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# Fintech and Young Adult Consumers

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**PREPARED BY**

CHWEE BENG LEE, MAREE SKILLEN, REEM NASRALDEEN

Western Sydney University

# Introduction

Achieving financial literacy (FL) is significant in today's society due to everyday life demands. FL simply refers to how much knowledge an individual has about several financial matters (French, McKillop, & Stewart, 2020; Lusardi, 2019; Lusardi & Mitchell, 2014). Individuals, at an early age, are sometimes required to take important steps towards their financial decisions which may affect their future life stability (Panos & Wilson, 2020). Therefore, taking steps to become financially literate is an important component of life that can ensure financial solidity and meet many other related financial needs (Mudasih & Subroto, 2021).

**Young adult consumers** (generally defined as 17-24 years old) are reportedly said to be active users of technology (Bayram, Olasubomi, & Thartori, 2021; French et al., 2020) and to be more economically robust (Afterpay, 2021; Bayram et al., 2021). In 2019, it was reported that about 18 per cent of global online users who purchased products or services online were aged 18 to 24 years. Financial apps and mobile wallets are also growing in popularity within this age group. In the United States, about 17 per cent of financial app users were between 18 and 24 years old (Statista, 2019). It was also reported that they use financial apps because they are user friendly (French et al., 2020). Similarly, Anthony, Sabri, Shazana, Magli, and Sufian (2021) reported that close to 98 percent of young adults involved in a survey conducted in Malaysia were using fintech applications.

With developments in technology and more complex financial products, young consumers need to be knowledgeable and capable of utilizing financial skills (Bayram et al., 2021). At this age, they have the potential to start developing vital life skills in order to become competent and confident in making sound financial decisions. Although it sounds like an area that young people would be reluctant to learn, some studies (Agustiningsih, Savitrah, & Lestari, 2021; Anthony, Sabri, Shazana, Magli, & Sufian, 2021; Mountain, Kim, Serido, & Shim, 2021) have indicated that young consumers agree that starting to save money early in their life is necessary and researchers tend to agree that the financial health of young adults is paramount in their lives (Anthony, Sabri, Shazana, Magli, & Sufian, 2021) as financial mistakes can be costly and can sometimes lead to irrevirsible poor decsions. Hence, young adults should be equipped with the necessary skills and knowledge to become financially-responsible adults for a thriving future.

The term "*FinTech*" or *Financial Technologies* is simply a combination of the words "finance" and "technology" which signifies the use of technology to improve financial activities including services, products, or anything related to finance to customers via easier and faster methods (Duma & Gligor, 2018). As a result, the emerging technology has made the traditional financial activities faster and more convenient. The rapid growth of fintech has captured younger consumers' interest by moving away from big banks payments, saving, and investing towards mobile apps that bypass aspects of the financial system such as zero-commission brokerages "buy now, pay later" and Afterpay lenders, as well as online investment advisors that offers services without necessarily being banks (Duma & Gligor, 2018; P. Gerrans, Baur & Lavagna-Slater, 2021).

Given the importance of fintech and it's relevance to young adults, this study aimed to investigate young adults' FL and to identify the level and influence of fintech on the behaviour of young consumers aged 17 to 24 years old. To achieve this aim, the project had the following objectives.

- To determine the association between FL and fintech adoption among young people.
- To understand variables that could play a role in young people's fintech adoption.

# Literature Review

**Young adults' financial literacy**

Today's economy requires all young adults to confront complicated financial decisions at a young age, yet many young consumers lack the essential skills and knowledge to survive costly financial mistakes in the future (Lusardi & Mitchell, 2014; Serido & Deenanath, 2016; Shim, Serido, Bosch, & Tang, 2013; Sinha, Tan, & Zhan, 2018). Previous studies on young adults' FL indicated that this group of people lack necessary skills such as money management, financial planning, saving, knowing what to spend money on, and knowledge to make appropriate financial decisions which may also impact their future economic wellbeing (Goyal & Kumar, 2021; Lusardi, Mitchell, & Curto, 2010; Mottola, 2014). One problem is that this young group of consumers are actually inexperienced in financial markets and are at risk of making poor financial decisions. In contrast, those young individuals who engage in financial behaviour during their adult years are more able to maintain it over many years (Grinstein-Weiss, Spader, Yeo, Taylor, & Freeze, 2011).

