Financial Self-Efficacy as a Mediator of Literacy and Financial Management in College Students

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Abstract

The rapid development of digital financial services has changed how people manage their money, especially among university students. In Indonesia, electronic money transactions reached IDR 2,503.96 trillion and QRIS users grew to 49.76 million. However, a pre-survey among Management students at Universitas Dian Nuswantoro found that 67.3% did not track their spending, 54.5% had no monthly budget, and 43.6% did not understand how to use digital financial services responsibly. This study aims to analyze the role of financial self-efficacy as a mediator between financial literacy, digital financial literacy, and financial management behavior. A quantitative approach was used with 156 students selected through purposive sampling. Data were collected using a Likert-scale questionnaire and analyzed with multiple linear regression, path analysis, and the Sobel test using IBM SPSS 31. The results show that financial literacy has a positive and significant effect on both financial management ($\beta = 0.359$, $p < 0.001$) and financial self-efficacy ($\beta = 0.238$, $p < 0.001$). Digital financial literacy also positively and significantly affects financial management ($\beta = 0.141$, $p = 0.040$) and financial self-efficacy ($\beta = 0.414$, $p < 0.001$). Financial self-efficacy significantly predicts financial management behavior ($\beta = 0.298$, $p < 0.001$). The Sobel test confirms that financial self-efficacy mediates the effect of financial literacy on financial management ($Z = 2.40$) and the effect of digital financial literacy on financial management ($Z = 3.25$). The model explains 53.1% of the variance in financial management behavior. These findings extend the application of Social Cognitive Theory by demonstrating that financial self-efficacy serves as the psychological mechanism through which financial literacy and digital financial literacy are translated into responsible financial management behavior.

Keywords: financial literacy, digital financial literacy, financial self-efficacy, financial management, Generation Z.

Introduction

The rapid advancement of the Fourth Industrial Revolution has accelerated digital transformation across various sectors, including financial services. Innovations such as mobile banking, electronic wallets (e-wallets), the Quick Response Code Indonesian Standard (QRIS), and other digital financial applications have significantly enhanced transaction convenience while reshaping individuals' financial behavior, particularly among younger generations. In Indonesia, the adoption of digital financial services has continued to increase alongside the growing number of internet users and widespread smartphone penetration (Hermawan & Septiani, 2024). According to Bank Indonesia (2024), the value of electronic money transactions increased by 34.62%, reaching IDR 2,503.96 trillion, while the number of QRIS users reached 49.76 million. These figures demonstrate that digital financial services have become an integral component of everyday financial activities.

Along with the rapid expansion of digital financial services, individuals' ability to understand and effectively manage their personal finances has become increasingly important. According to the 2025 National Survey of Financial Literacy and Inclusion (SNLIK) conducted by the Financial Services Authority (OJK) and the Central Statistics Agency (BPS), Indonesia's national financial literacy index reached 66.46%, while the literacy rate among individuals aged 18–25 years was 73.22%. Although these figures indicate an improvement compared with previous years, they also suggest that a considerable proportion of the population still lacks adequate financial literacy. In an increasingly digitalized financial environment, financial literacy is not limited to an understanding of general financial concepts and products but also involves the ability to understand and appropriately use digital financial services.

College students, who predominantly belong to the 18–25-year age group, represent one of the most active users of digital financial services. During this stage of life, students begin to assume greater responsibility for managing their personal finances, whether derived from parental allowances, scholarships, or additional sources of income. The use of mobile banking, e-wallets, QRIS, and other digital financial applications has become part of students' everyday financial activities, including payments, transfers, and other transactions. However, increased accessibility to digital financial services is not always accompanied by adequate financial management skills. Consequently, students may become more vulnerable to consumerism, impulsive spending, and inadequate saving and long-term financial planning. Therefore, students' ability to manage their finances in the digital era depends not only on their financial knowledge but also on their ability to understand and utilize digital financial services appropriately.

Furthermore, the rapid development of financial technology has highlighted the importance of digital financial literacy, defined as the ability to understand, evaluate, and effectively utilize digital financial services. The widespread use of e-wallets, buy now, pay later (BNPL) services, and other digital payment platforms has improved transaction efficiency; however, these innovations may also encourage impulsive or compulsive spending when users lack sufficient financial knowledge and awareness (Susilowati, Alnandhifah, Fitriana, Mahardika, & Saputra, 2025). Thus, digital financial literacy represents an important aspect of students' ability to make appropriate financial decisions and manage their finances responsibly. Therefore, both financial literacy and digital financial literacy are considered essential determinants of sound financial management behavior (Artha & Wibowo, 2023; Kanungo, 2026).

In addition to knowledge-related factors, psychological factors, particularly financial self-efficacy, are also considered important in shaping financial management behavior. Financial self-efficacy refers to an individual's confidence in their ability to manage financial resources and make appropriate financial decisions. Individuals with higher levels of financial self-efficacy are generally more confident in managing their finances, better able to control their spending, and more consistent in achieving their financial goals (Ahamed & Limbu, 2025). Consequently, financial self-efficacy is expected to mediate the relationship between financial literacy and financial management behavior.

The findings of a preliminary survey conducted among Management students at Dian Nuswantoro University revealed that the majority of respondents still experience difficulties in managing their personal finances. Approximately 67.3% of respondents reported that they did not maintain financial records, 54.5% did not prepare a financial budget, and 43.6% lacked sufficient understanding of the responsible use of digital financial services. Furthermore, several students reported low confidence in managing their finances independently. These findings suggest that financial management challenges among students are influenced not only by insufficient financial knowledge but also by limited confidence in their financial management abilities.

