DIGITAL FINANCIAL LITERACY AND FINANCIAL BEHAVIOR AMONG UNIVERSITY FACULTY

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ABSTRACT: *The study investigates the influence of Digital Financial Literacy (DFL) on the financial behavior of university faculty. It examines four dimensions of DFL—knowledge and use of digital financial products, awareness of digital financial risks, knowledge of consumer rights and redress procedures, and knowledge of digital risk control—along with the mediating role of financial self-efficacy, attitudes toward technology, access to digital services, and digital inclusion. A survey among faculty members from North Eastern Mindanao State University in Cantilan, Surigao del Sur, Philippines was conducted. Data were analyzed using Structural Equation Modeling (SEM) with Partial Least Squares (PLS). Findings reveal that knowledge and use of digital financial products and knowledge of consumer rights significantly predict responsible financial behavior, particularly in saving, spending, and investing. In contrast, risk awareness and risk-control knowledge were not significant predictors. This suggests that awareness alone does not directly translate into behavioral change. Mediation analysis revealed that only the pathway from knowledge and use of digital products through mediating factors significantly influenced financial behavior, emphasizing the role of confidence and attitudes in applying digital tools. Model fit indices confirmed strong reliability and validity, while Variance Inflation Factor (VIF) results indicated no multicollinearity issues. The study concludes that strengthening faculty competence in practical digital finance and consumer protection is essential. These insights support the development of institutional training and policy initiatives that promote financial resilience, enhance digital inclusion, and position educators as advocates of responsible financial practices.*

Keywords: Digital Financial Literacy, Financial Behavior, University Faculty, Digital Financial Products and Services, Structural Equation Modeling with Partial Least Squares

1. INTRODUCTION

This study focuses on the influence of Digital Financial Literacy (DFL) on financial behavior among university faculty. It examines how digital skills such as the ability to navigate online financial platforms, understand risks, and apply consumer rights affect financial behavior on savings, spending, and investment practices. The study also considers the role of mediating factors that includes access to digital services, attitudes toward technology, financial self-efficacy, and digital inclusion in shaping how educators participate with financial decision-making in the digital economy.

The Bangko Sentral ng Pilipinas (BSP) reported that teachers generally show higher levels of financial literacy than the national adult average. Their performance relatively reflects to factors such as household income, educational attainment, and access to digital devices. However, challenges remain as many Filipinos still struggle with high debt and limited capacity in applying advanced financial practices (BSP, 2023) [1]. To address these issues, BSP introduced the E-Learning Academy (BELA) in 2024 to expand the reach of financial education through digital platforms, particularly targeting teachers, MSMEs, and overseas Filipino workers. At the same time, research on digital financial inclusion highlights continuing barriers such as poor infrastructure, documentation requirements, and weak internet connectivity that limit their wider use of digital financial services across the country (Casingal & Ancho, 2022; DLSU, 2023) [2]. Globally, scholars have emphasized that DFL is more than just basic financial knowledge as it also involves risk awareness, consumer protection, and secure engagement with digital tools (Xiao & O'Neill, 2016; OECD, 2020) [3]. The studies further show that greater financial literacy can lead to stronger financial planning and better decision-making (Lusardi & Mitchell, 2014; Morgan & Long, 2020) [4] [5].

Research on digital financial literacy (DFL) has grown in recent years, but only few have focused into how it affects the financial behavior of college and university faculty. Existing studies are usually about the general adult population or focus on students, which leaves teachers as a group that is not often examined. This is important as faculty members are not only making financial choices for themselves but are also sharing knowledge with others. Their financial behavior is commonly shaped by the mix of their professional work, teaching responsibilities, and the technology they use in their jobs, which may influence them in ways different from other groups.

This study is essential as it adds value in both theory and practice. By reflecting on its theoretical side, it is clear that it contributes to the ongoing discussion on financial literacy by connecting digital skills with models of financial behavior. Practically, the findings can serve as a guide for higher education institutions, policymakers, and financial service providers in creating programs that support the financial well-being of faculty members. In addition, by examining factors such as digital inclusion, financial self-confidence, and attitudes toward technology, the study can highlight possible strategies for building financial resilience which can encourage responsible use of digital financial tools and promote long-term financial empowerment within the academic community.

