

Role of Financial Literacy in Indonesian International Exchange Students' Financial Management: Mediated by Financial Technology Adaptation

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Abstract

The low level of financial literacy in Indonesia has the potential to affect students' ability to manage their finances, particularly among participants of international student exchange programs who are exposed to different financial systems and payment technologies. This study aims to analyze the effect of financial literacy on financial management and to examine the mediating role of financial technology adaptation. The research employed a quantitative approach using a survey method involving Indonesian students who had participated in international student exchange programs. The sampling technique used was purposive sampling. Data were collected through questionnaires and analyzed using regression analysis and path analysis with the PROCESS Macro by Hayes in SPSS. The results indicate that financial technology adaptation significantly mediates the effect of financial literacy on financial management, as evidenced by an indirect effect value of 0.285 and a 95% bootstrap confidence interval ranging from 0.066 to 0.580, which does not include zero. These findings suggest that financial technology adaptation serves as a partial mediator, meaning that the effect of financial literacy on financial management occurs both directly and indirectly through financial technology adaptation.

Keywords: *Financial Literacy; Financial Management; Financial Technology Adaptation; International Exchange Program; Students*

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Introduction

Financial literacy has become one of the essential competencies that individuals must possess to navigate the complexities of modern economic life. Financial literacy refers to the enhancement of individuals' cognitive abilities and self-confidence to manage their finances effectively and securely in a dynamic economic environment (Septiani & Wuryani, 2026). Individuals with a high level of financial literacy tend to make sound financial decisions, thereby minimizing the risk of economic hardship (Santiara & Sinarwati, 2023). However, the level of financial literacy in Indonesia remains relatively low and unevenly distributed across different segments of society.

According to the 2025 National Survey on Financial Literacy and Financial Inclusion (Survei Nasional Literasi dan Inklusi Keuangan/SNLIK) conducted by the Indonesian Financial Services Authority (Otoritas Jasa Keuangan/OJK), the financial literacy index in Indonesia remains suboptimal at 66.46%. This figure

indicates a considerable gap compared to the financial inclusion rate, which has reached 80.51% under the sustainability method and 92.74% under the National Financial Inclusion Council (DNKI) coverage. This disparity suggests that public access to financial services has not been fully accompanied by adequate financial understanding. In fact, financial literacy is not merely a numerical indicator but rather a combination of awareness, knowledge, skills, attitudes, and behaviors required to make informed financial decisions and achieve financial well-being (Organization for Economic Co-operation and Development, 2020).

Given the gap between financial inclusion and financial literacy, university students, as an educated group and agents of change, play a crucial role in demonstrating more adaptive financial management capabilities. Financial literacy is particularly important for university students, as they are in a transitional phase toward financial independence (Serido et al., 2014). During this stage, students begin to face various financial decisions independently, such as managing allowances, preparing budgets, and prioritizing needs over wants. Without adequate financial understanding, these circumstances may lead to unhealthy financial behaviors, including excessive spending, poor saving habits, and dependence on external sources of funding (Jamaludin et al., 2023).

The need for financial literacy becomes even more complex when students are required to adapt to unfamiliar economic environments. Such adaptability is not only related to the management of financial resources but also to the ability to adjust to the continuously evolving financial system. Along with the rapid development of digital payment systems and financial technology (fintech), individuals are expected to understand, accept, and effectively utilize various financial technological innovations. This condition highlights that the ability to adapt to financial technology, or fintech adaptation, is an important factor in supporting better decision-making and financial management practices.

The importance of fintech adaptation becomes even more pronounced for students who have participated in international student exchange programs. During such programs, Indonesian students are exposed to different economic systems, living costs, consumption cultures, and payment methods, requiring them to adjust their financial behaviors quickly and appropriately (Khotimah et al., 2025). Some students may encounter difficulties in accessing or using specific digital payment services, which can affect their consumption patterns and financial management practices. On the other hand, the convenience of digital transactions may also encourage overspending behavior if not accompanied by proper financial control (Susilowati et al., 2025). Therefore, participation in international student exchange programs serves not only as a platform for academic and cultural development but also as a learning experience that fosters students' financial independence and resilience.

In line with these adaptation demands, financial management becomes a critical aspect of students' lives. Sound financial management is reflected in consistent financial planning, organizing, and controlling activities (Suwatno et al., 2019). In practice, students' financial management is demonstrated through their ability to plan for future financial needs (Yunita, 2020). The integration of strong financial literacy is expected to foster rapid adaptation capabilities and resilient financial management behaviors. Students who are able to apply sound financial management principles are more likely not only to achieve financial stability during their exchange programs but also to develop economic resilience in coping with fluctuations in global living costs.

