

# **Digital Financial Literacy Among Young Adults in Malaysia**

Wan Rasyidah Wan Nawang <sup>a</sup>, Syadiyah Abdul Shukor <sup>b</sup>

<sup>a, b</sup>*Faculty of Economics and Muamalat, Universiti Sains Islam Malaysia, 71800 Nilai, Negeri Sembilan, Malaysia*

*Corresponding Author: [wasyidah@usim.edu.my](mailto:wasyidah@usim.edu.my)*

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## **Abstract**

The financial industry has been impacted by the increased use and reliance on digital technologies, which has resulted in the digitalization of financial products, services, and providers. This transformation highlights the importance of individuals' digital financial literacy (DFL). Accordingly, this study determines the prevalence of DFL among young adults in Malaysia. An online questionnaire was designed using Google Forms and a Uniform Resource Locator (URL) link was used to distribute the survey on several social media platforms. Respondents were selected using a convenience sampling and 229 responded to the survey. The survey sought to measure DFL in four dimensions: 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 results show that Malaysian young adults score medium-high to high on all four dimensions of DFL and have a good understanding of DFL. This study is important for both academics and practitioners. It contributes to the limited knowledge in DFL, which is a new concept with little empirical evidence, and thus serves as a catalyst for future DFL research. As the world progresses towards digitalization, having DFL is essential. This study supports the government, educational institutions, and policy makers in developing financial literacy programmes and policies related to DFL towards improving the well-being of Malaysians and the national vision of shared prosperity to become a high-income nation by 2030.

## **Keywords:**

Awareness, digital financial literacy, financial risks, knowledge, young adults

## **INTRODUCTION**

Even before the Covid-19 pandemic, the world was changing at an increasingly rapid pace, driven by science and technology. During the pandemic, an enormous digital transformation took place, widening the remaining gaps. After the pandemic, digitalization is even more pronounced. The increasing use of and dependence on digital technologies is bringing about major changes in the economy and society. Digitization and its rapid spread have also transformed the financial market and led to digital financial services (henceforth DFS) gaining traction globally. Digitization is seen as possibly the most promising mechanism for bringing financial services closer to people and making them more accessible in terms of knowledge and cost (Gomber et al., 2017), as well as promoting overall financial inclusion (Azeez et al., 2021).

The adoption of digital payments and the creation of financial tools and applications are among the prominent examples of the financial innovation that has accelerated in the financial services industry. This has changed the way retail customers and sellers buy and sell goods. As a result, large swathes of economic activity have become dependent on technology, forcing new and traditional financial players to adapt quickly to a changing financial landscape. In addition, more and more consumers, including those who have never used DFS before, are being compelled to turn to DFS. Accordingly, the introduction of DFS has changed how consumer behave and demand for financial services.

According to Statista (2023), there were more than five billion internet users worldwide in April 2023, which corresponds to 64.6 per cent of the global population. This number is anticipated to surge over time, with a staggering total of more than seven billion users projected by 2030 (Cybersecurity Ventures, 2017). In Malaysia, techno users have also increased (Department of Statistics Malaysia, 2022). There were 27.4 million internet users in Malaysia as per January 2022 (Fintech Malaysia, 2022). The Fintech Malaysia (2022) further added that internet banking adoption has fourfold increase in the last 10 years, with usage rate increased by more than 100 per cent in 2020, with online banking penetration of 112.5 per cent and mobile banking penetration of 61.8 per cent. This is echoed in the Bank Negara Malaysia (BNM) Annual Report 2022 (p. 150). Financial Capability and Inclusion Demand Side Survey 2021 (FCI Survey 2021) also reported the use of DFS by Malaysians reached 74 per cent of the total Malaysian population. In support, the adoption of digital payments increased to one-third of Malaysian adults (World Bank's Global Findex Survey 2021, p. 70). These statistics show that the internet, digital commerce, and banking have become a part of everyday Malaysian life. A further intriguing statistic is that, in only four years, Malaysia's national internet use rose from 76.9% to 88.7%, with young people aged 44 and under making up 85.9% of the user base.

