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Education and Promotion of Online Transaction Services for Traditional Market Traders in Sleman: An Alternative to Alleviate the Impact of COVID-19 "Layanan Online Pasar Ing Sleman (LOPIS)"

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Abstract Spreading in Special Region of Yogyakarta (DIY) since March 2020, the COVID-19 pandemic has slowed down economic activities. Activities in traditional markets decreased due to restricted operating time and people movement. Traders should use online transactions to reach potential consumers. Expanding market segments is also necessary to target the younger generation who regularly use online transactions. Unluckily, traders were not well-trained in online transactions. This activity was aimed to encourage well-implemented online transaction services by traditional market traders in Sleman Regency. Four measures were taken: 1) identifying conditions of traders, 2) formulating online transaction models for traders and potential consumers, 3) online transaction training, and 4) Disseminating/promoting online transaction services. A survey was done in 22 of 37 markets to identify market conditions. Collected data were analysed using the interactive model. Formulated online transaction model includes offer, order, payment and delivery of products. Traders in 25 markets received the training. Service marketing activities include publications on social media, data presentation of markets and traders on Google Maps page, and webinar. All activities were conducted under the tagline "LOPIS (Layanan Online Pasar Ing Sleman)", which means Online Services by Traditional Markets in Sleman Regency. Monitoring is planned for three months after the training is conducted. However, this monitoring could not be carried out due to a significant increase in COVID-19 cases, hence the limitation of this community service activity.

1. INTRODUCTION

Spreading in the Special Region of Yogyakarta (DIY) since March 2020, the COVID-19 pandemic has caused a downturn in economic activities, marked by a significant drop in economic growth to -0.17% in the first quarter and -6.74% in the second quarter (Bank Indonesia, 2020). Trading activities in traditional markets have by no means also decreased given restrictions in operating time and movement of people such as the elderly, pregnant women, small children, and those who are vulnerable to COVID-19 infection. Traditional markets were then encouraged to add sales channels with online transactions to reach potential consumers and expand market segments such as young people and families who frequently use online transactions.

Immediately following the first confirmed positive case of COVID-19 in DIY on March 18, 2020 (Wijana, 2020), the local government issued a disaster emergency response status with the Governor's Decree number 65/KEP/2020 on March 20, 2020, which obviously restricted community activities and decreased economic activities. DIY's economic performance dropped by -0.17% (yoy) in the first quarter and even lower in the second quarter by -6.74% (yoy) (Bank Indonesia, 2020).

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Restricted community activities and decreased economic activities also occurred in Sleman. The local government has set a restriction in the operational time of the traditional markets to close no later than 13:00 WIB (Western Indonesian Time), as stipulated in the Sleman Regent Circular Letter Number 360/00872 dated March 27, 2020. As stated by the Deputy Regent of Sleman (Setyawan, 2020), the declined turnover of traditional traders reached 30% to 75%. For example, the Godean Market Traders Association reported that the turnover of traders has fallen to 50% (Razak, 2020). For traders or suppliers of goods declared to suffer from COVID-19, the turnover fell by 90% like in Kranggan Market (Saraswati, 2020).

Online trading transactions will benefit both parties as traders can increase sales turnover, while people will get their goods easily and safely. Given restricted economic activities and dropped turnover, traditional traders obviously need to add sales channels with online transactions to reach potential consumers, especially those vulnerable to COVID-19 such as the elderly, pregnant women, and young children. Vulnerable people are expected to avoid crowds such as traditional markets.

With online transactions, traditional market traders can expand captive market segments, such as young people and young families, the regular users of online transactions. Released by the Indonesian Internet Service Providers Association (APJII), internet users and internet user penetration in Indonesia continue to increase, directly proportional to the population Table 1. Most internet users are in the age range of 19 to 34 years, the potential age as consumers of traditional markets. Furthermore, people aged 35-54 years also frequently use the internet as shown in Figure 1 (Asosiasi Penyelenggara Jasa Internet Indonesia, 2016, 2017, 2020, 2022).