Previous studies have consistently demonstrated that financial literacy and digital financial literacy positively influence financial management behavior (Wahyuni et al., 2023; Ali et al., 2024), while financial self-efficacy has been identified as an important psychological factor affecting financial decision-making and behavior (Rahayu et al., 2023). However, existing studies have generally examined these relationships separately or have focused on financial self-efficacy as a mediator only between financial literacy and financial management (e.g., Arvita & Mardiana, 2026). As digital financial services become increasingly integrated into students' daily lives, financial management is likely to depend not only on conventional financial knowledge but also on the ability to understand and utilize digital financial services effectively. Nevertheless, limited empirical evidence explains whether financial self-efficacy functions as a common psychological mechanism through which both financial literacy and digital financial literacy influence financial management simultaneously.

Therefore, this study extends previous research by integrating financial literacy and digital financial literacy into a single mediation framework grounded in Social Cognitive Theory. Rather than examining the independent effects of each literacy construct, this study investigates how financial self-efficacy translates both conventional and digital financial competencies into responsible financial management behavior among university students. This integrated perspective is expected to provide a more comprehensive understanding of financial management behavior in today's increasingly digital financial environment.

Based on these considerations, this study aims to examine the mediating role of financial self-efficacy in the relationships between financial literacy, digital financial literacy, and the financial management behavior of Management students at Dian Nuswantoro University.

Literature Review

Social Cognitive Theory posits that individual behavior is shaped through the dynamic interaction of personal, behavioral, and environmental factors. The theory emphasizes that individuals are not merely influenced by their environment but also possess the capacity to regulate and control their own behavior through cognitive processes (Kanth & Sinha, 2026).

Within the context of financial behavior, Social Cognitive Theory suggests that financial management is determined not only by an individual's knowledge, including financial literacy and digital financial literacy, but also by psychological factors such as financial self-efficacy. Individuals with greater confidence in their financial capabilities are more likely to translate their knowledge into effective financial management practices (Kanth & Sinha, 2026).

Self-efficacy represents one of the core constructs of Social Cognitive Theory and refers to an individual's belief in their ability to successfully perform specific tasks or behaviors. In the present study, financial self-efficacy is proposed as a mediating variable that explains the relationship between financial literacy, digital financial literacy, and financial management behavior. This perspective suggests that financial knowledge alone may not directly lead to effective financial management; rather, its influence is strengthened through an individual's confidence in their ability to manage financial matters effectively (Ihzani, 2023).

Accordingly, Social Cognitive Theory provides the theoretical foundation for explaining how cognitive resources (financial literacy and digital financial literacy) influence financial management behavior through psychological beliefs, namely financial self-efficacy. In this study, financial self-efficacy is conceptualized as the underlying psychological mechanism that transforms financial knowledge into responsible financial behavior. By integrating both conventional and digital financial literacy within a single mediation framework, this study extends the application of Social Cognitive Theory to the contemporary digital financial context experienced by university students.

Financial self-efficacy refers to an individual's belief in their ability to effectively manage financial resources and make appropriate financial decisions. This construct reflects an individual's confidence in performing various financial management activities, including budgeting, controlling expenditures, saving, and managing personal finances to achieve long-term financial goals.

Individuals with higher levels of financial self-efficacy are generally more capable of regulating their financial behavior, making rational financial decisions, and avoiding unnecessary or excessive spending. In contrast, individuals with lower financial self-efficacy often experience greater uncertainty and reduced confidence in managing their finances, which may result in less effective financial management practices. Previous studies have consistently identified financial self-efficacy as an important psychological factor influencing financial management behavior. In addition, financial self-efficacy has been recognized as a potential mediating variable in the relationship between financial literacy and financial management behavior. Accordingly, individuals with stronger confidence in their financial capabilities are more likely to demonstrate better financial management practices.

Table 1. Indicators of Financial Self-Efficacy Variable

No.	Indicator
1.	Adhering to a spending plan despite unexpected expenses
2.	Making progress toward financial goals
3.	Avoiding the use of credit cards when unexpected expenses arise
4.	Overcoming financial obstacles and challenges
5.	Saving and investing for future financial needs

Source: Dare et al, 2022

Table 1 presents the indicators used to measure the financial self-efficacy variable in this study. Financial self-efficacy was assessed using five indicators: (1) adhering to a spending plan despite unexpected expenses; (2) making progress toward financial goals; (3) avoiding the use of credit cards when

unexpected expenses arise; (4) overcoming financial obstacles and challenges; and (5) saving and investing for future financial needs. These indicators were adapted from Dare et al. (2022) and were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).
Financial literacy refers to an individual's ability to understand and effectively manage personal financial resources (Artha, 2023). According to Arianti (2021), financial literacy encompasses a broad understanding of financial concepts, including savings, investments, debt, insurance, and other financial instruments. Therefore, financial literacy extends beyond financial knowledge alone, as it also involves the ability to apply such knowledge in managing personal finances to achieve long-term financial well-being.
Financial literacy is widely recognized as a key determinant of effective financial management. Individuals with higher levels of financial literacy are generally better equipped to make informed financial decisions and manage their financial resources responsibly (Hermawan & Septiani, 2024). Similarly, Rahma and Susanti (2022) argue that financial literacy constitutes an essential life skill that enables individuals to minimize financial risks and avoid potential financial difficulties.

Furthermore, Sumarno (2023) defines financial literacy as a combination of knowledge and skills that enables individuals to make informed decisions regarding the management of their financial resources. This perspective is consistent with that of Korankye, Pandey, and Ahmmed (2026), who describe financial literacy as the competencies, knowledge, and capabilities that empower individuals to make appropriate financial decisions and take effective actions to achieve their financial objectives.