In general, internet use is almost ubiquitous among teens and young adults worldwide. Hence, there is no doubt that the younger generations are digital natives. They have become accustomed to digital finance through online banking and online shopping. However, it cannot be assumed that they have all the necessary knowledge, skills, and understanding to use the technology (Raj, 2021). Even though they are more confident in using digital channels, they might disregard certain safety precautions. Therefore, albeit they are immersed in the digital technology, they may not be digitally literate.

This is evidenced by the almost daily media coverage of online scams such as the Macau scam, investment and loan scams, love scams, and even mule account activities that young adults fall prey to. These deceptive practises and fraudulent activities often involve large sums of money. Young adults are often targeted because they are impressionable and among the most gullible, naïve, and credulous targets (Dickler, 2021; Lieber, 2021). Therefore, the assumption that these young adults are digitally savvy is also inaccurate here. Hence, some degree of literacy in digital financial aspects is required to decide on financial decision wisely and avoid costly mistakes when using financial technology products (Gallego-Losada et al., 2021; Morgan et al., 2019). Accordingly, young adults need to be educated in digital and financial literacy and understand the technological limitations, risks, and dangers of internet use.

The combination of digital literacy and financial literacy results in a new concept called digital financial literacy (DFL). Digital literacy refers to the ability to find, use, comprehend, and evaluate information derived from various digital technologies such as PCs, smartphones, and e-readers. Financial literacy, by contrast, is the understanding and application of a wide range of financial skills such as the skills in managing personal finance, making appropriate

budget and investing. DFL, then, combines these two skills of navigating financial services with the ability to use digital technologies. As the description suggests, DFL is linked to financial literacy. Despite a plethora of research demonstrating the importance of financial literacy in various contexts and for all segments of the population (see e.g., Mokhtar et al., 2018; Mulyana et al., 2019), there are very few studies providing evidence on DFL (Basar et al., 2022; Yadav & Banerji, 2023). Moreover, DFL is still a relatively new field of research. Therefore, DFL has not yet been thoroughly researched and necessitates investigation. Given the paucity of empirical research on DFL, a study addressing this issue is still needed, especially for young adults in Malaysia.

The study focuses on understanding DFL among young adults in Malaysia. Young adults are defined with different age ranges. Much of the literature classifies young adults as between 18 and 34 years old (Intermill et al., 2022; Jin et al., 2015; Nour et al., 2016; Rossenkhan et al., 2021; Wong et al., 2021). Thus, in accordance with previous studies, 18 to 34 years old individuals were selected as the samples for this study. This group of young adults is one of the most vulnerable, yet essential groups, and all the more important for research because they will be the decision-makers, entrepreneurs, and leaders of tomorrow (Ong et al., 2021). Even though this group will have a significant future role, Dong et al. (2023) claim that less attention has been paid to research on young adults' financial decisions and behaviour. Subsequently, this study is pertinent and timely as the study addresses the research gap in relation to young adults by determining Malaysian's young adults' knowledge, awareness, and understanding of DFL.

This study is important for both theory and practise. In theory, this research provides an important contribution to the limited literatures of DFL, which is an emerging concept with little empirical evidence. As a result, this study will act as a basis for further DFL research, especially with regard to certain age groups. In practise, as the world progresses toward complete digitalization, having DFL on hand is critical. It takes not only individuals, but also governments and other organisations to assist the public by developing appropriate tools to assess DFL and programmes to encourage digital financial education. Consequently, supporting the country's economic development and poverty reduction, as envisioned in the country's 2030 vision of becoming a high-income nation.

The remaining of this paper is laid out as follows. Following the introduction of this study, a review of prior literature, including the definition of DFL and its measurements, is provided. The methods and approaches used in this study are then elaborated. Subsequently, the findings are presented, discussed and a conclusion based on the empirical results of this study are provided. Finally, the study limitations and recommendation for future research are explained.