Traditional market traders lack skills and knowledge and have not provided online transaction services. A survey confirmed that few traders provided online transaction services personally for regular consumers (Attachment 2), and other traders have not used online transaction services. Although a small number of traders previously attended an online transaction training held by the Industry and Trade Office (Disperindag) of Sleman Regency, they are not ready to use the online transactions because of insufficient promotion to the broader community.

The afore-mentioned points become the basis for formulated problems as follows: 1) it is necessary to identify market conditions and formulate online transaction models suitable for traditional market traders in Sleman and their potential customers, 2) traditional traders need to receive education and training on online transactions, and 3) dissemination or promotion to the broader community is compulsory to let the public know about online transaction services by traditional market traders.

2. METHOD

The method consists of four sequentially arranged measures: 1) identifying conditions of traders, 2) formulating online transaction models for traders and potential consumers, 3) online transaction training, and 4) disseminating/promoting online transaction services.

Table 1 . The internet use in Indonesia 2016-2021

Description	2016	2017	2018	2019
Total population of Indonesia (in millions)	256	262	266	273
Internet users (in millions)	132.7	143.26	196.71	210.02
Percentage of internet user penetration (%)	51.79	54.68	73.7	77.0

Source: Asosiasi Penyelenggara Jasa Internet Indonesia (2016, 2017, 2020, 2022), processed data

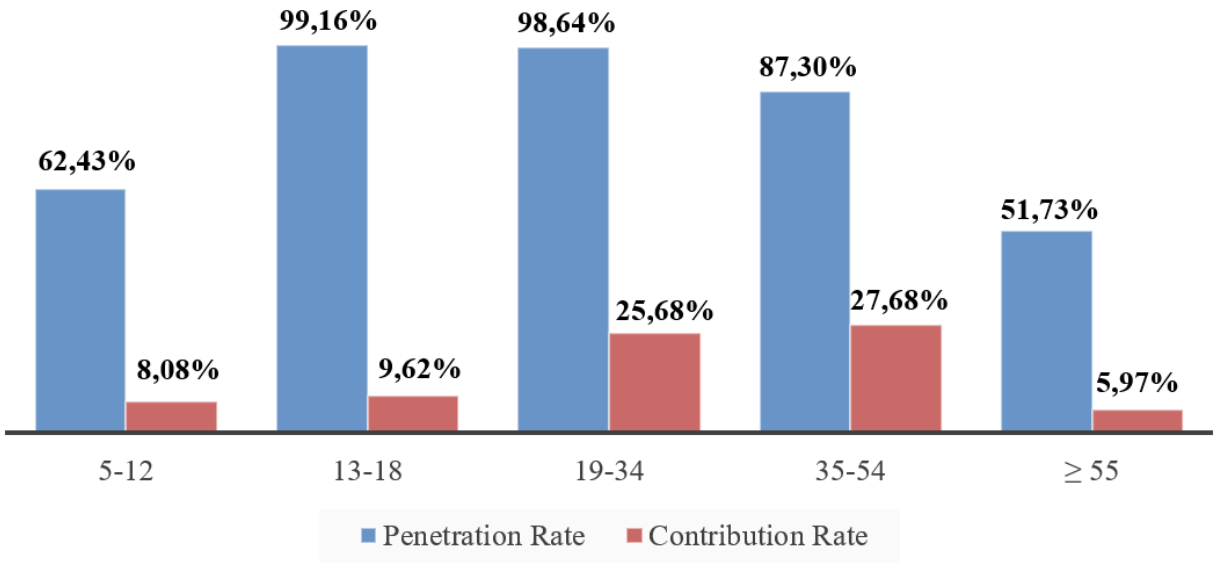

Figure 1 . Internet users by age in 2021

The first stage was identifying the conditions of online transactions applied in traditional markets. This identification aims to determine the existence of online transactions by traditional market traders and the available facilities and infrastructure. The collected information includes: 1) third-party marketplaces and applications used in online transactions, 2) online transactions involving online motorcycle taxis, 3) online transactions with WhatsApp and WhatsApp Business application, 4) payment mechanisms, especially non-cash payments, 5) mechanisms of goods delivery and couriers, 6) availability of Wi-Fi-internet network, 6) smartphone ownership among traditional market traders. The identification process took place from July to August 2020.