## Financial literacy and fintech

With the growth of technological financial services, FL has become a must (Mudasih & Subroto, 2021). Morgan and Trinh (2020) found that a higher level of FL has positive effects on an individual's awareness and use of fintech products. Fintech is rapidly developing worldwide and is to some extent targeting end-user (individual) customers (Albarrak & Alokley, 2021). With global Fintech adoption reaching 64%, Fintech is clearly becoming mainstream in all surveyed markets (Hwa, 2020). Across 27 markets, Singapore is identified to be at 13$^{th}$ place with a 67% adoption rate and Australia at 20$^{th}$ place with 58%. With Fintech services now being commonly used by consumers globally, it is clear that Fintech's have become recognised financial service providers. A study conducted by Gulamhuseinwala, Bull, and Lewis (2015) showed that early fintech adopters tend to be young, high-income, and high-value customers. Another study in Vietnam by Morgan and Trinh (2020) indicated that the adoption of fintech services among younger people (i.e., those aged less than 30 years old) is much higher than that of older people. Fintech has captured the interest of young consumers' like those referred to as millennials and Generation Z. These users do not know a world without mobile banking, and use technology extensively to complete everyday tasks. For example, millennials and Generation Z. have moved away from big bank payments including saving and investing towards the use of mobile Apps that bypass aspects of the financial system such as zero-commission brokerages. They are a group caught up in the "Buy Now, Pay Later" schemes, and lean towards online investments and activities because they are faster and more convenient. For this reason, young adults need to have the basic knowledge and skills to make significant personal financial decisions.

# Research Methodology

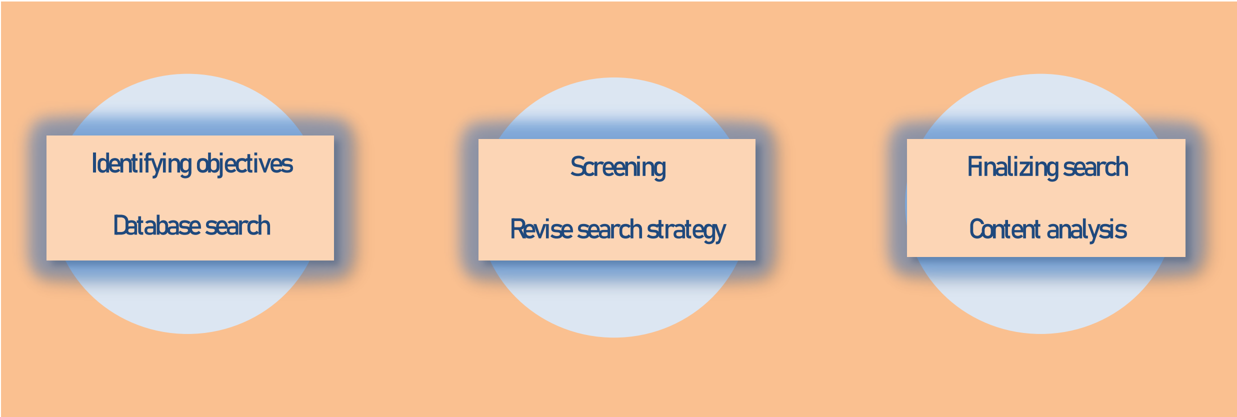
This section describes the research approach applied to investigate young adults' FL and to explore the influence of fintech on the behaviour of young consumers aged 17 to 24 years old. This project focused on younger consumers because it is considered the generation most adaptable to technological developments (Agustiningsih et al., 2021).

We used an inductive review approach to uncover findings regarding the influence of fintech on young individuals. The present review followed the prescribed PRISMA method (McKenzie et al., 2021) for a rigorous and explicit process. This review focused on the following questions:

1. What is the connection between FL and fintech usage among young people?
2. What variables might play a role in young people's financial literacy and their financial behaviour?

In undertaking this review and addressing these questions, we first briefly provide an overview of the FL background related to the specific age of 17 to 24 years old, and then consider FL and its influence on this group's financial decisions.

**Information sources, search strategy and analysis**




In this study, we adopted a qualitative approach for the review due to the small number of papers. We applied thematic coding (inductive coding) in order to identify the gaps in the research. There were three phases in the review process used by the project team. In the first phase, we identified the research objectives and collected related papers from databases. This phase allowed us to look deeply into related literature focusing on FL and fintech literacy. We included theoretical and empirical papers in the process. The primary objective of this research project was to identify the association between the FL and the fintech adoption of young individuals with financial literacy. Thus, we used several keywords in our database search including “fintech”, “financial literacy”, “young adults or young consumers” (i.e., 17-24), “financial attitudes”, “digital literacy”, financial knowledge”, and “financial education”. We used databases such as Scopus, ERIC, and ScienceDirect for the literature search process. An initial 50 papers were found.