Previous studies have examined the relationship between financial literacy and students' financial management. Evidence suggests that financial literacy has a significant influence on students' financial management behavior (Veriwati et al., 2021). Other studies have shown that financial literacy programs can improve students' understanding of personal financial management while simultaneously enhancing financial adaptability (Azakia et al., 2025). Furthermore, research conducted by (Kartini et al., 2025) found that financial literacy significantly encourages students to adopt fintech. However, these studies have primarily focused on financial management behavior within domestic contexts. Research integrating financial literacy, fintech adaptation, and financial management among students participating in international student exchange programs remains relatively limited. Therefore, this study offers novelty by not only examining the effect of financial literacy on financial management but also incorporating fintech adaptation as an important variable within the context of students who have participated in international exchange programs.

This study aims to analyze the effect of financial literacy on financial management and to examine the role of fintech adaptation as a mediating variable among Indonesian students with international student exchange experience. More specifically, this study seeks to investigate the extent to which financial literacy can enhance students' ability to adapt to fintech in responding to economic challenges in host countries. Furthermore, the study aims to determine whether successful adaptation can lead to healthy and resilient financial management behaviors, enabling students to maintain financial stability throughout their study period abroad.

Based on the foregoing discussion, this study seeks to address three research questions: (1) Does financial literacy influence the financial management of Indonesian students with international student exchange experience? (2) Does financial literacy influence the fintech adaptation of Indonesian students with international student exchange experience? and (3) Does fintech adaptation

mediate the relationship between financial literacy and the financial management of Indonesian students with international student exchange experience? Through this study, the findings are expected to provide a strategic foundation for higher education institutions and international mobility program organizers in designing more adaptive financial education programs to support students' financial readiness during academic activities abroad.

Literature Review

Theory of Planned Behavior

According to the Theory of Planned Behavior (TPB), individual behaviour is determined by intention, which is influenced by attitude, subjective norms, and perceived behavioural control (Ajzen, 1991), individual behavior is determined by intention, which is influenced by attitude, subjective norms, and perceived behavioral control. This theory emphasizes the rationality of human behavior, suggesting that individuals' actions are influenced by their belief that such behavior is under their conscious control. Based on this theory, individuals tend to consider the consequences of available information before deciding whether to engage in a particular action. Consequently, the resulting behavior is viewed as a manifestation of a planned cognitive process. In the context of financial management, attitudes toward the importance of managing finances and perceptions regarding one's ability to control financial activities influence financial decision-making. Therefore, the Theory of Planned Behavior has been widely used to explain financial behavior because it illustrates how individuals' beliefs and perceptions can affect financial decisions.

Technology Acceptance Model

The Technology Acceptance Model (TAM) was developed by (Davis et al., 1989) to explain individuals' acceptance and use of technology. The model proposes that an individual's decision to accept and use a technology is influenced by two primary factors: perceived usefulness and perceived ease of use. Perceived usefulness refers to the belief that using a technology can enhance performance or effectiveness in completing a task, whereas perceived ease of use refers to the degree to which an individual believes that using the technology requires minimal effort. In the context of financial technology, TAM explains that individuals are more likely to adopt fintech services when they perceive them as useful and easy to use. Therefore, this model has been widely employed to explain the acceptance of digital financial technologies and individuals' adaptation to various technology-based financial service innovations.

Financial Literacy

Financial literacy refers to the enhancement of individuals' cognitive abilities and self-confidence in managing finances effectively and securely amid economic dynamics (Septiani & Wuryani, 2026). (Adi et al., 2021) explain that

financial literacy is a fundamental skill that helps individuals plan and allocate financial resources appropriately to improve their quality of life. Financial literacy also influences an individual's financial condition and the quality of economic decision-making (Amelia, 2022). Indicators of financial literacy include a combination of knowledge, skills, confidence, attitudes, and behaviors necessary to achieve financial well-being (OJK, 2025).

Financial Technology Adaptation

Financial technology adaptation is a dynamic process that reflects an individual's ability to adjust to developments in digital financial technology and changes in modern transaction systems. This concept describes how individuals understand, accept, and utilize fintech services effectively and securely in their daily financial activities (Hanson & Ott, 2026). Three indicators are commonly used to measure fintech adaptation: perceived usefulness, perceived ease of use, and payment-related utilization (Kim et al., 2015). This adaptation process involves the conscious modification of attitudes and behaviors to cope with economic challenges arising from both personal factors and broader economic environmental dynamics.

Financial Management

Financial management refers to an individual's ability to manage financial resources, which is influenced by psychological factors and daily financial habits (Nurjanah et al., 2022). This behavior encompasses decision-making, planning, budgeting, controlling, and managing financial resources effectively in accordance with established financial goals (Dwitri & Pradikto, 2025). In practice, financial management is reflected in an individual's ability to spend money according to needs, pay obligations on time, plan for future financial needs, save money, and allocate funds for personal and family-related purposes (Yunita, 2020).