## **LITERATURE REVIEW**

### **Digital Financial Literacy (DFL)**

DFL has been defined in a number of ways. According to the Organization for Economic Cooperation and Development (OECD), DFL is a "combination of knowledge, skills, attitudes, and behaviours required for individuals to be aware of and safely use DFS and digital technologies with the goal of contributing to their financial well-being." (OECD, p. 8, 2022). Whilst the Alliance for Financial Inclusion (AFI) network defines DFL as gaining the information, abilities, confidence, and competences necessary to utilise financial goods and

services offered through digital platforms safely and to make wise financial decisions. Academics have also explained DFL depending on the context of their research. For Prasad and Meghwal (2017), for example, DFL is regarded as one's understanding on how to use online systems to do saving and purchasing purpose via online banking or electronic payments. Alternatively, DFL was defined as synergies of two ideas: digital literacy and financial literacy (Tony & Desai, 2020). It combines knowledge of financial services with the ability to use digital technologies. Setiawan et al. (2020), on the other hand, describe DFL as the ability or competence in using digital applications, platforms or system in financial services. All in all, DFL is the ability to use both digital and financial knowledge to enable the use of DFS and the making of sound financial decisions to achieve financial well-being.

In the present digital age, DFL emerges as a significant aspect of education (Liew et al., 2020; Morgan et al., 2019), particularly with the development of the gig economy (Morgan et al., 2019). In the gig economy, individuals create multiple sources of income and work independently rather than in structured, paid jobs. Due to the nature of such jobs, they are expected to be wiser in managing their own financial matters. On that note, DFL will come to the fore in order to benefit from available financial services without falling into fraudulent digital financial activities (Morgan et al., 2019). Therefore, adequate knowledge and competencies related to DFL is paramount to avoid cyber-attack, illegal information disclosure, and other unethical issues such as financial mismanagement.

DFL is still a relatively new area of study, but there are some studies had been conducted India. For instance, Prasad and Meghwal (2017) surveyed Indian households and concluded that a government awareness campaign is needed to educate people about DFL while study by Fathima (2018) has suggested that the focus of DFL should be on empowering the Indian population. This government's aim is attainable if there is even a single digitally and financially literate member in a household. On the other hand, a study was also conducted to determine the relationship between DFL and overall financial inclusion (Tony & Desai, 2020). According to their findings, DFL awareness and use lead not only to financial inclusion, but also individual financial growth and overall economic growth.

Other studies on DFL were conducted by Pranatasari et al. (2022), Rahayu et al. (2022), and Setiawan et al. (2020) in Indonesia. Pranatasari et al. (2022) studied digital Islamic finance literacy and financial inclusion with profitability among micro, small, and medium enterprises (MSMEs). They reported that understanding of digital Islamic finance positively and significantly affected MSMEs' profitability, but not financial inclusion. Rahayu et al. (2022) examined the relationship between DFL level and financial behaviour among the Indonesian Millennial generation and concluded that DFL positively influences financial behaviour. Setiawan et al. (2020) conducted another study to measure the relationship between DFL and financial management behaviour. Their results suggest that socio-economic position influenced DFL, which positively impacted current saving and spending behaviour. It implies that DFL level could help to predict one's saving and spending behaviour in future.

In the context of Malaysia, several DFL studies have been conducted by Basar et al. (2022), Liew et al. (2020), Othman et al. (2021), and Rahim et al. (2022). Liew et al. (2020) pioneered the investigation of DFL in the country. They investigated the prevalence of DFL among Malaysian rural farmers. They found that DFL was low to moderate in this segment, suggesting that digital economic developments have left this segment of the population behind. Othman et al. (2021) conducted a literature review and concluded that most traders have low DFL, making a rapid transition to the digital economy difficult, although the COVID-19 pandemic has been the main catalyst for transition to digital economics. Basar et al. (2022) examined the use of Islamic FinTech or i-FinTech and the extent of DFL among Bumiputera

entrepreneurs. They concluded that there is an imbalance between i-FinTech and the extent of DFL among entrepreneurs, implying that DFL is still low among Malaysians. They recommend that the Malaysian government craft a comprehensive DFL policy for Malaysians. Rahim et al. (2022) studied the extent of DFL among students. They concluded that students lack DFL and showed low awareness of digital financial transaction risks. The BNM (2022) also highlighted in its recent annual report that Malaysians have a low DFL, where 37 per cent of Malaysians surveyed said they share bank account passwords and/or PINs with close friends.