The second stage was formulating online transaction models suitable for traditional market traders and potential consumers. The identification results become the basis for analysing the online transaction model to be carried out by traders and accepted by the public. The process of formulating the online transaction model was done in August 2020.

The data were collected through interviews, observations, and document evaluation. The interviews were conducted with the heads of the association or representatives of the association of traders in 22 traditional markets in Sleman. The observations were conducted on the activities of traders, facilities and infrastructure available in 22 traditional markets. Meanwhile, document evaluation was performed on the prevailing laws and regulations and other related information such as Governor Decrees, Regent Circular Letters, Regent Decrees, economic reports issued by Bank Indonesia, survey reports issued by APJII, factual information published in the mass media and information from other reliable sources.

The data obtained from the interviews, observations, and document evaluation were analysed with the interactive model. The interactive model uses four components: data collection, data reduction, data presentation, and conclusions or verification, as illustrated in Figure 2 (Miles & Huberman, 1984; Sugiyono, 2007).

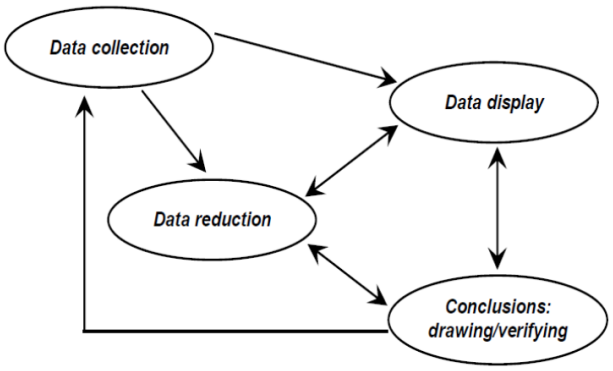

Figure 2 . Data collection technique model and data analysis according to Miles & Huberman (1984)

The third stage was online transaction training. Training on the use of online transactions includes the operation of the tools required for transactions, along with tricks and tips for serving customers. This training was conducted face-to-face from September to October 2020 to market traders in 25 traditional markets using printed materials and MS PowerPoint slide-assisted presentation. These 25 traditional markets were chosen according to the recommendation of Sleman Industry and Trade Office (Attachment 1).

The fourth stage was online transaction service promotion. To introduce and promote the existence of online transaction services in traditional markets to the wider community, the steps below were taken: 1) data presentation of markets and traders on Google pages, 2) online transaction campaigns in social media, and 3) webinar. The activities took place from August to December 2020.

To assess the results of the activities, it wa planned to monitor the number of traditional traders who implement online transactions. The monitoring was planned three months after the training was carried out. However, this monitoring could not be carried out due to a significant increase of COVID-19 cases.

3. RESULT AND DISCUSSION

3.1 Profile of Traditional Markets in Sleman

Based on the administrators, traditional markets in Sleman fall into village and regency markets. The village market is a market managed by a village and generally opens on certain market days. Village market traders only come and sell on market days, while the regency market is a market managed by Sleman Regency Government and has regular traders. In some regency markets, traders come on market days only.

There are 37 traditional markets across Sleman, as stated in the Sleman Regent's Decree Number 3.15/Kep.KDH/A/2018 on Regency Markets, Market Days, and Trade Business Facilities owned by the Regency Government as presented in Attachment 1.

3.2 Identification of the Existence and Conditions of Online Transactions in Traditional Markets

Identification was carried out from July to August 2020 in which 22 of 37 traditional markets in Sleman were surveyed (Attachment 2). The data collection survey was conducted through interviews and observation. Several markets were not surveyed because of difficulties to communicate with the market association officials. The interviews were conducted with the head of the association or representatives of market trader associations. The observations were made on the activities of traders, facilities, and infrastructure available in 22 traditional markets.