Hypotheses

The Effect of Financial Literacy on Financial Technology Adaptation

Financial literacy is a combination of awareness, knowledge, skills, attitudes, and behaviors required to make informed financial decisions that contribute to individual well-being. Financial literacy is considered a form of specialized human capital that enhances the efficient allocation of savings and the appropriate use of financial instruments to mitigate the effects of economic shocks. Meanwhile, financial technology adaptation refers to an individual's ability to understand, accept, and adjust to the use of digital financial technologies in daily financial activities. Studies conducted by (Murthi et al., 2023) and (Priyatna et al., 2024) indicate that financial literacy has a positive and significant relationship with the use and acceptance of fintech services among university students. Individuals with better financial knowledge tend to be more

prepared to cope with changes in digital transaction systems and are more capable of adapting to technology-based financial services. However, several studies have reported different findings. (Christanal, 2019) found that financial literacy did not significantly influence students' fintech usage and financial inclusion. Similarly, (Sholehah & Amaniyah, 2024) reported that financial literacy did not directly affect students' consumptive behavior, although fintech payment usage was included as an intervening variable. Based on these arguments, this study proposes that financial literacy influences financial technology adaptation. **H₁:** Financial literacy has a significant effect on financial technology adaptation.

The Effect of Financial Literacy on Financial Management

Financial literacy is one of the key factors influencing an individual's ability to manage finances effectively. Individuals with higher levels of financial literacy tend to demonstrate stronger capabilities in financial planning, expenditure management, and financial decision-making. Research conducted by (Yuwono et al., 2023) found that financial literacy positively affects personal financial management through improved financial planning and decision-making capabilities. This finding is consistent with the study by (Safitri & Huda, 2026), which revealed that financial literacy strengthens the influence of financial knowledge on financial management behavior, enabling individuals to manage their financial resources more wisely. Furthermore, (Rani, 2023) explained that higher levels of financial literacy encourage the development of responsible financial behavior and improve overall financial well-being. These findings suggest that students with a strong level of financial literacy are more likely to manage their finances effectively than those with lower levels of financial literacy. **H₂:** Financial literacy has a significant effect on financial management.

The Effect of Financial Literacy on Financial Management Mediated by Financial Technology Adaptation

Financial literacy not only influences financial management directly but may also enhance individuals' ability to utilize financial technology to support their financial activities. Research conducted by (Anugraini et al., 2023) demonstrated that fintech serves as a significant mediator in the relationship between financial literacy and financial management. This finding is supported by (Fauziyah et al., 2025), who found that the effect of financial literacy on financial management can be strengthened through the utilization of fintech. On the other hand, (Maharani & Rosdiana, 2026) found that although financial literacy significantly influences students' financial management, fintech usage does not have a significant effect on financial management. These inconsistent findings indicate that the mediating role of fintech in the relationship between financial literacy and financial management requires further investigation, particularly among Indonesian students with international student exchange

experience. **H₃**: Financial technology adaptation mediates the positive effect of financial literacy on financial management.

Based on the theoretical foundations, previous empirical findings, and the hypotheses developed in this study, a research model is proposed to illustrate the relationships among the variables under investigation. The model positions financial literacy as the independent variable influencing financial management as the dependent variable, both directly and indirectly through financial technology adaptation as the mediating variable. This framework is intended to explain the mechanism through which students' financial literacy enhances their ability to adapt to financial technologies, which subsequently contributes to improved financial management. The proposed research model is presented in

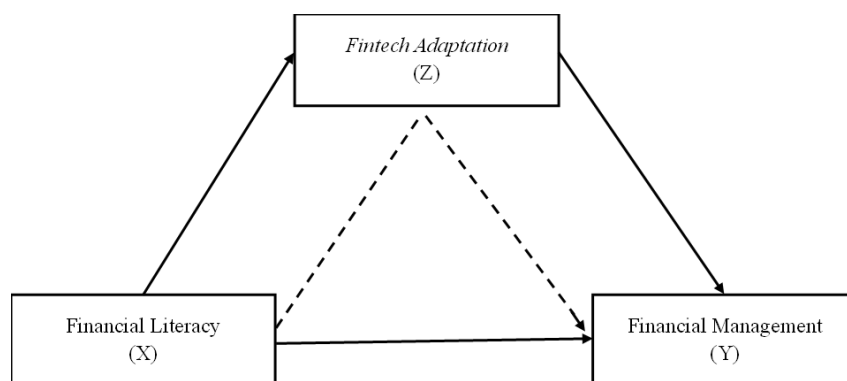


Figure 1 Framework

Remark:

———— : Direct effect
----- : Indirect effect

Methods

Time and Research Setting

This study was conducted among Indonesian students who had participated in international student exchange programs in various host countries. The selection of these respondents was based on the research focus, which examines students' financial management capabilities and their adaptation to financial technology during international academic mobility. Data were collected online through the distribution of questionnaires to respondents who met the established research criteria. The data collection process was conducted over a two-week period, from 9-22 May, 2026.

