School of Islam Journal, 2(2), 99-111. doi:https://doi.org/10.37812/zahra.v2i2.240

Kesuma, D. A., Purwanto, P., Putranto, T. T., Rahmani, T. P. D., & Santi, S. S. (2020). Groundwater Risk Assessment as an Impact of Land Use in the Groundwater Basin of Salatiga, Province of Central Java, Salatiga. Nusantara Science and Technology Proceedings, 288-299. doi:https://doi.org/10.11594/nstp.2020.0545

Kusumawati, A., & Rahayu, K. S. (2020). The effect of experience quality on customer perceived value and customer satisfaction and its impact on customer loyalty. The TQM Journal, 1525-1540. doi:https://doi.org/10.1108/TQM-05-2019-0150

Leu, D. J., Zawilinski, L., Castek, J., Banerjee, M., Housand, B., Liu, Y., & O'Neil, M. What is new about the new literacies of online reading comprehension. 37-68.

Li, K., Kim, D. J., Lang, K. R., Kauffman, R. J., & Naldi, M. (2020). How should we understand the digital economy in Asia? Critical assessment and research agenda. Electronic commerce research and applications, 44, 101004. doi:https://doi.org/10.1016/j.elerap.2020.101004

Littlejohn, A., Beetham, H., & McGill, L. (2012). Learning at the digital frontier: a review of digital literacies in theory and practice. Journal of computer assisted learning, 28(6), 547-556. doi: https://doi.org/10.1111/j.1365-2729.2011.00474.x

Margiansyah, D. (2020). Revisiting Indonesia's Economic Diplomacy in the Age of Disruption: Towards Digital Economy and Innovation Diplomacy. Journal of ASEAN Studies, 8(1), 15-39. doi:10.21512/jas.v8i1.6433

Nadal, K. L. (2017). The SAGE encyclopedia of psychology and gender: Sage Publications.

Parasuraman, A., & Colby, C. L. (2015). An updated and streamlined technology readiness index: TRI 2.0. Journal of service research, 18(1), 59-74. doi:https://doi.org/10.1177/1094670514539730

Purnomo, S. D. (2021). Analysis of Labor Absorption in Central Java Province. Ekonomis: Journal of Economics and Business, 5(1), 240-244.

Rejeki, D. S. (2020). DIGITAL LITERACY MAPPING FOR HOUSEWIFE IN ENTREPRENEURSHIP. PalArch's Journal of Archaeology of Egypt/Egyptology, 17(10), 1541-1550.

Rodrigues, M., & Franco, M. (2021). DIGITAL ENTREPRENEURSHIP IN LOCAL GOVERNMENT: CASE STUDY IN MUNICIPALITY OF FUNDÃO, PORTUGAL. Sustainable Cities and Society, 103115. doi:https://doi.org/10.1016/j.scs.2021.103115

Sommer, L. (2011). The theory of planned behaviour and the impact of past behaviour. International Business & Economics Research Journal (IBER), 10(1), 91-110. doi:https://doi.org/10.19030/iber.v10i1.930

Syuhada, A. A., & Gambett, W. (2013). Online marketplace for Indonesian micro small and medium enterprises based on social media. Procedia Technology, 11, 446-454. doi:https://doi.org/10.1016/j.protcy.2013.12.214

Valencia, D., & Layman, C. V. (2021). E-WALLET SERVICE INNOVATION, SERVICE DELIVERY, AND CUSTOMER SATISFACTION ON CUSTOMER LOYALTY WITHIN SHOPEEPAY IN INDONESIA. Ultima Management: Jurnal Ilmu Manajemen, 13(1), 23-46. doi:https://doi.org/10.31937/manajemen.v13i1.1929

Verhoef, P. C., & Bijmolt, T. H. (2019). Marketing perspectives on digital business models: A framework and overview of the special issue (pp. 341-349): Elsevier.

Wahyuningtyas, N. (2021). Strategic Value of Marble Mine Management for Community Economic Improvement and Challenges Keeping Sustainable Environmental Support in Tulungagung Regency. Paper presented at the IOP Conference Series: Earth and Environmental Science.

Washington, E. R. Bank Indonesia, 1996, Indonesia Financial Statistics (Jakarta)., 1996, Weekly Report (Jakarta)., 1996, Governor," Speech to the Annual Bankers' Association Meeting,'January (Jakarta)., 1995, Report for the Financial Year 1994/95 (Jakarta). 119. doi:https://doi.org/10.5089/9781451818192.002

Wu, Y.-C., Chen, C.-S., & Chan, Y.-J. (2020). The outbreak of COVID-19: An overview. Journal of the Chinese medical association, 83(3), 217-220. doi:10.1097/JCMA.0000000000000270