Table 2. Indicators of Financial Literacy Variable

No.	Indicator
1.	Financial knowledge
2.	Savings and loans
3.	Investment
4.	Insurance

Source: Sitorus, 2022

Table 2 presents the indicators used to measure financial literacy in this study. The financial literacy variable was assessed using four indicators: general financial knowledge, savings and loans, investments, and insurance. The general financial knowledge indicator comprised 12 statement items, while the savings and loans, investment, and insurance indicators consisted of 4, 5, and 5 statement items, respectively. All items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), resulting in a total of 26 items used to assess financial literacy.

Digital financial literacy (DFL) refers to the integration of financial literacy and the ability to effectively utilize digital technologies in financial activities. It encompasses individuals' knowledge and understanding of digital financial products and services, including mobile banking, digital wallets, and other technology-based financial platforms (Rahayu, 2022).

Conceptually, digital financial literacy has evolved into a multidimensional construct that integrates financial literacy, financial capability, and digital literacy. In addition to possessing fundamental financial knowledge—such as an understanding of interest rates, inflation, and investment diversification—individuals are also expected to have the digital competencies required to access, evaluate, and manage digital financial services effectively. Consequently, digital financial literacy encompasses cognitive, technical, and behavioral competencies that support financial decision-making in the digital era (Jiang, Chen, & Xiao, 2026).

The digital financial literacy framework comprises several key dimensions, including knowledge of digital financial services, awareness of digital financial risks, the ability to manage digital financial risks, and an understanding of consumer rights and protection in digital financial transactions (Zhou, Li, Abbasi, & Ahmad, 2026). Similarly, Kanungo (2026) emphasizes that individuals with higher levels of digital financial literacy are not only capable of using digital financial applications but also understand the financial implications and potential consequences of their digital financial decisions.

Digital financial literacy is also closely associated with financial behavior and financial management. The adoption of digital financial technologies has expanded financial inclusion by reducing transaction costs, improving access to financial information, and increasing the efficiency of financial transactions and financial management. As digital financial services become increasingly integrated into everyday financial activities, digital financial literacy has emerged as a critical factor in promoting responsible financial behavior and effective financial management (Zhou, Li, Abbasi, & Ahmad, 2026).

Table 3. Indicators of Digital Financial Literacy Variable

No.	Indicator
1.	Financial Knowledge
2.	Digital Knowledge
3.	Awareness of digital financial services (DFS)
4.	Practical know-how of DFS
5.	Decision-making

Source: Lyons & Kass-Hanna, 2021

Table 3 presents the indicators used to measure digital financial literacy in this study. The variable was assessed using five indicators: financial knowledge, digital knowledge, awareness of digital financial services (DFS), practical know-how of DFS, and decision-making. These indicators comprised a total of 13 questionnaire items used to assess respondents' level of digital financial literacy. All items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Personal financial management refers to an individual's ability to effectively plan, organize, utilize, and monitor financial resources in order to achieve both short-term and long-term financial goals. Beyond the management of financial resources, it also involves making informed, rational, and responsible financial decisions. Conceptually, Personal Financial Management Behavior (PFMB) encompasses a range of financial activities, including budgeting, saving, investing, debt management, financial protection through insurance, and long-term financial planning (Sharma, Kumar, & Sood, 2026). This concept is closely related to Financial Management Behavior (FMB), which describes how individuals plan, manage, and make decisions regarding their financial resources, including budgeting, debt management, savings, and investment decisions (Ahamed & Limbu, 2025).

Personal financial management is widely regarded as both an art and a science of managing financial resources effectively. An individual's financial well-being is largely influenced by their ability to allocate and utilize financial resources responsibly. Conversely, poor financial management may create an imbalance between income and expenditure, potentially leading to financial difficulties (Hidajat & Wardhana, 2023).
Within the context of higher education, financial management refers to students' ability to manage their financial resources effectively by controlling expenditures, prioritizing financial needs, and allocating funds for future purposes through saving and investment. Students who demonstrate sound financial management practices are generally better able to prioritize essential needs, regulate spending behavior, and maintain financial stability (Rabbani, Tubastuvi, Rahmawati, & Widyaningtyas, 2024).

From an empirical perspective, financial management behavior reflects an individual's responsibility to acquire, allocate, utilize, and evaluate financial resources appropriately. It is also closely associated with money management behavior, which refers to the ability to manage income, expenditures, credit, savings, and investments in a manner that supports long-term financial well-being (Putri & Andarini, 2022).

Table 4. Indicators of Financial Management Variable

No.	Indicator
1.	Consumption
2.	Cash flow management
3.	Savings and investment
4.	Credit management

Source: Brilianti & Lutfi, 2020
Table 4 presents the indicators used to measure the financial management variable in this study. Financial management was assessed using four indicators: consumption, cash flow management, savings and investment, and credit management. These indicators were adopted from Brilianti and Lutfi

(2020), who conceptualized financial management as a multidimensional construct encompassing various aspects of individual financial behavior. All questionnaire items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Hypothesis Development

Financial literacy reflects an individual's ability to understand financial concepts and apply financial knowledge in making informed financial decisions. Individuals with higher levels of financial literacy are more likely to possess greater confidence in managing their financial resources, as adequate financial knowledge enhances their perceived ability to make appropriate financial decisions. Accordingly, the following hypothesis is proposed:
H1: Financial literacy has a positive effect on financial self-efficacy.

Digital financial literacy enables individuals to understand, evaluate, and effectively utilize digital financial products and services. Greater competence in using digital financial technologies is expected to strengthen individuals' confidence in making financial decisions and managing digital financial transactions. Therefore, the following hypothesis is proposed:
H2: Digital financial literacy has a positive effect on financial self-efficacy.