In the second phase, screening criteria were used to identify relevant papers for the content analysis process. Considering the limited number of relevant publications of journal articles on fintech and young adults, we decided to include journal articles, empirical papers, reports published by government, as well as conference and working papers. The search also included the domain of fintech and young adults' financial knowledge, behaviour, aptitude, attitude, and financial literacy. It included individuals who were employed, married, or single, and a multinational population. We limited our search to include papers published in English.

In the final phase, we applied a review protocol proposed by Krippendorff (2018) to analyse the selected documents for the content analysis. Papers published between 2010 and 2022 were selected for the content analysis process; however, most of the reviewed articles were published between 2018 and 2022. Application of these inclusion and exclusion criteria resulted in the selection of 28 documents that met all of the requirements established by the review protocol.

The review table was constructed and reviewed by the members of the team. The resulting review was coded and analysed under themes related to the study questions. The report was then written based on these areas and the analysis. A brief description of the documents is provided in Table 1.

Table 1. Key findings on FL & Fintech among Young Adults (17-24 years old)

| # | Author (date) | Document Type | Findings |
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| | | | |
| **1** | Declan French, Donal McKillop & Elaine Stewart (2020) | Empirical Study | *Using finance Apps for the treatment group translated into better financially capable behaviours; those receiving the apps were more likely to keep track of their income and expenditure and proved to be more resilient when faced with a financial shock. |
| **2** | Rompas, R. C., Pangemanan, S., & Tulung, J. E. (2020) | Article | *Transaction benefit and discount significantly affect students' lifestyle, while transformational advertising does not. |
| **3** | Gerrans, P., Baur, D. G., & Lavagna-Slater, S. (2021) | Report | *The findings suggest that financial literacy reduces perceived Buy Now Pay Later benefits and that lower financial literacy is associated with more benefits and less risks. |
| **4** | Yoshino, N., P. J. Morgan, and T. Q. Long. 2020 | Article | *Higher financial literacy is positively associated with a higher likelihood of using fintech services.<br>*Those with greater financial literacy tend to use fintech services, especially electronic money, more frequently.<br>*The use of fintech services differs for people with different behavioural traits and greater financial literacy could encourage risk-averse persons to adopt fintech. |
| **5** | Nikolaos D. Philippas & Christos Avdoulas (2020) | Article | *Male students and students who keep a record of expenses or whose father is highly educated are more financially literate. |

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| | | | *Financially literate students are better able to cope with an unexpected financial shock.<br>*Financial literacy and low levels of financial fragility are key drivers of financial well-being among Greek university students. |
| **6** | Mudasih, I., & Subroto, W. T. (2021) | Article | *The increase in financial literacy is followed by an increase in entrepreneurial behaviour.<br>*Financial literacy, digital literacy, and entrepreneurial learning outcomes together have a significant effect on the entrepreneurial behaviour of students.<br>*This shows that the higher the financial literacy, digital literacy, and learning outcomes of entrepreneurship, the higher the entrepreneurial behaviour of students. |
| **7** | Duma, F., & Gligor, R. (2018) | Article | *Almost everybody who grew up in the internet era was doing online shopping or making online payments, with half of them doing this on a monthly basis.<br>*Students who are willing to use their bank card to do online shopping are very comfortable using debit or credit cards for online payments and are aware of the dangers brought by cybercrime. |
| **8** | Gomber, P., Koch, J. A., & Siering, M. (2017) | Article | *In a rapidly changing economic environment and in the light of challenging and cost-intensive regulatory requirements, incumbent providers of banking business and financial services are<br>facing a substantial transformation: Digital Finance. |