The survey confirmed that, firstly, none of the markets had made online transactions with the available Marketplaces (Bukalapak, Shopee, Tokopedia, and others). Secondly, several traders in 10 markets had made transactions with online motorcycle taxis using the Grab Assistant and Go Shop services. Thirdly, several traders in all of these markets had made online transactions using the WhatsApp application. In some markets, online

transactions were carried out in groups where one group consisted of several traders with different commodities to provide commodities to be purchased by traders. Online transactions with WhatsApp took place because the Sleman Industry and Trade Office (Disperindag) has given several market representatives training on online transactions with WhatsApp. Fourthly, in all markets, none of the traders transacted online using WhatsApp Business application. Fifthly, no traders used non-cash payment transactions despite the dissemination held by BRI Bank. Sixthly, five markets used traditional motorcycle taxis as couriers. Seventhly, no markets had Wi-Fi facilities except their market administrators. Lastly, most traders owned smartphones.

3.3 Formulation of Online Transaction Models suitable for Traditional Market Traders

The online transaction models suitable for the traditional market traders were formulated based on survey results by considering the basic concepts of online transactions and customer satisfaction. Online transactions are a form of e-commerce, which is the use of internet media and websites to conduct business transactions between organisations and individuals (Laudon & Laudon, 2012). Rapid development of communication technology has developed it into mobile commerce, which allows users to make online transactions via mobile devices (Mahatanankoon, 2007).

E-commerce and mobile commerce provide an alternative for consumers to shop more comfortably. Both models offer convenience for users as they can save time when shopping. Consumers can easily search for products, compare qualities and prices before making transactions.

Both models shall prioritise customer satisfaction to survive and compete in business. Customer satisfaction fosters a sustainable intention to use a service or product to eventually increase sales. Continuous intention is the user's interest in using the service in the future (Wang & Liao, 2007). Therefore, customer satisfaction is perceived as the result of a post-purchase evaluation of product or service performance that exceeds the expectation (Yeh & Li, 2009). Satisfaction is the most significant predictor of sustainable intention among mobile commerce users (Chong, 2013). Satisfied customers would likely to reuse mobile commerce in the future (Wang & Liao, 2007). Several variables, such as trust, handy use, perceived benefits, perceived pleasure, social influence, and mobility, contribute to customer satisfaction.

The online transaction models that suit traditional market traders were formulated based on six factors, including: 1) characteristics of goods sold by most traders, 2) target market or targeted consumers, 3) goods delivery, 4) applications widely used by the target market, 5) smartphone ownership by traders and target markets/consumers, and 6) traders' previous experiences in using applications for online transactions.

The most traded goods in traditional markets are commodities and staple goods with a short use life span, such as rice, vegetables, fish, rice, and other commodities. Therefore, the transaction models focused on targeting nearby consumers up to a maximum of 10 km away to be delivered directly by motorcycles or cars, not couriers such as POS, JNE, JNT, TIKI, etc., which generally take some days.

The target market are the nearby consumers. Therefore, the online transaction models need to consider common application used by its target market. APJII Internet Survey Data for 2016 and 2017 (Table 2) shows that most internet users use mobile devices (smartphones/tablets) or combined with computer/laptop. The survey also revealed that WhatsApp was used by 91.5% of the respondents.

Most traders and their target market own smartphones. As surveyed, most traders own smartphones (Attachment 2), while 44%–47% of the target market also use smartphones when accessing the internet (Table 2). Therefore, smartphones should be used in the process of bargaining and trading.