Financial literacy provides individuals with the knowledge and skills necessary to manage financial resources effectively. Individuals with higher levels of financial literacy are generally better equipped to make informed financial decisions, regulate expenditures, develop saving habits, and plan their finances more efficiently. Based on this rationale, the following hypothesis is proposed:
H3: Financial literacy has a positive effect on financial management.

Digital financial literacy facilitates individuals' ability to access financial information, evaluate digital financial products, and utilize financial technologies effectively. As a result, individuals with higher levels of digital financial literacy are expected to demonstrate more effective financial management behavior. Accordingly, the following hypothesis is proposed:
H4: Digital financial literacy has a positive effect on financial management.

Financial self-efficacy reflects an individual's confidence in their ability to manage financial resources and make sound financial decisions. Individuals with stronger financial self-efficacy are generally more confident in regulating their financial behavior, controlling expenditures, and achieving their financial goals. Consequently, the following hypothesis is proposed:
H5: Financial self-efficacy has a positive effect on financial management.

Financial literacy is expected to enhance financial self-efficacy by increasing individuals' confidence in their ability to manage financial resources effectively. Greater financial self-efficacy, in turn, is likely to encourage more responsible financial management behavior. Therefore, financial self-efficacy is expected to mediate the relationship between financial literacy and financial management. Accordingly, the following hypothesis is proposed:
H6: Financial self-efficacy mediates the relationship between financial literacy and financial management.

Digital financial literacy is expected to strengthen individuals' confidence in utilizing digital financial products and services effectively. This increased confidence may subsequently encourage more responsible financial management behavior. Therefore, financial self-efficacy is proposed to mediate the relationship between digital financial literacy and financial management. Accordingly, the following hypothesis is proposed:
H7: Financial self-efficacy mediates the relationship between digital financial literacy and financial management.

Figure 1 presents the conceptual framework of the study, illustrating the proposed relationships among financial literacy, digital financial literacy, financial self-efficacy, and financial management. In this framework, financial literacy (X1) and digital financial literacy (X2) are specified as the independent variables, financial self-efficacy (Z) functions as the mediating variable, and financial management (Y) represents the dependent variable. The framework proposes that financial literacy and digital financial literacy exert both direct effects on financial self-efficacy and financial management, as well as indirect effects on financial management through the mediating role of financial self-efficacy.

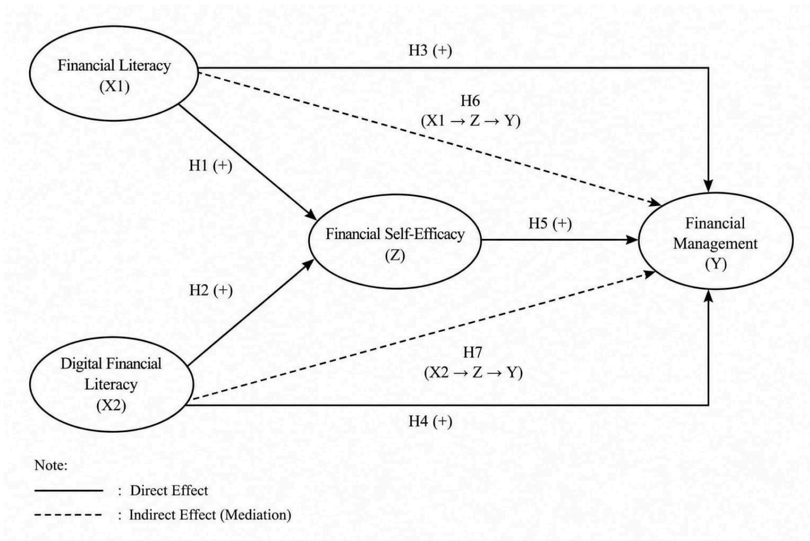

Figure 1. Research Conceptual Framework

Method

This study employed a quantitative approach using a causal associative research design to examine the relationships among the study variables and to investigate the mediating role of financial self-efficacy in the relationships between financial literacy, digital financial literacy, and financial management.
The study population comprised undergraduate students enrolled in the Management Study Program at Dian Nuswantoro University. Participants were recruited through purposive sampling based on predefined eligibility criteria. Specifically, eligible participants were active students in semesters 4 to 8 who had completed the Financial Management course and had either previously used or were currently using digital financial applications or services. These criteria were established to ensure that participants had relevant academic knowledge of financial management and direct experience with digital financial services. A total of 156 students who met the eligibility criteria participated in the study.

Primary data were collected through a self-administered questionnaire distributed to the respondents. The measurement items were developed based on indicators derived from established literature and were adapted to the objectives and context of the present study. Accordingly, the study focused on testing the structural relationships among the constructs using theoretically grounded measurement indicators. The measurement items using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The variables examined in this study included financial literacy, digital financial literacy, financial self-efficacy, and financial management.

Data analysis was performed using IBM SPSS Statistics version 31. The analytical procedures consisted of two stages: descriptive analysis and inferential analysis. Descriptive analysis was conducted to summarize respondents' characteristics and provide an overview of the distribution of each research variable, including financial literacy, digital financial literacy, financial self-efficacy, and financial management.

Inferential analysis was subsequently performed to test the proposed hypotheses. The relationships among the study variables were examined using multiple linear regression analysis. To assess the mediating role of financial self-efficacy in the relationships between financial literacy, digital financial literacy, and financial management, path analysis was conducted through a series of regression models following the causal step approach. The mediating role of financial self-efficacy was examined using the Sobel Test. This approach was selected because it remains one of the most widely applied procedures for testing indirect effects in regression-based mediation analysis and is appropriate for evaluating whether the indirect relationship between the independent and dependent variables is statistically significant. Nevertheless, future studies are encouraged to employ bootstrap mediation techniques, which provide more robust confidence interval estimation for indirect effects.