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| **9** | Gerrans, P., & Heaney, R. (2019) | Article | *Female students have lower levels of financial literacy, both objective and self-rated<br>*Parents' role in financial literacy is socialising agents. |
| **10** | Panos, G. A., & Wilson, J. O. (2020) | Report | *Financial literacy plays an important role in financial well-being, and differences in financial knowledge acquired early in life can explain a significant part of financial and more general well-being in adult life. |
| **11** | Agustiningsih, M. D., Savitrah, R. M., & Lestari, P. C. A. (2021) | Article | *Based on the hypothesis test, the Religiosity variable has a significant positive effect on interest in distributing donations (crowdfunding) using the Sharia fintech application. |
| **12** | Anthony, M., Sabri, M. F., Shazana, A., Magli, H. A. R., & Sufian, N. A. | Article | *The usage of fintech has been proven to have a causal positive relationship with financial health.<br>*97.4% of young adults are using fintech applications. |
| **13** | Ferdiana, A. M. K., & Darma, G. S. (2019) | Article | *Young people's understanding of fintech is still general in nature and is only limited to the meaning of words, as well as young people' understanding of a cashless society. |
| **14** | Sohn, S. H., Joo, S. H., Grable, J. E., Lee, S., & Kim, M. (2012) | Article | *The results of this study illustrate how the financial literacy of Korean high school students is significantly associated with media as a socialization agent, possession of a bank account, money attitudes, and monthly allowance levels.<br>*A professionally designed financial curriculum improved the financial knowledge and behaviour of high school students. |

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| | | | *Media and the Internet were used as sources to acquire financial information. |
| **15** | Aydin, A. E., & Selcuk, E. A. (2019) | Article | *Students with higher financial knowledge scores have more favourable financial attitudes and exhibit more desirable financial behaviours.<br>*Financial attitude is positively related to financial behaviour.<br>*Students with higher parental income had higher financial knowledge scores. |
| **16** | Mountain, T. P., Kim, N., Serido, J., & Shim, S. (2021) | Article | *Meeting with a financial advisor; reading personal finance books, magazines, and websites; having parents as financial role models; and gaining objective financial knowledge were all associated with positive financial behaviours.<br>*Financial knowledge played an important role in improving financial behaviours<br>*Classroom learning in college had no effect on financial behaviours. |
| **17** | Goyal, K., & Kumar, S. (2021) | Review | * Financial literacy is critically deficient amongst the young; only a few know about inflation, interest rates, and risk diversification.<br>* Young adults need financial education to make responsible financial decisions |
| **18** | Panos, G. A., Karkkainen, T., & Atkinson, A. (2020) | Article | *Financial literacy exerts a statistically significant negative impact on the probability of owning cryptocurrency.<br>*Financially literate individuals are also more likely to have no intention of owning Cryptocurrencies in the future. |
| **19** | Shim, S., Barber, B. L., Card, N. A., Xiao, J. J., & Serido, J. (2010) | Article | *Acquiring responsible financial behaviour is a key developmental task. |

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| **20** | Bayram, K., Olasubomi, S. S., & Thartori, V. (2021) | Article | *Generation Y are reported to be active users of fintech. At the same time, recent research documents that Millennials are prone to inadequate financial knowledge, an unsatisfactory current financial situation, and misuse of retirement accounts.<br>*The level of financial literacy is higher among post-graduate students and engineering students. |
| **21** | Afterpay. (2021) | Report | *BNPL spending is trending up across all generations; however, younger generations are leading the charge. |
| **22** | Albarrak, M. S., & Alokley, S. A. (2021) | Article | *A population with such a young age provides an appealing market of early technology adopters, due to the size of the population.<br>*The fintech industry will have a significant effect on the future financial system in Saudi Arabia.<br>*This study shows that fintech efforts have not yet contributed to a radical transformation of the Saudi financial market. |
| **23** | Grinstein-Weiss, M., Spader, J., Yeo, Y. H., Taylor, A., & Freeze, E. B. (2011) | Article | *Acquiring financial skills during childhood is linked with better savings in adulthood.<br>*The level of parental financial teaching influences the relationship between children's later educational attainment and credit scores. |
| | Gulamhuseinwala, I., Bull, T., & Lewis, S. (2015) | Report | *Early adopters of fintech tend to be young, high-income, high-value customers.<br>*Younger non-fintech users are also far more likely than older non-users to say they plan to give additional fintech products a try in the future. |