The Malaysian government has in fact made concerted efforts to educate and sensitise Malaysians on the significance of financial literacy. Among others, the National Financial Literacy Strategy 2019-2023 was launched to increase financial literacy, encourage responsible financial behaviour, and instil a positive financial management attitude among Malaysians across age brackets and life stages. Nonetheless, the efforts are far from complete, as studies and reports continue to show Malaysians' low level of financial literacy. With the DFL is so much in the spotlight, the strategy unfortunately does not specifically address digital financial literacy. This is a significant gap that needs to be closed.

### **Digital Financial Literacy Measurements**

While financial literacy has been extensively researched and has a number of established metrics, the DFL is still in its infancy. In studying DFL, Morgan et al. (2019) pioneered the development of the DFL measure. The Morgan et al. (2019) measure is currently the most widely used in other academic work (Gallego-Losada et al., 2021). Previous studies on DFL such as Basar et al. (2022), Liew et al. (2020), and Setiawan et al. (2020) used the DFL measures proposed by Morgan et al. (2019).

Morgan et al.'s (2019) DFL measurements includes four dimensions: a) knowledge of digital financial products and services, b) awareness of digital financial risks, c) monitoring of digital risks, and d) knowledge of consumer rights and redress procedures.

#### *Knowledge of digital financial products and services*

Understanding digital financial products and services, including mobile wallets, internet banking, crowdfunding, and insurance services, is crucial for personal and business purposes. Comparing benefits and drawbacks of each DFS helps individuals understand their basic functions.

#### *Awareness of digital financial risks*

Digital financial literacy involves understanding risks like online fraud, cyber security threats, and overborrowing, as well as fintech risks like phishing and spyware. Users should also understand contract terms and contract terms, as providers may use personal information for credit evaluation.

#### *Monitoring of digital risks*

DFS users must be knowledgeable about protecting themselves from risks, using computer programs and mobile applications to avoid spamming and phishing, and safeguarding personal information.

#### *Knowledge of consumer rights and redress procedures.*

DFS users should understand their rights, access compensation, and personal data protection in case of fraud or loss and take action against unauthorised use.

**METHODOLOGY**

This study is quantitative in nature. To achieve the study's objective of exploring the DFL of young adults in Malaysia, an online questionnaire survey was conducted. The survey was created in Google Forms, and a URL link was shared on multiple social media platforms such as Facebook and WhatsApp. The online survey was chosen because it allows for the rapid, efficient, and low-cost collection of large amounts of data from a large number of people. It also includes validation features for complete responses, ensuring that missing values are compensated for. Using convenience sampling, 229 questionnaires were collected and included in this study. Given the population young adults in Malaysia of more than one million, Krejcie and Morgan (1970) recommend a sample size of at least 384. However, due to time constraints, only 229 samples were collected. Regardless, the sample size of 229 is deemed sufficient for the preliminary study and descriptive analysis sought in this study (Roscoe, 1975).

Prior to conducting the actual fieldwork, a pilot test was carried out to assess the reliability and validity of the questionnaire (Devisakti & Ramayah, 2019). The questionnaire was distributed to 30 pilot samples for preliminary survey as suggested by Johanson and Brooks (2010) and the reliability test was performed. Table 1 shows the reliability scores of the pilot test analysis which confirmed that Cronbach's alpha is greater than 0.7 (Nunally, 1978; Hair et al., 2006), indicating very good reliability of the research instrument. Therefore, none of the items were dropped from the instrument. In addition, no significant changes were made to the contents or words used, thereby validating the survey questionnaire. The reliability and validity results of this study show that the variables are suitable to be used in the main data collection for the purpose of analysing actual or future research.

**Table 1: Reliability scores (pilot test)**

Dimensions of DFL	No. of items	Cronbach's alpha
Knowledge of digital financial products	8	0.787
Awareness of digital financial risk	5	0.833
Financial risk control	4	0.872
Knowledge of consumer rights and redress procedures	4	0.833

The questionnaire was split into two sections. The first section asked general questions regarding the respondents' demographic information (such as gender, age, and marital status). The second section of the questionnaire asked respondents on the four dimensions of DFL proposed by Morgan et al. (2019). All items were taken from the study by Morgan et al. (2019) and measured by asking respondents questions on a five-point Likert scale ranging from "1" (strongly disagree) to "5" (strongly agree). The IBM Statistical Package for Social Science (SPSS) version 24 was used to analyse the data using descriptive analysis.