Results and Discussion

A total of 156 undergraduate students enrolled in the Management Study Program at Dian Nuswantoro University participated in this study. Respondent characteristics were described based on gender, semester of study, and age. The demographic characteristics of the respondents are presented in Table 5.

Table 5. Demographic Characteristics of Respondents (n = 156)

Characteristic	n (%)	Mean ± SD / Median (Min-Max)
Gender		
Male	64 (41%)	
Female	92 (59%)	
Semester		
Semester 2	27 (17.3%)	
Semester 4	54 (34.6%)	
Semester 6	37 (23.7%)	
Semester 8	38 (24.4%)	
Age		20 (19-23)

As presented in table 5, female respondents constituted the majority of the sample, accounting for 92 participants (59%), whereas male respondents accounted for 64 participants (41%). Regarding the semester of study, most respondents were enrolled in the fourth semester (34.6%), followed by the eighth semester (24.4%), the sixth semester (23.7%), and the second semester (17.3%). The respondents had a median age of 20 years, with an age range of 19–23 years.

Descriptive analysis was conducted to summarize the distribution of each research variable. The descriptive statistics included the mean, standard deviation (SD), median, minimum value, and maximum value. The results of the descriptive analysis for financial self-efficacy, financial literacy, digital financial literacy, and financial management are presented in Table 6.

Table 6. Descriptive Statistics of Research Variables

Variable	Mean	SD	Median	Min	Max
Financial Self-Efficacy	2.56	0.67	2.4	1.2	4.4
Financial Literacy	2.57	0.74	2.5	1.25	5
Digital Financial Literacy	2.58	0.74	2.4	1.4	5
Financial Management	2.39	0.66	2.25	1.25	5

As shown in table 6, digital financial literacy recorded the highest mean score (Mean = 2.58; SD = 0.74), followed by financial literacy (Mean = 2.57; SD = 0.74) and financial self-efficacy (Mean = 2.56; SD = 0.67). Financial management exhibited the lowest mean score (Mean = 2.39; SD = 0.66). The median scores ranged from 2.25 to 2.50 across all variables, indicating that respondents generally demonstrated moderate levels of financial literacy, digital financial literacy, financial self-efficacy, and financial management.

The normality test was conducted to determine whether the residuals of the regression model were normally distributed. In this study, normality was assessed using the One-Sample Kolmogorov–Smirnov (K–S) test. A regression model is considered to satisfy the normality assumption when the significance value (Asymp. Sig.) is >0.05.

Table 7. Kolmogorov-Smirnov Normality Test

Statistics	Value
N	156
Test Statistic	0.052
Asymp. Sig. (2-tailed)	0.200

Source: Processed primary data, SPSS 31, 2026

As presented in Table 7, the One-Sample Kolmogorov–Smirnov test yielded an Asymp. Sig. (2-tailed) value of 0.200, which was >0.05. These results indicate that the residuals were normally distributed. Therefore, the regression model satisfied the normality assumption and was considered appropriate for subsequent analyses.
The multicollinearity test was conducted to examine the presence of correlations among the independent variables in the regression model. Multicollinearity is considered absent when the tolerance value is >0.10 and the Variance Inflation Factor (VIF) is <10.

Table 8. Multicollinearity Test Results

Variable	Tolerance	VIF	Description
Financial Self-Efficacy	0.595	1.680	No multicollinearity
Financial Literacy	0.519	1.926	No multicollinearity
Digital Financial Literacy	0.577	1.734	No multicollinearity

As shown in table 8, all independent variables exhibited tolerance values >0.10 and VIF values <10. These findings indicate that no multicollinearity was present among the independent variables, suggesting that the regression model satisfied the multicollinearity assumption.

The heteroscedasticity test was conducted to examine whether the variance of the residuals remained constant across the predicted values. The assumption was evaluated using a scatterplot of the standardized residuals against the predicted values.

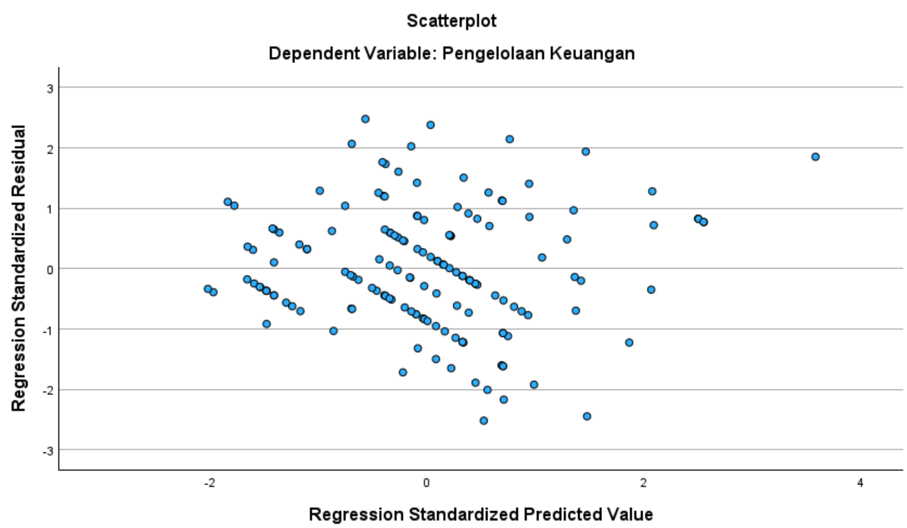

Figure 2. Scatterplot for the Heteroscedasticity Test

As illustrated in Figure 2, the residuals were randomly dispersed above and below the zero line on the Y-axis without forming any discernible pattern. These findings indicate the absence of heteroscedasticity, suggesting that the regression model satisfied the homoscedasticity assumption and was appropriate for further statistical analysis.