Some active traditional market traders in the market association received WhatsApp-based online transaction training organised by the Sleman Industry and Trade Office, which involved representatives of the respective market associations. WhatsApp has now released WhatsApp Business with an additional business feature to assist traders. Among the features are trader/shop profiles, merchandise catalogues, automatic out-of-service messages, greetings, instant messaging replies, and transaction labels suitable for the online transaction model. Table 3 shows an ideal online transaction model to be formulated, easily used by traders, and accepted by the public. Market traders display their shop profiles and goods catalogues on their WhatsApp Business accounts. Consumers can view merchandise catalogues and select and order goods in the WhatsApp application. The bargaining process occurs with the existing messaging media on WhatsApp. Following an agreement on price, payment method and delivery, the trader delivers the goods to the designated address him/herself or using an online motorcycle taxi service.

Table 2 . Devices used to access the internet

Year	Mobile (Smartphone/ Tablet)	Computer/ Laptop	Mobile and Computer/ Laptop
2016	47.6%	1.7%	50.7%
2017	44.16%	4.49%	39.28%
2021	89.03%	0.73%	10.24%

Source: Asosiasi Penyelenggara Jasa Internet Indonesia (2016, 2017, 2022), processed data

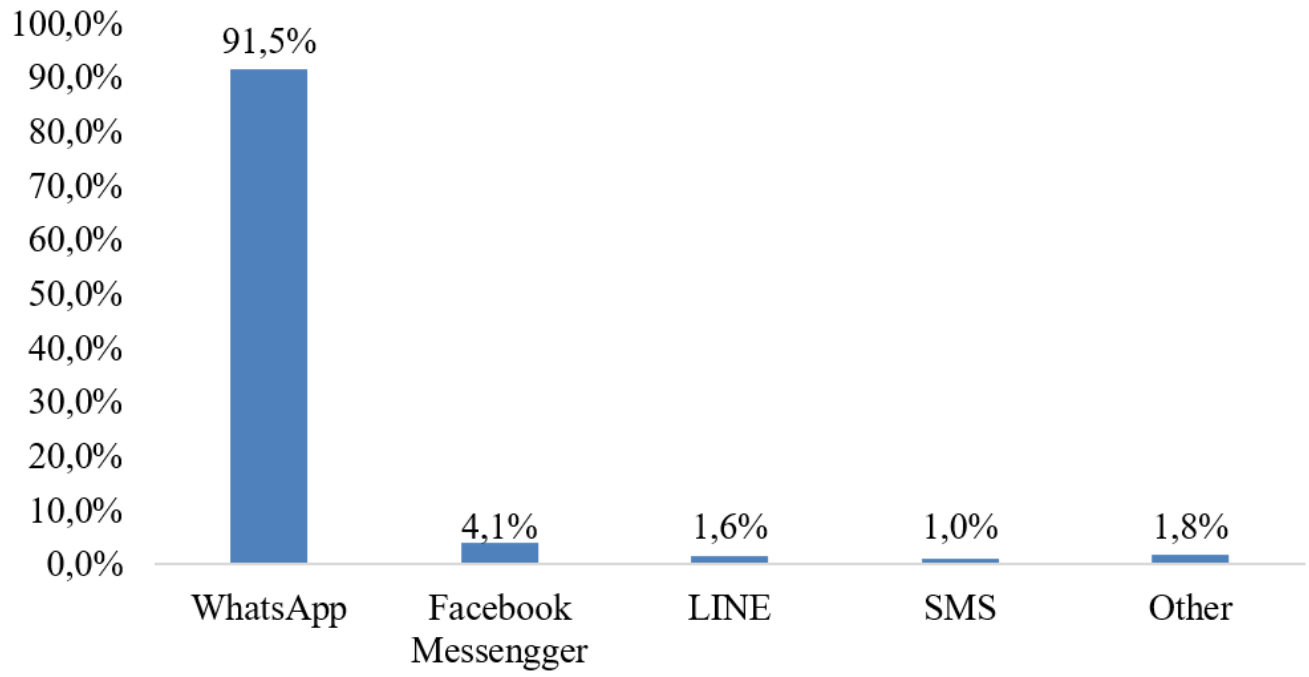

Figure 3 . Frequently used messaging applications (messenger)

