

International Journal of Education and Pedagogy (IJEAP)
eISSN: 2682-8464 [Vol. 2 No. 4 December 2020]
Journal website: <http://myjms.mohe.gov.my/index.php/ijeap>

DIGITAL FINANCIAL LITERACY: A CASE STUDY OF FARMERS FROM RURAL AREAS IN SARAWAK

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Article Information:

Article history:

Received date : 3 December 2020
Revised date : 8 December 2020
Accepted date : 14 December 2020
Published date : 25 December 2020

To cite this document:

Liew, T., Lim, P., & Liu, Y. (2020). DIGITAL FINANCIAL LITERACY: A CASE STUDY OF FARMERS FROM RURAL AREAS IN SARAWAK. *International Journal Of Education And Pedagogy*, 2(4), 245-251.

Abstract: *Financial Technology (FinTech) development has transformed the services provided by banking and financial industry into digital mode. Financial Literacy solely is no more sufficient to ensure financial well-being of individuals and societal welfare. The Digital Financial Literacy (DFL) has therefore become increasingly vital aspect of education in the FinTech era. The key challenge is that there are significant gaps in DFL especially among the disadvantaged groups. Hence, this study intends to investigate the DFL among the farmers in Sarawak, a targeted group which are originated from rural areas. A total of 252 respondents was selected and a questionnaire adapted from Morgan et. al (2019) was administered to gauge their DFL in terms of four dimensions including knowledge of digital financial products and services, awareness of digital financial risks, knowledge of digital financial risk control and knowledge of consumer rights and redress procedures. The findings indicate that the respondents have moderate scores on the knowledge of digital financial products and services but low scores in the other three dimensions. This suggests that the FinTech development has left many of the country's vulnerable people behind. It highlights the needs to promote DFL to disadvantaged groups via specific initiatives in order to achieve a more inclusive financial and economic development.*

	Keywords: Digital Financial Literacy, Financial Inclusion.
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1. Introduction

FinTech promotes higher efficiencies in financial services and serves as an effective means of reaching the unbanked. It allows greater access to digital financial services and products that will benefit poor people and other disadvantaged groups (Kunt & Klapper, 2018). However, its use must be accompanied with consumers who are digital financial literate. Consumers must possess both digital and financial literacy in order to utilize effectively the financial technology products and to prevent from being conned or making costly mistake. In Malaysia, the rapid development in financial technology has enabled the provision of financial services to consumers via digital devices. At one side, it promotes financial inclusion but at the same time, it creates opportunities for the online perpetrator to swindle Malaysians to trust in the legitimacy of their money game schemes (Liew et. al, 2019).

Hence, this study aims at understanding the digital financial literacy among the farmers, one of the vulnerable groups in the era of FinTech. To our knowledge, this is the first study to investigate the digital financial literacy among farmers in Malaysia. We intend to fill the gaps by revealing the level of digital financial literacy of farmers who are the individuals that are likely to be left behind in the FinTech era. It is our hope that the findings would help the authorities in designing well-tailored education programs that target on specific groups. Special education tools that focus on the skills to enable them to utilize the FinTech products will be more effective.

2. Literature Review

Financial technology (FinTech) has exerted significant impacts on personal financial well-being (Frame et. al, 2019) and financial inclusions (Lauer & Lyman, 2015; Thard & Singh, 2015; Nuryakin et. al, 2017; Morgan et. al, 2019). On one side, the rapid development in digital payment system has created opportunities to connect low-income households to affordable and reliable financial tool via smart phone and other digital tools. On the other side, FinTech development may be harmful on financial well-being by increasing the financial risk and fostering impulsive consumer behavior (Prasad & Meghwal, 2017; Shen, et. al, 2018; Georgios & John, 2020). Hence, it is essential to enhance the DFL of the people in order to utilize effectively the FinTech products and services and at the same prevent fraud and costly mistakes.

Past literature has evidenced the significant gaps in DFL especially among disadvantaged groups. The gaps in the usage of Fintech products among rural and urban residents and among income groups are extensive (Potrich et. al, 2015; Prasad & Meghwal, 2017; Morgan et. al, 2019). This reveals that DFL education strategies have to be well-tailored to specific groups to enable more inclusive economic development. Hence, extensive research on the DFL is required to exhibit a clearer picture before formulating the education strategies.

Even though the Organisation for Economic Co-operation and Development (OECD) has initiated to describe various aspects of digital financial literacy and the importance of DFL (OECD, 2017), there is still lack of consensus about the DFL. A more conclusive measurement has been developed by Morgan et. al (2019) who propose the four dimensions in measuring DFL: (i) knowledge of digital financial products and services; (ii) awareness of digital financial risks; (iii) knowledge of digital financial risk control and (iv) knowledge of consumer rights and redress procedures.

The Malaysian government had implemented the National Strategy for Financial Literacy 2019-2023 (Financial Education Network, 2019) to strengthen the financial literacy, foster responsible financial behaviour and healthy attitudes towards financial management to Malaysians across all ages and life stages. However, like most national financial education plans, it does not focus on digital financial literacy specifically. This is a vital gap that needs to be addressed.