Multiple linear regression analysis was performed to examine the effects of financial literacy and digital financial literacy on financial self-efficacy. The results of the regression analysis are presented in Table 9.

Table 9. Results of Multiple Linear Regression Analysis (Model I)

Model	Unstandardized Coefficient		Standardized Coefficient	t	*p*	*R*	*R Square*
	B	Std. Error	Beta				
Constant	0.878	0.166		5.304	<0.001	0.651	0.423

Financial Literacy	0.238	0.70	0.262	3.411	<0.001
Digital Financial Literacy	0.414	0.069	0.459	5.984	<0.001

Note: Adjusted R^2= 0.416; F= 56.132

The regression equation derived from Model I is expressed as follows: FSE = 0.878 + 0.238FL + 0.414DFL + e. As presented in Table 9, financial literacy had a positive and statistically significant effect on financial self-efficacy (B = 0.238, p <0.001). Likewise, digital financial literacy had a positive and statistically significant effect on financial self-efficacy (B = 0.414, p <0.001). The model yielded an Adjusted R² value of 0.416, indicating that 41.6% of the variance in financial self-efficacy could be explained by financial literacy and digital financial literacy. The remaining 58.4% of the variance was attributable to other factors not included in the present study.

A multiple linear regression analysis was conducted to examine the effects of financial literacy, digital financial literacy, and financial self-efficacy on financial management. The results of the regression analysis are presented in table 10.

Table 10. Multiple Linear Regression Results for Model II (Dependent: Financial Management)

Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	***p***	***R***	***R Square***
	B	**Std. Error**	**Beta**				
Constant	0.340	0.160		2.132	0.035	0.735	0.540
Financial Literacy	0.359	0.064	0.400	5.610	<0.001		
Digital Financial Literacy	0.141	0.068	0.158	2.067	0.040		
Financial Self-Efficacy	0.298	0.072	0.302	4.165	<0.001		

Note: Adjusted R^2= 0.531; F= 59.450

The regression equation derived from Model II is expressed as follows: FM = 0.340 + 0.359FL + 0.141DFL + 0.298FSE + e. As presented in Table 10, financial literacy had a positive and statistically significant effect on financial management (B = 0.359, p < 0.001). Digital financial literacy also demonstrated a positive and statistically significant effect on financial management (B = 0.141, p = 0.040). Likewise, financial self-efficacy had a positive and statistically significant effect on financial management (B = 0.298, p < 0.001). The model yielded an Adjusted R² value of 0.531, indicating that 53.1% of the variance in financial management was explained by financial literacy, digital financial literacy, and financial self-efficacy. The remaining 46.9% of the variance was attributable to factors not included in the present study.

The explanatory power of the model can be considered moderate to high, indicating that financial literacy, digital financial literacy, and financial self-efficacy jointly explain a substantial proportion of students' financial management behavior. Nevertheless, 46.9% of the variance remains unexplained, suggesting that other factors, such as financial attitudes, parental financial socialization, income level, or lifestyle, may also contribute to financial management behavior and should be considered in future research.

The Sobel test was conducted to examine whether financial self-efficacy mediates the relationships between financial literacy, digital financial literacy, and financial management. The results of the mediation analysis are presented in Table 11.

Table 11. Results of the Sobel Test for the Mediating Role of Financial Self-Efficacy

Mediation Path	Z Sobel	Description
FL → FSE → FM	2.40	Significant

DFL → FSE → FM	3.25	Significant

The Sobel Test statistic was calculated using the following formula:

$$Z = \frac{ab}{\sqrt{b^2 s_a^2 + a^2 s_b^2}}$$

Where:
a= regression coefficient representing the effect of the independent variable on the mediator;
b= regression coefficient representing the effect of the mediator on the dependent variable;
s_a= standard error of coefficient a; and
s_b= standard error of coefficient b

As presented in table 11, the Sobel test produced a Z-value of 2.40 for the mediation pathway financial literacy → financial self-efficacy → financial management, and 3.25 for the pathway digital financial literacy → financial self-efficacy → financial management. Both Z-values exceeded the critical value of 1.96 at the 5% significance level, indicating that financial self-efficacy significantly mediated the relationships between financial literacy and financial management, as well as between digital financial literacy and financial management.

Discussion
The findings of this study indicate that financial literacy has a positive and significant effect on financial self-efficacy. Accordingly, Hypothesis 1 (H1) is supported.These findings are consistent with Social Cognitive Theory, which suggests that individuals' beliefs in their own capabilities are shaped by their knowledge, experiences, and cognitive processes. In the context of this study, students with a stronger understanding of financial concepts are more likely to develop greater confidence in managing their personal finances. Such knowledge enables them to make informed decisions regarding budgeting, saving, spending, and investing, thereby strengthening their confidence in handling financial matters effectively.

This finding also indicates that confidence plays an essential role in transforming financial knowledge into actual financial behavior. Students may understand how to prepare a budget or control spending, but without sufficient confidence in their ability to manage money independently, they may hesitate to apply these practices consistently. Therefore, financial self-efficacy serves as an important psychological resource that bridges the gap between financial knowledge and responsible financial behavior.