**RESULTS AND DISCUSSION**

**Descriptive Analysis**

Table 2 illustrates the profiles of the respondents in this study. Of the 229 respondents, 60.3 per cent are female and 39.7 per cent are male. Information on age shows that more than half (90.0 per cent) of the respondents are between 18 and 24 years old, while the rest (10.0 per cent) are between 25 and 34 years old. Regarding the marital status of the respondents, 95.6 per cent are single, 3.9 per cent married, and others (0.4 per cent).

**Table 2: Demographic profile of the respondents**

Description		(N=229)	
		Frequency	Percentage
Gender	Male	91	39.7
	Female	138	60.3
Age	18 - 24	206	90.0
	25 - 34	23	10.0
Marital status	Single	219	95.6
	Married	9	3.9
	Others	1	0.4

**Reliability Analysis**

Table 3 shows the reliability values for all items measured in this study. Cronbach's alpha was chosen as a measure to assess the degree of consistency between construct items. The greater the reliability, the closer the coefficient is to one. The general rule of thumb for Cronbach's alpha is 0.70 (Nunnally, 1978; Hair et al., 2006). The Cronbach's alpha values for all items measuring each dimension of the DFL are above 0.70, indicating high internal consistency.

**Table 3: Reliability scores (actual study)**

Dimensions of DFL	No. of items	Cronbach's alpha
Knowledge of digital financial products	8	0.801
Awareness of digital financial risk	5	0.895
Financial risk control	4	0.851
Knowledge of consumer rights and redress procedures	4	0.840

**Descriptive Statistics of DFL Dimensions**

In this study, the mean is used to assess DFL in young adults. The interpretation of the mean presented in Table 4, produced by Nunnally and Berstein (1994), is used to measure the mean in this study.

**Table 4: Mean score interpretation**

Mean Scale	Level
1.00 – 2.00	Low
2.01 – 3.00	Medium Low
3.01 – 4.00	Medium High
4.01 – 5.00	High

Source: Nunnally and Berstein (1994)

The mean score for each item measuring the dimension of DFL is presented in Table 5. Based on the interpretation of the mean scores presented in Table 4, the mean scores for all items measuring respondents' knowledge of digital financial products are high, ranging from 4.50 to 4.63. Nevertheless, two items in this dimension have a medium-high mean score. Both items measure respondents' ability to use online stock trading and internet-based insurance services. The mean score is as expected since 90 per cent of the respondents in this study are between 18 and 24 years old and therefore have little exposure to either financial product.

The mean scores for the items measuring the dimension of awareness of digital financial risks are high, indicating that young adults are aware of the potential risks they face when using

digital financial products and services. The mean score ranged from 4.21 to 4.46. Nevertheless, in terms of the mean score on the financial risk control dimension respondents scored a medium-high to high mean score. Respondents scored a medium-high mean on their knowledge of avoiding spamming, phishing, and protecting personal data when using digital financial products. This is of concern as individuals can easily fall victim to online fraud and their ignorance of the risks could discourage them from using digital financial products and services.

Finally, respondents scored a medium-high to high mean score on questions measuring respondents' knowledge of consumer rights. The mean score ranged from 3.67 to 4.18. Knowledge of consumer rights is important for users to be able to use financial products and services with confidence.