Research Design

This study employed a quantitative approach using a survey method. The research aimed to examine the causal relationships among variables through hypothesis testing. The variables investigated consisted of financial literacy as the

independent variable, financial management as the dependent variable, and financial technology adaptation as the mediating variable that links the effect of financial literacy to financial management. This study sought to explain both the direct and indirect effects among these variables among Indonesian students with experience in international student exchange programs.

Data Sources and Data Collection Technique

This study utilized primary data collected through a survey method by distributing structured questionnaires to Indonesian students who had participated in international student exchange programs. The sampling technique employed was purposive sampling, which involves selecting respondents based on specific criteria aligned with the research objectives (Subhaktiyasa, 2024). The respondent criteria were established to ensure that the selected sample could provide relevant information regarding the variables under investigation. The criteria for respondents in this study were as follows: (1) Indonesian citizens, (2) individuals who had participated in an international student exchange program, and (3) individuals who had used digital technology services during their participation in the exchange program. These criteria were established to ensure the relevance of the collected data to the research objectives.

The sample size was determined by considering the adequacy of observations required for path analysis. According to (Sarwono, 2011), path analysis requires a minimum sample size of 100 respondents to produce statistically significant and reliable results. The questionnaire was developed based on the indicators of each research variable. Variable measurement was conducted using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Table 1 Operationalization of Research Variables

Variable	Indicators	Source
Financial Literacy	1. Knowledge 2. Skills 3. Confidence 4. Attitude 5. Behavior	OJK, 2025
Financial Technology Adaptation	1. Perceived usefulness 2. Perceived ease of use 3. Payment	Kim et al. (2015)
Financial Management	1. Decision-Making 2. Financial Planning 3. Budgeting 4. Financial Control 5. Fund Management	Dwitri & Pradikto, 2025

In addition to primary data, this study also utilized secondary data obtained from various sources, including books, scholarly journals, research reports, policies, and publications relevant to the research topic.

Data Analysis Technique

The data were analyzed using path analysis with the assistance of SPSS Statistics software. This analytical technique was employed to examine the direct effect of financial literacy on financial management, the effect of financial literacy on financial technology adaptation, and the indirect effect of financial literacy on financial management through financial technology adaptation as a mediating variable. The mediation analysis was conducted through a series of procedures beginning with validity and reliability testing. Subsequently, mediation analysis was performed using Hayes' PROCESS Macro with a bootstrapping approach to assess both the direct and indirect effects among the variables. This method was selected because it provides a more robust assessment of mediation effects without relying on the assumption of normality and offers more accurate estimates of statistical significance.

Result and Discussion

This study involved Indonesian students who had participated in international student exchange programs. The characteristics of the respondents were classified into several categories. The respondent profile is presented in Table 2.

Table 2 Respondent Profile

Characteristics	Category	Frequency	Percentage
Age	18 Years	15	15%
	19 Years	21	21%
	20 Years	30	30%
	21 Years	13	13%
	22 Years	13	13%
	23 Years	8	8%
Gender	Female	68	68%
	Male	32	32%
Host Country	Malaysia	54	54%
	Germany	3	3%
	Japan	7	7%
	Thailand	12	12%
	Vietnam	7	7%
	Egypt	3	3%
	South Korea	6	6%
	China	8	8%

Source: Processed by the author, 2026

The respondent profile shows that the majority of the sample is dominated by students aged 20 years (30%). This indicates that most respondents are at a stage where they generally have gained university experience and have begun to face greater responsibilities in academic and financial decision-making independently. In terms of gender, the majority of respondents are female (68%).

This dominance suggests that female students' participation in international student exchange programs is relatively higher than that of male students within this research sample.

Based on host countries, respondents are distributed across various international destinations such as Malaysia, Thailand, China, and others. This indicates a variation in cross-country experiences. Such diversity reflects that respondents are exposed to different social environments and economic systems, providing a relevant context for examining the influence of financial literacy and financial technology adaptation on students' financial management in international settings.

Before distributing the questionnaire to all respondents, a pilot test of the research instrument was conducted with 30 initial respondents. This number was considered adequate for initial instrument testing because pilot studies for scale development commonly use a limited preliminary sample to evaluate item clarity, response patterns, and early measurement performance (Johanson & Brooks, 2009).

Descriptive Statistical Analysis

Descriptive statistics were used to provide a general overview of the research data prior to further analysis. This analysis includes the minimum value, maximum value, mean, and standard deviation of each research variable, namely financial literacy, financial technology adaptation, and financial management. The results are presented in Table 3.

Table 3 Descriptive Statistics

Variable	Minimum	Maximum	Mean	Std. Deviation
Financial Literacy	19	30	25.58	2.864
Financial Technology Adaptation	21	35	29.76	3.490
Financial Management	27	45	37.45	4.454

Source: SPSS 25 data processing, 2026

Based on **Table 3**, a general overview of respondents' financial literacy, financial technology adaptation, and financial management can be observed. Financial literacy has a mean value of 25.58 with a standard deviation of 2.86. The minimum score obtained is 19, while the maximum score is 30. The relatively high mean value, close to the maximum score, indicates that respondents' financial literacy tends to be in the good category. In addition, the relatively small standard deviation suggests that the variation in respondents' answers for this variable is relatively low or homogeneous.