The present findings are consistent with those reported by Korankye, Pandey, and Ahmmed (2026), who concluded that higher levels of financial literacy enhance individuals' confidence in managing their financial resources. Similarly, Kartawinata, Fakhri, Pradana, Hanifan, and Akbar (2021) found that financial literacy significantly contributes to the development of financial self-efficacy among university students in West Java, Indonesia. Collectively, these findings suggest that financial literacy extends beyond improving financial knowledge, as it also strengthens individuals' confidence in making appropriate and responsible financial decisions.

The findings of this study indicate that digital financial literacy has a positive and significant effect on financial self-efficacy. Accordingly, Hypothesis 2 (H2) is supported.
These findings suggest that the ability to understand and utilize digital financial technologies enhances students' confidence in managing their personal finances. Students who are familiar with digital financial services tend to feel more capable of controlling their financial conditions, as these technologies provide timely access to financial information and facilitate more efficient financial decision-making. Consequently, greater proficiency in using digital financial services contributes to stronger confidence in managing financial matters independently.

The findings also support Social Cognitive Theory, which posits that individuals' confidence in performing a particular behavior develops through the acquisition of knowledge, skills, and successful experiences. In the context of this study, greater competence in using digital financial services strengthens students'

beliefs in their ability to make appropriate financial decisions and effectively manage their financial resources.
The present findings are consistent with those reported by Jose and Ghosh (2024), who found that proficiency in financial technology enhances individuals' confidence in conducting financial activities independently and effectively. Collectively, these findings highlight the important role of digital financial literacy in fostering financial self-efficacy among university students.

The findings of this study indicate that financial literacy has a positive and significant effect on the financial management of Generation Z university students. Accordingly, Hypothesis 3 (H3) is supported. These findings are consistent with the principles of Social Cognitive Theory proposed by Albert Bandura (1997), which posits that individuals' knowledge shapes their cognitive processes and subsequently influences their behavior. In the context of this study, a sound understanding of financial concepts, including budgeting, saving, investing, and debt management, enables students to make more informed, rational, and responsible financial decisions. As their financial knowledge increases, students become better equipped to evaluate financial alternatives, anticipate potential risks, and allocate their financial resources more effectively.

One possible explanation is that financial literacy improves students' ability to evaluate financial alternatives before making spending decisions. Students with adequate financial knowledge are more likely to compare financial products, distinguish between needs and wants, understand the long-term consequences of borrowing, and allocate their income more efficiently. Consequently, financial decisions become less impulsive and more goal-oriented, leading to better financial management practices. This finding indicates that financial literacy influences not only what students know about finance but also how they apply that knowledge in everyday financial situations.

The present findings are also consistent with previous empirical studies. Annamaria Lusardi and Olivia S. Mitchell (2023) reported that individuals with higher levels of financial literacy tend to demonstrate more effective financial management behaviors. Similarly, Hermawan and Septiani (2024) emphasized that financial knowledge plays a fundamental role in shaping responsible financial behavior. Collectively, these findings reinforce the view that financial literacy serves as a fundamental foundation for developing sound financial management practices among Generation Z university students.

The findings of this study indicate that digital financial literacy has a positive and significant effect on the financial management of Generation Z university students. Accordingly, Hypothesis 4 (H4) is supported.
These findings suggest that advances in financial technology have fundamentally transformed the way individuals manage their personal finances. Students with a higher level of digital financial literacy are better equipped to utilize digital banking applications, mobile banking services, e-wallets, and other digital financial platforms to manage their financial activities effectively. Such competencies facilitate transaction monitoring, budgeting, financial planning, and real-time tracking of financial conditions, thereby supporting more informed and responsible financial decision-making.

Moreover, the regression results indicate that digital financial literacy has a smaller standardized effect ($\beta = 0.158$) than financial literacy ($\beta = 0.400$). This finding suggests that technological competence alone may not be sufficient to improve financial management. Instead, students are likely to benefit most when digital financial skills are supported by adequate financial knowledge. In other words, digital financial literacy functions as an enabling capability, whereas financial literacy provides the fundamental basis for making sound financial decisions.

The findings further support Social Cognitive Theory, which posits that individual behavior is shaped by the interaction between cognitive capabilities and environmental factors. In this context, digital financial literacy represents a form of competence that enables students to effectively utilize digital financial technologies, thereby fostering more responsible and adaptive financial management behaviors.

The present findings are consistent with those reported by Ali, Alamgir, and Nawaz (2024) and Respati, Widyastuti, Nuryati, Musyaffi, Handayani, and Ali (2023), who found that the ability to utilize digital financial technologies contributes to more planned, efficient, and responsible financial behavior.

Collectively, these findings underscore the importance of digital financial literacy as a key determinant of effective financial management among Generation Z students in an increasingly digital financial environment.

The findings of this study indicate that financial self-efficacy has a positive and significant effect on financial management. Accordingly, Hypothesis 5 (H5) is supported.These findings are consistent with Social Cognitive Theory, which posits that individuals' beliefs in their own capabilities play a central role in shaping their behavior. In the context of financial management, students with higher levels of financial self-efficacy are more likely to feel confident in planning budgets, controlling expenditures, and making appropriate financial decisions. This confidence encourages them to translate their financial knowledge into effective financial management practices and to respond more effectively to financial challenges.

The present findings are consistent with those reported by Ahamed and Limbu (2025), who identified financial self-efficacy as a psychological factor that is consistently associated with positive financial management behavior. Similar results were reported by Rahayu et al. (2023), who found that financial self-efficacy positively influences students' financial management behavior. Likewise, Aprillia and Wiyanto (2023) demonstrated that individuals with higher levels of financial self-efficacy tend to exhibit more effective financial management practices. Collectively, these findings reinforce the important role of financial self-efficacy in motivating individuals to apply their financial knowledge and skills in managing their personal finances responsibly and effectively.