Table 3 . Analysis of online transaction models

No.	Factor	Analysis
1.	Characteristics of traded goods	The use life span is relatively short
2.	Target market	The community nearby is reachable by vehicles for delivery up to a maximum of 10 km
3.	Goods delivery	- Motorcycles or cars depending on the volume of goods - Using online motorcycle taxi services
4.	Applications widely used by the target market	Whatsapp
5.	Smartphone ownership	-Most market traders own a smartphone - 44%–47% of the target markets own a smartphone
6.	Traders' previous experience in using WhatsApp application	- Several traders attended a training on WhatsApp-based transactions - Potentially able to adapt to the use of WhatsApp Business

3.4 Online Transaction Training

Online transaction training using WhatsApp Business was intended to provide skills for market traders in operating business features and providing education about online transactions and tips for success. This training was given to traders in 25 markets from September to December 2020 (Attachment 1). These 25 traditional markets were chosen according to the recommendation of Sleman Industry and Trade Office. Participants also received materials for independent learning.

Training materials were provided to assist the training process and help traders to learn independently. The materials contain an introduction to reasons for expanding services with online transactions, tips and tricks for serving consumers, and how to operate the WhatsApp Business application Figure 4(a) The training on operating the WhatsApp Business application includes: 1) creating an account, 2) changing personal accounts be a business account vice versa, 3) filling in a business profile, 4) designing a catalogue, 5) storing data of goods into a catalogue, 6) updating data of goods in the catalogue, 7) deleting data on goods in the catalogue, 8) making automatic messaging replies, 9) creating automatic greetings/greetings, 10) creating quick reply messages, 11) creating transaction labels, and 12) creating short links. The materials are completed with illustrative images in each step of operating the WhatsApp Business application for traders

Figure 4 . Implementation of online transaction training with WhatsApp Business. (a) List of contents of online transaction training materials. (b) Display of material contents. (c) Presentation of training materials. (d) Practice of WhatsApp Business application operation

to learn independently Figure 4(b).

Training was held for traders in 25 traditional markets by theories and practices. The trainers gave a presentation at the beginning of the session using MS PowerPoint Figure 4(c). In addition, trainers also assist traders in operating the WhatsApp Business application Figure 4(d) on their respective smartphones.

3.5 Promotion of Online Transaction Services

Promotional activities were carried out to introduce and promote online transaction services by the traditional markets to the broader community, such as: 1) online transaction campaigns on social media, 2) presenting market and trader data on google pages, and 3) webinar.

The campaign on social media used the tagline "Layanan Online Pasar Ing Sleman (LOPIS)" on Instagram Figure 5(a). This Instagram account contains photos and a brief overview of LOPIS, information about the traders and contact numbers to be contacted via WhatsApp Business, product information, and testimonies given by consumers Figure 5(b). This page also includes links to Google Maps services which share information about markets, products and contact numbers. The activities lasted from August to December 2020.

The presentation of market and merchant data on the Google page was carried out to help potential consumers see the nearby market, available commodities, and contact numbers (WhatsApp Business). This page link is presented on Instagram on lopis.id account. Users can easily identify the closest market by clicking the icon in Google Maps Figure 6(a). They will also access information about traders, goods, and phone numbers to be contacted with WhatsApp Business Figure 6(b). The activities were conducted from August to December 2020.