Fintech adaptation has a mean value of 29.76 with a standard deviation of 3.49, with scores ranging from 21 to 35. These results indicate that respondents' level of fintech adaptation is relatively high. The relatively small standard

deviation compared to the mean indicates that the data distribution is fairly concentrated around the average value, suggesting a relatively uniform level of fintech adaptation among respondents.

Financial management shows a mean value of 37.45 with a standard deviation of 4.45, with a minimum score of 27 and a maximum score of 45. The mean value approaching the maximum score indicates that respondents tend to have good financial management abilities. However, this variable has the highest standard deviation among the three variables, indicating greater variation in financial management behavior among respondents.

Overall, the descriptive statistical results show that respondents have relatively high levels of financial literacy, financial technology adaptation, and financial management, with a moderate level of data dispersion. This indicates that most respondents already possess good financial understanding, are able to adapt to financial technology developments, and apply relatively effective financial management practices.

Validity and Reliability Analysis

Before further data analysis, the research instrument was tested to ensure the quality of the measurement tools used. Instrument testing included validity and reliability tests. A validity test was conducted to assess the extent to which each questionnaire item accurately represented the intended construct, while reliability testing was performed to evaluate the consistency of the measurement instrument. Validity and reliability assessment are essential stages in scale development because they ensure that questionnaire items adequately capture the construct and produce consistent measurement results (Boateng et al., 2018); (Taber, 2018).

Validity Analysis

Validity analysis was conducted to examine the extent to which each questionnaire item accurately measures the intended research variables. This test was performed using SPSS Statistics by calculating the Pearson correlation coefficient (r) between each item score and the total score of the corresponding variable. The obtained correlation values were then compared with the r_{table} value at a 5% significance level ($\alpha = 0.05$). With 30 respondents in the pilot test, the value was $r_{table} = r_{0.05,30} = 0.361$, which was used as the criterion for determining instrument validity. An item is considered valid if the calculated r_{value} is greater than the r_{table} value ($r_{value} > 0.361$). The results of the validity test for each item of financial literacy, financial technology adaptation, and financial management are presented in Table 4.

Table 4 Validity Test

Variable	Item	R _{value}	R _{table} (30, 5%)	Remark
Financial Literacy	X1	0.627	0.361	Valid
	X2	0.525	0.361	Valid
	X3	0.620	0.361	Valid
	X4	0.636	0.361	Valid
	X5	0.657	0.361	Valid
	X6	0.732	0.361	Valid
Financial Technology Adaptation	Z1	0.601	0.361	Valid
	Z2	0.719	0.361	Valid
	Z3	0.722	0.361	Valid
	Z4	0.651	0.361	Valid
	Z5	0.782	0.361	Valid
	Z6	0.775	0.361	Valid
	Z7	0.425	0.361	Valid
Financial Management	Y1	0.800	0.361	Valid
	Y2	0.647	0.361	Valid
	Y3	0.574	0.361	Valid
	Y4	0.422	0.361	Valid
	Y5	0.543	0.361	Valid
	Y6	0.580	0.361	Valid
	Y7	0.427	0.361	Valid
	Y8	0.455	0.361	Valid
	Y9	0.618	0.361	Valid

Source: SPSS 25 data processing, 2026

The results show that all questionnaire items across financial literacy, fintech adaptation, and financial management variables have values $r_{value} > r_{table}$. This indicates that all measurement items are valid and are able to properly represent the constructs being measured. Therefore, all items are considered suitable for use in the main data collection process.

Reliability Analysis

According to (Ghozali, 2021), the results of reliability analysis can be classified into five levels, namely:

- Low reliability: Cronbach's alpha value of less than 0.50;
- Moderate reliability: Cronbach's alpha value between 0.50 and 0.70;
- Sufficient reliability: Cronbach's alpha value greater than 0.70;
- Strong reliability: Cronbach's alpha value greater than 0.80;
- Excellent (perfect) reliability: Cronbach's alpha value greater than 0.90.

The reliability analysis results are presented in Table 5.

Table 5 Reliability Analysis Results

Variabel	Cronbach's alpha	N of Items
Financial Literacy (X)	0.683	6
Financial Technology Adaptation (Z)	0.779	7
Financial Management (Y)	0.697	9

Source: SPSS 25 data processing, 2026

The reliability test results indicate that all variables in this study exceed the minimum acceptable threshold of 0.50. Financial literacy (X) obtained a Cronbach's alpha value of 0.683 and financial management (Y) obtained 0.697, indicating a moderate level of reliability. Meanwhile, financial technology adaptation (Z) obtained a Cronbach's alpha value of 0.779, indicating sufficient reliability in measuring the construct under study. Therefore, all research instruments are considered reliable and suitable for further analysis.