3. Method

This study intends to measure the DFL among the farmers from rural areas in Sarawak. The descriptive survey research design was employed. A questionnaire was administered to gauge their DFL in terms of four dimensions as proposed by Morgan et. al (2019). The questionnaire consists of two sections. The first section collected the demographic data of the respondents. The second section contained 17 questions for measuring the respondent's DFL. Based on five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree), the respondents were asked to give rating to the 17 questions that examine the respondents' knowledge of digital financial products, awareness of digital financial risk, knowledge of financial risk control and knowledge of consumer rights in adopting the digital financial products and services. Descriptive analysis was performed to measure the level of DFL. Overall, a total of 252 farmers from rural areas in Sarawak was selected and the surveys were conducted in their original language, including Mandarin, Bahasa Malaysia and other local dialects.

4. Results and Discussion

Table 1 shows the reliability test of the data. Results indicate that the items developed in measuring each dimension in DFL have high internal consistency as all the value of Cronbach’s Alpha are above 0.70.

Table 1: Reliability Statistics for Four Dimensions in DFL

Dimension	No. of Items	Reliability (α)
Knowledge of digital financial products and services	4	0.71
Awareness of digital financial risks	5	0.84
Knowledge of digital financial risk control	4	0.81
Knowledge of consumer rights and redress procedures	4	0.79

Table 2 exhibits the mean scores of the respondents for the four dimensions in DFL. It is noteworthy to highlight that the substantial support from the government to encourage the adoption of e-wallet has been fruitful, with a mean score of 4.11. This indicates that the e-wallets are well employed by the farmers in Sarawak. However, the adoption of other financial products and services are not encouraging. This reveals a relatively low financial inclusion where the farmers in Sarawak are obviously left behind in the era of FinTech. The lack of knowledge has impeded them from enjoying the benefits of the FinTech products and services.

The mean scores for the dimension of awareness of digital financial risks are low, indicating that the farmers are not aware of the potential risks they are facing when using digital financial products and services. This poses a danger as they may be easily conned in the on-line fraud and the lack of understandings about the potential risks will further hinder them from using the digital financial products and services. They will continue to prefer using the traditional financial products which to them will get rid of the potential risks they face if they adopt digital financial products.

The third and fourth dimension in DFL have low mean scores as well. Lacking of knowledge about the digital financial risk control and the consumer rights and redress procedures will further inhibit the farmers’ confidence in applying the digital financial products and services. The low scores further reassure that the usage of FinTech products and services is a vague stipulation to the farmers and this will exert anxiety that will surely inhibit them from enjoying the benefits of the FinTech products and services.

Overall, the findings indicate that a well-tailored education strategy that targets the farmers’ needs is imperative to promote the adoption of digital financial products. How to convey and instil the knowledge pertaining to the DFL among the farmers whose education level are not high should be the main concern when designing the education strategy. It is vital that the farmers possess the knowledge in the first place and the confidence in subsequent that would only boost up their deployment of FinTech products and services.

Table 2: Descriptive Statistics for Four Dimensions in DFL

Dimension	Mean	Standard Deviation
Knowledge of digital financial products and services:		
I am capable of using e-wallet	4.11	0.95
I am capable of using on-line banking	3.02	0.77
I am capable of using on-line stock trading	1.04	0.67
I am capable of using internet-based insurance services	2.44	0.85
Awareness of digital financial risks:		
I am aware that a hacker may pretend to be institution to get the user to reveal personal data	2.15	0.81
I am aware that a virus may redirect the user to a false page to get the user to reveal personal data	2.31	0.57
I am aware that malicious software maybe inserted into the user’s PC or mobile phone and transmits personal data	1.54	0.49
I am aware that someone may pose as the user and obtain the user’s SIM card and thereby obtaining user’s data	1.54	0.92
I am aware that a hacker may steal my personal data from my online activities such as social network	2.31	0.85
Knowledge of digital financial risk control:		
I know how to use computer programs to avoid spamming, phishing, etc	1.54	0.72
I know how to use mobile apps to avoid spamming, phishing, etc	1.54	0.72
I know how to protect my personal identification number (PIN)	2.41	0.55
I know how to protect my personal information when using digital financial products	2.59	0.43
Knowledge of consumer rights and redress procedures:		
I know my rights as a user of digital financial products and services	2.15	0.85
I know where I can lodge a report if I fall victim to fraud when using financial products through digital means	1.33	0.77
I know how to obtain redress if I fall victim to fraud	2.15	0.75
I know my rights regarding my personal data	1.54	0.65

5. Conclusion

The farmers from the rural areas in Sarawak have moderate scores on the knowledge of digital financial products and services but low scores in the other three dimensions: awareness of digital financial risks, knowledge of digital financial risk control and knowledge of consumer rights and redress procedures. The findings suggest that the FinTech development has left many of the country's vulnerable people behind. It highlights the needs to promote DFL to disadvantaged groups like the less educated, the elderly and the rural residents via specific initiatives in order to achieve a more inclusive financial and economic development. Extensive research to other disadvantaged groups will reveal a clearer picture in order to formulate well-tailored education strategies.

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