**Table 5: Descriptive statistics of DFL dimensions**

Dimension	Mean	SD
<b>Knowledge of digital financial product</b>		
I can conduct online searches using my digital device(s) (Smartphone/PC/ Laptop)	4.64	0.595
I can send and receive emails on my own	4.63	0.611
I shop online	4.63	0.660
I am capable of using an e-wallet	4.50	0.804
I am capable of using mobile banking	4.52	0.798
I am capable of using online banking	4.62	0.743
I am capable of using online stock trading	3.23	1.331
I am capable of using Internet-based insurance services	3.22	1.306
<b>Awareness of digital financial risk</b>		
I am aware that a hacker may pretend to be an institution to get the user to reveal personal data	4.42	0.811
I am aware that a virus may redirect the user to a false page to get the user to reveal personal data	4.39	0.807
I am aware that malicious software may be inserted into the user's PC or mobile phone and transmits personal data	4.26	0.863
I am aware that someone may pose as the user and obtain the user's SIM card and thereby obtaining the user's data	4.21	0.914
I am aware that a hacker may steal my personal data from my online activities, such as social network	4.46	0.808
<b>Financial risk control</b>		
I know how to use computer programs to avoid spamming, phishing, etc.	3.54	1.098
I know how to use mobile apps to avoid spamming, phishing, etc.	3.76	1.039
I know how to protect my personal identification number (PIN)	4.15	0.826
I know how to protect my personal information when using digital financial products	3.95	0.942
<b>Knowledge of consumer rights and redress procedures</b>		
I know my rights as a user of digital financial products and services	4.07	0.898
I know where I can lodge a report if I fall victim to fraud when using financial products through digital means	3.88	1.013
I know how to obtain redress if I fall victim to fraud	3.67	1.114
I know my rights regarding my personal data	4.18	0.844



## **CONCLUSION**

This study examines the extent of DFL among young adults in Malaysia. An online survey was conducted among 229 Malaysian young adults aged 18 to 34 to achieve the study's objective. The data was analysed using descriptive statistics. The study measured DFL across four dimensions: 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 results show that Malaysian young adults score medium-high to high on all four dimensions of DFL. This suggests that Malaysian young adults are generally digitally financially literate. Nonetheless, particular attention should be paid to financial risk control and knowledge of consumer rights and redress procedures, where the mean scores are quite low. Financial education programmes should include and emphasise the importance of avoiding spam and phishing, filing reports, and knowing where to go if people become victims of financial fraud. Hence, DFL must continue in light of rising statistics involving young adults in financial scams.

The widespread presence of fintech in daily life, as well as the growing number of financial apps and tools, necessitates digital and financial acumen in consumers in order for them to wisely use suitable digital products and services for financial purposes, emphasising the importance of individuals possessing DFL skills. DFL is quickly becoming an important life skill, equipping consumers with the knowledge and resources they need to manage their daily financial activities effectively, responsibly, and confidently with the help of technology. Improved DFL ultimately enables consumers to better utilize DFS in managing their daily finances, resulting in better financial well-being and life choices. This situation requires consumers to be digitally and financially savvy to identify and wisely use the appropriate digital financial products and services. The low awareness, little trust, and insufficient DFL as reported are barriers for some segments of society to adopt DFS and reap their benefits. Thus, DFL is critical to the development of a generation of informed consumers capable of capitalising on the best that innovation has to offer.

Theoretically, this study aims to contribute significantly to the limited knowledge of DFL as a developing field with limited empirical evidence. The study's findings could be used to lay the groundwork for future DFL research in both developed and developing countries. Furthermore, because this field is still in its early stages and measurement scales are scarce, academics can use the findings of this study to improve the DFL measurement scale. Practically, this study hopes to assist governments, educational institutions, and policy makers in developing financial literacy programmes and policies related to DFL. In addition, the study hopes to help the government track the effectiveness of its interventions. This is in line with the National Strategy for Financial Literacy in Malaysia 2019-2023, which aims to improve the well-being of Malaysians and the national vision of shared prosperity to become a high-income nation by 2030.

Like all other studies, this study too has limitations. First, the results of this study cannot be generalised due to the convenience sampling method used. As a result, future studies should employ probability sampling to allow for generalisation. Second, this study only includes young adults between the ages of 18 and 34. As a result, it is suggested that future studies test the same measurement on a larger group of Malaysians, particularly those from vulnerable groups such as senior citizens and women, who are the most frequently reported to be victims of online financial scams. Third, this study focuses solely on the prevalence of DFL without considering outcomes such as financial well-being and financial inclusion. Future research should delve deeper into the subject.

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