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| **24** | Lusardi, A. (2019) | Article | *Young people also struggle with debt, in particular with student loans.<br>*Young people are ideal targets for financial literacy programs. |
| **25** | Lusardi, A., Mitchell, O. S., & Curto, V. (2010) | Article | *From a 1997 database financial literacy is low among the young; fewer than one-third of young adults possess basic knowledge of interest rates, inflation, and risk diversification.<br>*Financial literacy is strongly related to sociodemographic characteristics and family financial sophistication. |
| **26** | Mottola, G. R. (2014). | Report | *Millennials are struggling financially.<br>* Females and minorities display signs of lower financial capability relative to males and whites, but it is millennial households with dependents that struggle the most. |
| **27** | Sinha, G., Tan, K., & Zhan, M. (2018) | Article | *The growing socioeconomic and market complexities require all young adults to make sound financial decisions, yet a large number of them lack the necessary skills and knowledge.<br>*Findings suggest that a deeper understanding of patterns of financial behaviours and attributes of emerging adults can help in designing appropriate need-based programs and increasing their program participation. |
| **28** | Statista. (2019) | Report | *As of 2019, a third of online users worldwide were aged between 25 and 34 years. Website visitors in this age bracket constituted the biggest group of online users worldwide. Also, 18 per cent of global online users were aged 18 to 24 years. |

# Findings

Although we did not find a large number of related studies, we were able to unravel some interesting findings from the limited number of papers gathered. Based on our analysis, several themes emerged that could possibly explain young people's FL and fintech adoption.

### The association between financial literacy and fintech

In general, a number of studies focused on how various types of financial learning activities affect young adults' financial knowledge and financial behaviour (Mountain et al., 2021; Shim, Barber, Card, Xiao, & Serido, 2010). Other studies aimed to investigate the level of young consumers' FL and financial responsibility by examining their attitudes and behavioural beliefs (Gerrans, Baur, & Lavagna-Slater, 2021; Mudasih & Subroto, 2021; Shim et al., 2010).

It was not surprising that studies reported that young people who are more conscientious of their financial decisions or are more financially literate tend to be more resilient in the face of unexpected financial shock (Philippas & Avdoulas, 2020). Similarly, it was also reported that the higher students' FL, digital literacy, and learning outcomes of entrepreneurship, the higher their entrepreneurial behaviour (Mudasih & Subroto, 2021).

Interestingly, there were studies suggesting the positive association between FL and the use of fintech services. For instance, Anthony et al. (2021) reported that the usage of fintech has been proven to have a causal positive relationship with users' financial health. Yoshino, Morgan, and Long (2020) also indicated that those with greater FL tend to use fintech services more frequently, especially electronic money and mobile payment apps. There is a positive association between FL and the awareness of almost all fintech products (Morgan & Trinh, 2020). It also appears that with more sophisticated financial knowledge, young users were more likely to avoid online financial dangers. For instance, Panos, Karkkainen, and Atkinson (2020) reported that FL exerts a statistically significant negative impact on the probability of owning cryptocurrency. Individuals who are more financially literate are less likely to have the intention to own cryptocurrencies in the future. An empirical study (French et al., 2020) showed that "using Apps for the treatment group translated into better financially capable behaviours; those receiving the apps were more likely to keep track of their income and expenditure and proved to be more resilient when faced with a financial shock." (p. 14).

## Young people's inclination to use fintech and the importance of designed programs

Almost everybody who grew up in the internet era was doing online shopping or making online payments. Therefore, media and the Internet are used as sources to acquire financial information (Duma & Gligor, 2018). Indeed, young fintech users are the technology developers (Agustiningsih et al., 2021).

While studies have consistently reported the positive association between FL and financial behaviour as well as fintech usage, a more concerning yet unsurprising phenomenon is that young people are reportedly active users of fintech (Bayram, Olasubomi & Thartori, 2021) and they are more likely to try out fintech products as compared to older non-fintech users (Gulamhuseinwala, Bull, & Lewis, 2015). The widespread adoption of fintech among young people does not necessarily indicate that they have sophisticated financial knowledge or knowledge of the use of fintech. Through a qualitative study, Ferdiana and Darma (2019) reported that young people's understanding of fintech is still general in nature and is only limited to the meaning of words, as is young people’s understanding of a cashless society. The researchers also reported that the participants had limited understanding of fintech. Goyal and Kumar (2021) also suggested that FL is critically deficient among young people as only a few know about interest rates, inflation, and risk diversification, and perhaps this is congruent with Lusardi’s (2019) statement that young people struggle with debt, in particular student loans, and these young people are ideal targets for FL programs.

Some studies have pointed out the importance of financial programs or curricula as, when children grow up to be adults, they do need to have sufficient knowledge of their financial life in order to achieve a healthy financial status. In Sinha, Tan, and Zhan’s (2018) research, the researchers suggested that a deeper understanding of patterns of financial behaviours and attributes of emerging adults can help in designing appropriate needs-based programs and increasing their program participation. A professionally designed financial curriculum improved the financial knowledge and behaviour of high school students (Sohn, Joo, Grable, Lee, & Kim, 2012). In addition, students with higher financial knowledge scores had more favourable financial attitudes and exhibited more desirable financial behaviours (Aydin & Selcuk, 2019).