Hypotheses Analysis

The Effect of Financial Literacy on Financial Technology Adaptation

The relationship between financial literacy and fintech adaptation was examined using regression analysis. This analysis aims to determine the direction and significance of the effect of financial literacy on financial technology adaptation. The results are presented in Table 6.

Table 6 Regression Analysis of Financial Literacy on Financial Technology Adaptation

Model	Coeff	Std. Error	t	Sig.
1 (Constant)	9.547	2.412	3.959	0.001
Financial Literacy	0.790	0.094	8.433	0.001

Source: SPSS 25 data processing, 2026

The results of the analysis above show that financial literacy has a significant effect on financial technology adaptation, as indicated by a significance value of 0.001, which is lower than 0.05. Based on the analysis, the regression equation is as follows:

$$Z = 9,547 + 0,790X$$

The equation shows that financial literacy has a positive relationship with fintech adaptation. The constant value of 9,547 indicates that when financial literacy is considered constant or equal to zero, fintech adaptation is estimated at 9,547. Meanwhile, the regression coefficient of financial literacy of 0,790 indicates that every one-unit increase in financial literacy will increase fintech adaptation by 0,790 units. The positive coefficient value indicates that the higher the level of financial literacy possessed by students, the better their ability in conducting fintech adaptation.

In addition, the t analysis results show that the value of $t_{\text{value}} > t_{\text{table}}$ ($8,443 > 1,984$) at a 5% significance level. This finding indicates that financial literacy has a significant effect on financial technology adaptation. Therefore, H_1 is accepted. The contribution of financial literacy in explaining the variation in

fintech adaptation can be observed through the coefficient of determination (R Square) presented in Table 7.

Table 7 Coefficient of Determination of Financial Literacy on Fintech Adaptation

Model	R	R Square	F	p-value
1	0.648 ^a	0.421	71.115	0.001

Source: SPSS 25 data processing, 2026

Based on Table 7, the coefficient of determination (R Square) is 0,421. This value indicates that the financial literacy variable is able to explain 42,1% of the variation in fintech adaptation, while the remaining 57,9% is explained by other factors outside the research model that are not analyzed in this study. These results indicate that financial literacy has a fairly large contribution in shaping the fintech adaptation ability of Indonesian students who have participated in international exchange programs.

The Effect of Financial Literacy and Financial Technology Adaptation on Financial Management

The analysis was conducted to determine the effect of financial literacy and fintech adaptation on financial management of Indonesian students who have participated in international exchange programs. This aims to identify whether an increase in the level of financial literacy and fintech adaptation can encourage better financial management. The results of the analysis are presented in Table 8.

Table 8 Regression Analysis of Financial Literacy on Financial Management

Model	B	Std. Error	t	Sig.
(Constant)	8.721	3.245	2.687	0.008
1 Financial Literacy	0.703	0.154	4.571	0.001
Financial Technology Adaptation	0.361	0.126	2.860	0.005

Source: SPSS 25 data processing, 2026

The results show that financial literacy and fintech adaptation have a significant effect on financial management. This is indicated by the significance values of financial literacy of 0,001 and fintech adaptation of 0,005, both of which are smaller than 0,05. Based on the analysis, the regression equation is as follows:

$$Y = 8,721 + 0,703X + 0,361Z$$

The equation shows that financial literacy and fintech adaptation have a positive effect on financial management. The constant value of 8,721 indicates that when financial literacy and fintech adaptation are considered constant, financial management is estimated at 8,721. The regression coefficient of financial literacy of 0,703 indicates that every one-unit increase in financial literacy will increase financial management by 0,703 units, assuming other variables are constant. Meanwhile, the regression coefficient of fintech adaptation of 0,361 indicates that every one-unit increase in fintech adaptation

will increase financial management by 0,361 units, assuming other variables are constant.

Based on the *t* analysis results, financial literacy has $t_{\text{value}} > t_{\text{table}}$ ($4,571 > 1,984$) with a 5% significance level. In addition, fintech adaptation also has $t_{\text{value}} > t_{\text{table}}$ ($2,860 > 1,984$) with a 5% significance level. These results show that financial literacy and fintech adaptation have a positive and significant effect on financial management. These findings indicate that the higher the level of financial literacy and financial technology adaptation possessed by students, the better the financial management they perform. Therefore, H_2 is accepted. The contribution of financial literacy and fintech adaptation in explaining the variation in financial management can be seen through the coefficient of determination (R Square) presented in Table 9.