The webinar was held to attract target consumers and

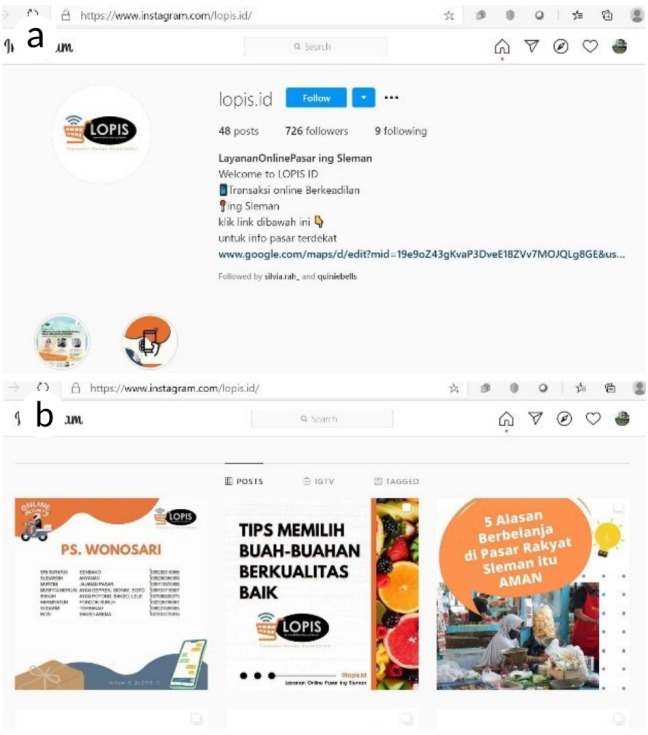

Figure 5 . Lopis.id page on Instagram. (a) Display of lopis.id Instagram home page. (b) Display of lopis.id Instagram contents

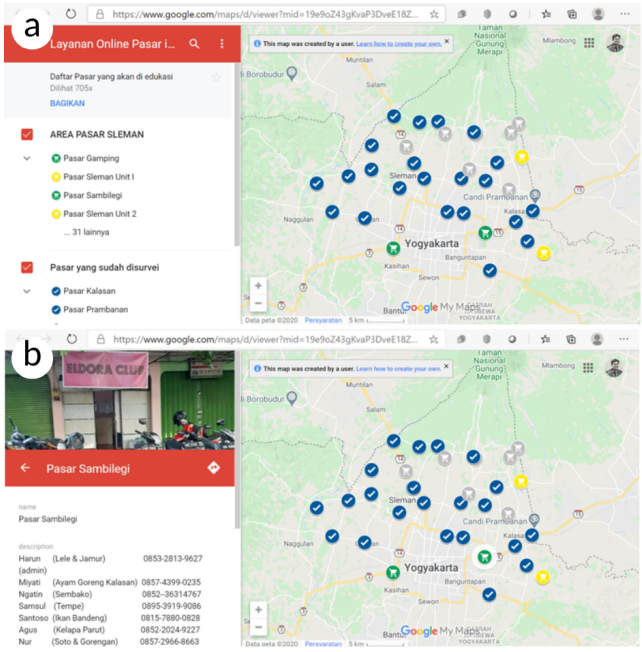

Figure 6 . Presentation of market and trader data on the Google Map page. (a) Google map display of market list and position. (b) Google Map display of traders, goods and contact numbers

campaign for LOPIS. This webinar presented millennial mothers and young entrepreneurs from the Jogja Muslimah Preneur community. Among the presenters were the Head of Sleman Industry and Trade Office and the Chairperson of the Economic Revival Team, who initiated the LOPIS program. This webinar used an online chat or chat format. At the end of the session, shopping vouchers worth IDR 50,000 each were complimentarily given for online shopping at traditional markets. Prize winners were asked to testify after shopping to be uploaded to LOPIS Instagram. The activities took place in October 2020.

3.6 Measurement of Activity's Success (The Limitation)

Initially, the team had developed a monitoring plan for implementing online transactions carried out by traders in traditional markets to assess the results of implementing activities. Monitoring is planned for three months after the training is conducted. However, this monitoring could not be carried out due to a significant increase in COVID-19 cases, hence one limitation of this community service activity.

4. CONCLUSION

The COVID-19 pandemic has decreased the revenue of traditional market traders. Therefore, they need to add new sales channels to meet potential consumers' needs and serve the millennial community segment with online transaction services. Online transactions between traders and consumers were performed directly using the WhatsApp Business application. Therefore, training on using the application was carried out for traders in 25 traditional markets. Promotional activities were done with social media campaigns, presenting market and trader data on Google Maps page, and webinar. The impact of this activity cannot be measured due to the increase in COVID-19 cases, hence the limitation of this community service activity.