## The critical role of parents and gender differences

Additionally, some studies identified that the influence of having parents as a financial role model was associated with positive behaviour (Aydin & Selcuk, 2019; Gerrans & Heaney, 2019; Mountain et al., 2021; Philippas & Avdoulas, 2020). Similarly, Nikolaos Philippas and

Avdoulas (2020) suggested that the more educated the fathers are, the more financially educated their children would be. It also seems that sociodemographic characteristics and family financial sophistication (Lusardi, Mitchell, & Curto, 2010) play an important role in young people's financial literacy. For instance, Aydin and Selcuk (2019) indicated that students with higher parental income had higher financial knowledge scores.

While some studies reported the influential factor of parents on young people's financial literacy, we also noted that a small number of studies suggested that there might be differences in terms of financial knowledge between young males and females. For instance, Nikolaos Philippas and Avdoulas (2020) indicated that male students and students who keep a record of their expenses or whose fathers are highly educated are more financially literate, while Gerrans and Heaney (2019) indicated that female students have lower levels of FL. Such findings resonated with OECD (2016) data in which it was reported that women are more likely than men to lack FL in less developed countries. At this stage, it is unclear to us whether gender difference is a significant predictor of young people' FL and fintech adoption regardless of their geographical locations.

## Research approaches

While we have identified themes that could possibly explain the association between FL and fintech adoption, we have also strived to identify the limitations and strengths of the related studies to inform future research. We found that some of the studies could be more comprehensive. For example, take the study conducted by Mudasih and Subroto (2021); the introduction of this study builds a logical case and context for the problem statement; the variables being investigated are clearly identified and presented; sampling procedures are sufficiently described; and data analysis procedures are sufficiently described to permit the study to be replicated. However, the researchers did not include the participants' financial background (welfare) as an effective factor. In another example, the literature review references in Yoshino et al.'s (2020) study are not up-to-date, as the most recent year included was 2017; this may limit the way the researchers built their research arguments. On the other hand, the research approaches in some studies seem to be more substantial. For instance, Gomber, Koch, and Siering (2017) highlighted three dimensions of fintech and digital finance in their study, ensuring a more comprehensive approach in their inquiry. Moreover, Anthony et al. (2021) wrote about diversity of the young adult population and used multi-stage sampling and comprehensive descriptive analysis. To substantiate their findings, Mountain et al. (2021) examined whether various types of financial learning activities affect young adults' objective financial knowledge and financial behaviour through three waves of longitudinal data collected from the same participants over 5 years.

## Recommendations and Conclusion

This report has included quantitative, qualitative, and mixed methods studies to identify related themes. Studies involving participants aged 17-24 years old were selected for analysis. This summary report has identified several themes such the association between financial literacy and the adoption of fintech, young people's inclination to use fintech and parents' role in financial literacy.


This report has included quantitative, qualitative, and mixed methods studies to identify related themes. Studies involving participants aged 17-24 years old were selected for analysis. This summary report has identified several themes such the association between financial literacy and the adoption of fintech, young people's inclination to use fintech and parents' role in financial literacy.

In this exploratory study, we have attempted to be as comprehensive as possible in terms of information seeking. However, our extensive search reveals that there is insufficient information in the literature regarding young people's fintech adoption. While the usage of fintech is widespread, studies have not been conducted systematically or fast enough to provide useful analysis for the understanding of young people's fintech adoption. Nevertheless, our initial findings may provide a glimpse of the current phenomenon of young people's fintech adoption. It is evident from the current literature that, while fintech adoption is widespread among young people, their level of financial literacy and fintech literacy are areas to be developed to ensure that they have the greatest chance of avoiding making poor financial decisions and of maximising the usage of fintech. We recommend a two-pronged approach that may foster young people's financial literacy in terms of fintech adoption. Such an approach requires researchers to invest more concerted research efforts to unravel the complexities of fintech adoption among young consumers, and carefully designed instruction could be simultaneously conducted for young consumers. In addition, we also recommend the study of the decision-making process of financial experts and their adoption of fintech as their valuable skills could be integrated into the design of instruction for young consumers. Nevertheless, it is of great importance to first understand how young people develop their financial literacy and its impact on their fintech adoption.

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