Table 9 Coefficient of Determination

Model	R	R Square	F	p-value
1	0.671 ^a	0.450	39.724	0.001

Source: SPSS 25 data processing, 2026

Based on Table 9, the coefficient of determination (R Square) is 0,450. This value indicates that financial literacy and fintech adaptation together are able to explain 45% of the variation in financial management, while the remaining 55% is influenced by other factors outside the research model that are not analyzed in this study. The analysis results also show that financial literacy remains positively and significantly related to financial management even after fintech adaptation is included in the model. In addition, fintech adaptation is proven to have a positive and significant effect on financial management. These findings indicate the role of fintech adaptation in the relationship between financial literacy and financial management.

Financial Technology Adaptation Mediates the Positive Effect of Financial Literacy on Financial Management

Mediation analysis was conducted using the bootstrap method in the Hayes PROCESS macro to evaluate the significance of the indirect effect of financial literacy on financial management through fintech adaptation. The mediation effect is considered significant if the bootstrap confidence interval does not include zero. The mediation analysis results are presented in Table 10.

Table 10 Indirect Effect Analysis Results

Model	Effect	BootSE	BootLLCI	BootULCI
Financial Technology Adaptation	0.285	0.131	0.066	0.580

Source: SPSS 25 data processing, 2026

Based on Table 10, the indirect effect value is 0,285 with BootSE of 0,131. The bootstrap results show that the lower confidence interval limit (BootLLCI = 0,066) and the upper limit (BootULCI = 0,580). The confidence interval does not include

zero ($\text{BootLLCI} - \text{BootULCI} > 0$), therefore the indirect effect of financial literacy on financial management through fintech adaptation is statistically significant. The relationship between variables in this mediation model is further illustrated through the direct and indirect effect paths shown in the following diagram.

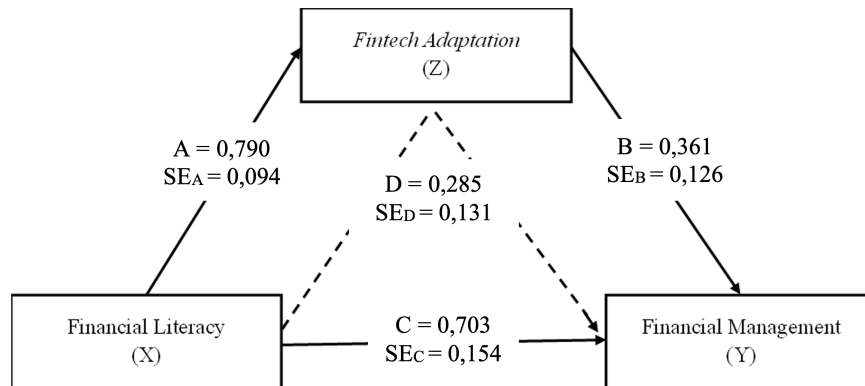


Figure 2 Mediation Path Diagram

The diagram above shows three relationship paths, namely path A (the effect of financial literacy on fintech adaptation) of 0,790 with SE 0,094, path B (the effect of fintech adaptation on financial management) of 0,361 with SE 0,126, and path C (the direct effect of financial literacy on financial management) of 0,703 with SE 0,154. Meanwhile, path D of 0,285 with SE 0,131 represents the indirect effect value as presented in Table 10.

The analysis results show that the direct effect of financial literacy on financial management remains significant after fintech adaptation is included in the model. This condition indicates that fintech adaptation acts as a partial mediator. This means that the effect of financial literacy on financial management occurs both directly and indirectly through fintech adaptation. Therefore, H_3 is accepted.

These findings indicate that the effect of financial literacy on financial management does not only occur directly but also through individuals' ability to adapt to financial technology. The higher the level of financial literacy possessed by students, the better their ability to understand, adopt, and utilize fintech services. This improvement in adaptation ability ultimately contributes to more effective financial management.

Discussion

The Effect of Financial Literacy on Financial Technology Adaptation

The results show that financial literacy has a positive and significant effect on fintech adaptation ($\beta = 0,790$; $t = 8,433$; $p < 0,05$). The coefficient of determination of 0,421 indicates that financial literacy explains 42,1% of the variation in fintech adaptation. These findings support H_1 and are consistent with the Technology

Acceptance Model (Davis et al., 1989), which states that perceived usefulness and perceived ease of use are the main determinants of technology acceptance.

Students with high financial literacy have a deeper understanding of the concepts and benefits of digital financial services. This understanding enables them to evaluate the usefulness of fintech more accurately and reduces perceived complexity in its use. In the context of international student exchange programs, students are exposed to different digital payment systems in host countries, such as local e-wallets, QR payments, or mobile banking with cross-currency features. Adequate financial literacy equips students with cognitive ability to understand currency conversion mechanisms, international transaction fees, and digital security risks, so that the adaptation process to new fintech ecosystems becomes more efficient.

These findings are consistent with (Murti et al., 2023) and (Priyatna et al., 2024), which show that financial literacy has a positive relationship with fintech adoption among students. However, these results differ from Veronica (2019) and (Sholehah & Amaniyah, 2024), which found no significant effect of financial literacy on fintech use. This difference can be explained by sample characteristics. Students participating in international exchange programs have higher financial technology adaptation needs compared to domestic students because they manage cross-border transactions and use unfamiliar payment platforms.