ACKNOWLEDGMENT

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CONFLICT OF INTERESTS

All authors declare that there was no conflict of interest in this community service program.

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ATTACHMENT

Table 1 . List of traditional markets in the Sleman Regency based on Sleman Regent's Decree Number 3.15/Kep.KDH/A/2018 and list of markets surveyed and trained by the community service team

No.	Market	Surveyed	Trained	No.	Market	Surveyed	Trained
1	Prambanan	Yes	Yes	19	Kejambon	No	Yes
2	Godean	Yes	Yes	20	Condongcatur	Yes	Yes
3	Gamping	Yes	No	21	Tegalsari	Yes	Yes
4	Balangan	Yes	Yes	22	Potrojayan	Yes	Yes
5	Kebonagung	Yes	No	23	Kalasan	Yes	Yes
6	Ngino	Yes	Yes	24	Sambilegi	No	No
7	Ngijon	Yes	Yes	25	Pasar Kuliner Godean	No	Yes
8	Cebongan	Yes	Yes	26	Pasar Hewan Prambanan	No	No
9	Denggung	Yes	Yes	27	Gendol	Yes	Yes
10	Sleman Unit I	Yes	Yes	28	Wonosari	Yes	Yes
11	Sleman Unit II	No	Yes	29	Kenaran	No	Yes
12	Tempel Induk	Yes	Yes	30	Manggung	Yes	Yes
13	Tempel Buah	No	No	31	Medari	No	No
14	Ngablak	Yes	Yes	32	Srowolan	No	No
15	Pakem	No	Yes	33	Pucung	No	No
16	Gentan	Yes	Yes	34	Bronggang	No	No
17	Turi	Yes	Yes	36	Setum	No	No
18	Jengkang	Yes	Yes	37	Salakan	No	No

Table 2 . Results of survey on online transactions in traditional markets in Sleman

No.	Market	Marketplace Use[1]	Online driver-involving Transactions[2]	WA Transactions[3]	Business WA Transactions[4]	Non-cash Payment	Courier	Wi-Fi	Smartphone Ownership
1	Prambanan	No	Yes	Several	No	No	Yes	No	Mostly
2	Godean	No	No	Several	No	No	No	No	Mostly
3	Gamping	No	Yes	Several	No	No	Yes	No	Mostly
4	Balangan	No	Yes	Several	No	No	Yes	No	Mostly
5	Kebonagung	No	No	Several	No	No	No	No	Mostly
6	Ngino	No	No	Several	No	No	No	No	Mostly
7	Ngijon	No	No	Several	No	No	No	No	Mostly
8	Cebongan	No	Yes	Several	No	No	No	No	Mostly
9	Denggung	No	Yes	Several	No	No	Yes	No	Mostly
10	Sleman Unit I	No	Yes	Several	No	No	Yes	No	Mostly
11	Tempel Induk	No	No	Several	No	No	No	No	Mostly
12	Ngablak	No	No	Several	Several	Several	No	No	Mostly
13	Gentang	No	Yes	Several	No	No	No	No	Mostly
14	Turi	No	Yes	Several	No	No	No	No	Mostly
15	Jangkang	No	Yes	Several	No	No	No	No	Mostly
16	Condongcatur	No	No	Several	No	No	No	No	Mostly
17	Tegalsari	No	No	Several	No	No	No	No	Mostly
18	Potrojayan	No	No	Several	No	No	No	No	Mostly
19	Kalasan	No	No	Several	No	No	No	No	Mostly
20	Gendol	No	No	Several	No	No	No	No	Several
21	Wonosari	No	No	Several	No	No	No	No	Several
22	Manggung	No	No	Several	No	No	No	No	Several

[1]Online trading platforms such as Tokopedia, Bukalapak, Shopee, and Blibli
[2]Online motorcycle taxi services available on smartphones such as Gojek, Grab, and Maxim applications
[3]WhatsApp messaging application available on Android and IOS-based smartphones
[4]WhatsApp messaging application intended for business activities