The findings of this study demonstrate that financial self-efficacy significantly mediates the relationship between financial literacy and financial management. Accordingly, Hypothesis 6 (H6) is supported. These findings indicate that financial literacy contributes to improved financial management both directly and indirectly by strengthening individuals' financial self-efficacy.

Financial literacy equips individuals with the knowledge and skills required to manage income, expenditures, savings, investments, and credit responsibly. Such knowledge enhances individuals' confidence in their ability to make appropriate financial decisions. As confidence increases, individuals are more likely to engage in effective financial management practices, including budgeting, controlling expenditures, and planning for future financial needs.

The mediation findings indicate that financial literacy does not automatically lead to better financial management. Instead, financial knowledge first strengthens students' confidence in managing financial matters, which subsequently encourages them to implement budgeting, saving, and spending decisions more consistently. This result demonstrates that financial self-efficacy represents the psychological process through which financial knowledge is translated into responsible financial management behavior.

These findings are consistent with Social Cognitive Theory, which suggests that knowledge contributes to the development of self-efficacy, thereby influencing subsequent behavior. In this study, financial self-efficacy serves as the psychological mechanism through which financial literacy translates into better financial management. Students with higher levels of financial literacy are more likely to develop confidence in their financial capabilities, enabling them to implement more effective financial management practices. The present findings are consistent with those reported by Arvita and Mardiana (2026), who found that financial literacy positively influences financial management both directly and indirectly through the mediating role of financial self-efficacy among students of the Faculty of Economics at UIN Maulana Malik Ibrahim Malang.

The findings of this study further indicate that financial self-efficacy significantly mediates the relationship between digital financial literacy and financial management. Accordingly, Hypothesis 7 (H7) is supported. These findings suggest that digital financial literacy influences financial management not only through a direct pathway but also indirectly by enhancing individuals' financial self-efficacy.
Digital financial literacy reflects individuals' ability to understand, evaluate, and effectively utilize a wide range of digital financial services. These competencies enable individuals to access financial information more efficiently, conduct secure digital transactions, and utilize financial technologies to support informed financial decision-making. As individuals become more proficient in using digital financial services, they

also develop greater confidence in managing their financial activities.

Interestingly, digital financial literacy demonstrated a stronger relationship with financial self-efficacy than financial literacy. This finding implies that confidence becomes increasingly important when students interact with digital financial services, where financial decisions are often made independently and in real time through digital platforms. Therefore, strengthening students' confidence in using digital financial services may further enhance the effectiveness of digital financial literacy in promoting responsible financial management.

These findings are in line with Social Cognitive Theory, which emphasizes that knowledge, competence, and experience contribute to the development of self-efficacy, ultimately shaping individual behavior. In this context, higher levels of digital financial literacy foster stronger financial self-efficacy, which subsequently encourages more effective financial management practices. Therefore, financial self-efficacy functions as an important psychological mechanism that strengthens the relationship between digital financial literacy and financial management. The present findings are consistent with those reported by Jose and Ghosh (2024), who demonstrated the mediating role of financial self-efficacy in the relationship between digital financial literacy and financial behavior. Likewise, Ali, Alamgir, and Nawaz (2024) found that digital financial literacy makes a significant contribution to university students' financial management behavior.

The findings of this study suggest that improving students' financial management requires a comprehensive approach that combines financial knowledge, digital financial competencies, and psychological confidence. Universities should complement financial management courses with practical activities, such as budgeting workshops, investment simulations, and responsible digital financial training. Financial institutions may strengthen collaboration with higher education institutions by providing educational programs related to digital financial products and consumer protection. In addition, policymakers should consider developing financial education programs that simultaneously enhance financial literacy, digital financial literacy, and financial self-efficacy to better prepare young adults for increasingly digital financial environments.

Conclusion

This study examined the mediating role of financial self-efficacy in the relationships between financial literacy, digital financial literacy, and financial management among students in the Management Study Program at Dian Nuswantoro University. The findings demonstrate that financial literacy, digital financial literacy, and financial self-efficacy each contribute significantly to improving students' financial management. Furthermore, financial self-efficacy was found to mediate the effects of both financial literacy and digital financial literacy on financial management, highlighting its important role in translating financial knowledge and digital financial competencies into effective financial behavior. The stronger influence of digital financial literacy on financial self-efficacy further emphasizes the growing importance of digital financial competencies in today's technology-driven environment.

These findings contribute to the application of Social Cognitive Theory by demonstrating that financial self-efficacy functions as the psychological mechanism through which both financial literacy and digital financial literacy are translated into financial management behavior. This suggests that improving financial knowledge alone may not be sufficient unless students also develop confidence in applying that knowledge to real financial decisions. Consequently, the study highlights the importance of integrating cognitive and psychological dimensions when explaining financial management behavior in the digital era. Therefore, the findings provide several practical implications for key stakeholders. For universities, integrating financial literacy and digital financial literacy into the curriculum through experiential learning, financial planning workshops, and digital financial simulations may help strengthen students' financial competencies and confidence. Financial institutions may collaborate with universities to provide educational programs on responsible digital financial services, budgeting applications, and financial risk awareness. Meanwhile, policymakers and financial regulators may utilize these findings to support financial education initiatives that emphasize not only financial knowledge but also the development of financial self-efficacy as an essential factor in promoting responsible financial management among young adults.

This study has several limitations. First, the respondents were limited to Management students at a single university, which may restrict the generalizability of the findings to other student populations. Second, the study employed a cross-sectional research design using self-reported questionnaire data, which limits causal inference and may be subject to common method bias. Future research is encouraged to examine more diverse populations, apply longitudinal research designs, and employ more robust mediation techniques, such as bootstrap analysis, to further validate the proposed model.

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