The Effect of Financial Literacy and Fintech Adaptation on Financial Management

The analysis results show that financial literacy has a positive and significant effect on financial management ($\beta = 0,703$; $t = 4,571$; $p < 0,01$). Similarly, fintech adaptation has a positive effect on financial management ($\beta = 0,361$; $t = 2,860$; $p < 0,05$). Together, both variables explain 45% of the variation in financial management ($R \text{ square} = 0,450$). These findings support H2, therefore H2 is accepted.

These results are consistent with the Theory of Planned Behavior (Ajzen, 1991), which emphasizes that individual behavior, including financial management, is influenced by attitudes, subjective norms, and perceived behavioral control. Students with high financial literacy have a more positive attitude toward financial planning and stronger confidence in their ability to control financial activities. This confidence encourages more disciplined financial management behavior, including budgeting, expense control, and rational financial decision-making.

For international exchange students, financial management challenges are more complex. They face differences in living costs, exchange rate fluctuations,

and consumption habits in host countries. Financial literacy equips students with the ability to estimate financial needs realistically, anticipate unexpected expenses, and prioritize limited resource allocation. Without adequate financial understanding, students are vulnerable to financial difficulties that may disrupt academic focus during the program.

These findings are consistent with (Yuwono et al., 2023), (Safitri & Huda, 2026), and (Rani, 2023), which show a positive effect of financial literacy on financial management behavior. (Veriwati et al., 2021) also found that financial literacy significantly affects students' financial management behavior. This consistency confirms that financial literacy is a strong predictor of financial management, both in domestic and international contexts.

Financial Technology Adaptation Mediates the Positive Effect of Financial Literacy on Financial Management

The mediation analysis using the bootstrap method in PROCESS Hayes shows that fintech adaptation significantly mediates the relationship between financial literacy and financial management (indirect effect = 0,285; BootLLCI = 0,066; BootULCI = 0,580). Since the confidence interval does not include zero, the indirect effect is statistically significant. This confirms the significance of mediation. The direct effect of financial literacy on financial management remains significant after fintech adaptation is included in the model, indicating that fintech adaptation acts as a partial mediator. These findings support H3, therefore H3 is accepted.

Fintech adaptation functions as a mechanistic bridge that transforms financial knowledge into effective financial management behavior. Financial literacy provides a cognitive foundation in the form of conceptual understanding, calculation skills, and risk awareness. However, this knowledge requires operational instruments to be implemented in daily financial practices. Fintech provides these instruments through expense tracking features, bill reminders, automatic transaction categorization, and cash flow visualization, which enable students to monitor and control their financial condition in real time.

For students in an international environment, fintech adaptation has particular significance. Fintech services allow them to transfer funds across countries at lower costs, convert currencies instantly, pay local bills without a host-country bank account, and access transaction history for reporting or budgeting purposes. Students who are able to adapt to the fintech ecosystem in the host country have greater financial control compared to those still relying on conventional payment methods.

These findings are consistent with (Anugraini et al., 2023) and (Fauziyah et al., 2025), which demonstrate the mediating role of fintech in the relationship

between financial literacy and financial management. These results confirm that financial knowledge does not automatically lead to optimal financial management without the support of technological adaptation. Fintech adaptation acts as a bridge that facilitates the implementation of financial theory into daily practice.

Conclusion and Recommendations

This study aims to analyze the effect of financial literacy on the financial management of international exchange students, with fintech adaptation as a mediating variable. The results show that financial literacy has a significant effect on financial management, both directly and through the mediation of fintech adaptation. In practical terms, these findings explain that theoretical knowledge alone is not sufficient. Students require financial technology adaptation skills as a crucial bridge. Fintech tools enable students to conduct real-time financial management to maintain life stability in the host country. The limitations of this study include a relatively small sample size and the diversity of destination country conditions. Future research is recommended to expand the sample and apply Structural Equation Modeling–Partial Least Square (SEM-PLS) to obtain a more comprehensive model analysis.

The results of this study provide practical implications for three main stakeholders:

1. Universities are expected to integrate financial literacy education and international budgeting simulation into mobility preparation curricula, including digital payment systems and exchange rate risk management materials.
2. Program organizers should include financial readiness as part of participant assessment and provide guidance on local fintech ecosystems as well as continuous mentoring to support students' technological adaptation.
3. Students are encouraged to proactively improve financial literacy and familiarize themselves with fintech services before departure, as financial independence is crucial for their well-being and academic success in foreign environments.

Generative AI Use Statement

Generative AI is used only to improve the language, clarity, and readability of manuscripts. This AI is not used to collect or modify data from respondents, perform statistical analysis, test hypotheses, or define research results. All statistical results, interpretations, references, and conclusions are independently reviewed and analyzed by the authors.

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