2. MATERIALS AND METHODS

This study adopted a quantitative research design using Structural Equation Modeling (SEM) with Partial Least Squares (PLS) to determine the influence of digital financial literacy (DFL) on financial behavior among university faculty. A purposive sample for faculty members from a state university served as respondents. Data were collected through

a structured survey questionnaire covering demographics, knowledge and use of digital financial products and services (KU), awareness of digital financial risks (AD), knowledge of consumer rights and redress procedures (KC), knowledge of digital financial risk and control (KD), as well as financial behavior (FB) and mediating factors (MF), which include access to digital services, attitudes toward technology, financial self-efficacy, and digital inclusion. All items were rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Instrument validity and reliability were ensured through factor analysis, Cronbach's alpha, and composite reliability, while Average Variance Extracted (AVE) and discriminant validity confirmed construct distinctiveness. Data analysis employed SEM with Partial Least Squares (SEM-PLS) to assess both measurement and structural models, with model fit indices (SRMR, NFI, CFI, TLI) confirming adequacy. Variance Inflation Factor (VIF) results verified the absence of multicollinearity. Ethical standards were observed by informing participants of the study's objectives, obtaining voluntary consent, ensuring confidentiality, and anonymizing data.

3. RESULTS AND DISCUSSION

Frequency Distribution of the Demographic Profile. The data reveal that most respondents in the sample are between 20 and 30 years of age. Meanwhile, gender distribution shows that 42.19% identify as male (n = 27), and the remaining 57.81% are female (n = 37). This supports the finding that most graduates started looking for work right after graduation. The median job search length is just 3 to 4 months, and graduates believe strongly in the primacy of work experience to get a job. In addition, they gathered that employers look for communication skills, trainability, competence, and problem-solving and analytical skills (Tutor et al., 2021) [6].

Furthermore, only 29.69% have permanent job positions, while 43.75% of the respondents are employed under a service contract. In terms of internet connectivity, 87.50% have a personal Wi-Fi connection, while 8% depend solely on mobile data. At the same time, most respondents have a mobile phone and a laptop or desktop computer as devices, with 89.06%. These results support the study of Upadhyaya & Vrinda (2021) that high ownership of laptops and smartphones correlates with better time management and multitasking [7]. Meanwhile, the presence of technostress among the younger population contradicts the belief that they do not experience it because they have considerably higher ICT experience and are techno-savvy. Thus, employers must ensure they do not take this group for granted and provide adequate ICT training for newly recruited employees to reduce burnout.

Level of digital financial literacy in terms of knowledge and use of digital financial products and services. This shows the respondents' level of digital financial literacy in terms of their knowledge and use of digital financial products and services to explore the essence of this study. Digital platforms play a bigger role in economic behavior. It is essential to understand how employed individuals engage with and understand these tools. This table examines respondents' knowledge of key digital financial products and services. The results provide insight into how digital financial literacy appears in awareness and practical use.

The overall mean score of 3.89 interpreted as agree indicates that the respondents possess a moderately high level of knowledge and use of digital financial products and services. This indicates that respondents generally have knowledge about digital finance, and they actively engage with available platforms.

Findings presented showcase the mean scores for each item indicator. These highlights two areas of a strong digital awareness, that is, familiarity with online payment platforms and awareness of various digital financial services (Mean = 4.67, Strongly Agree) and familiarity with online payment platforms (Mean = 4.61, Strongly Agree). This means that respondents are highly exposed to most commonly used digital tools or applications like GCash, PayPal, Venmo, and mobile banking applications which have become integral to both personal and professional financial transactions. The remaining items indicate agreement from the participants' responses, ranging from a 3.50 to a 4.49 mean score. These results agree with Azeez & Akhtar (2021), who state that, besides socioeconomic and demographic factors, various financial institutions' appreciable and effective efforts are made through projects and programs for enhancing digital financial literacy [8]. Digital financial education is intended to offer people financial knowledge to help them maintain budgets, choose among various digital financial platforms, plans, and services, and equip them to make financial decisions.

On the other hand, the least rated item is the use of digital platforms for tracking expenses and managing finances (Mean = 3.44, Agree). This indicates that respondents may be familiar with digital tools but may not fully adopting them to enhance personal finance such as budgeting, expense monitoring, and long-term planning. Likely, items on comfort in using digital financial tools for saving and investing (Mean = 3.50, Agree) and trust in digital financial services (Mean = 3.58, Agree) suggest cautious engagement especially when it involves higher financial risk or long-term commitments.

In general, findings reveal a gap between knowledge and actual usage. Respondents demonstrate strong awareness of digital platforms but tend to underutilize them for systematic financial management and investment purposes. This shows a pattern where digital finance is perceived primarily as a tool for payments and transactions rather than as an inclusive means of managing and growing personal finances. These findings support Azeez and Akhtar (2021) who argue that digital financial literacy is influenced not only by demographic and socioeconomic factors but also by the extent of exposure to financial institutions' educational programs and initiatives [8]. Users still need guidance and confidence building measures to integrate these tools into more complex financial decisions even financial institutions have made efforts in introducing and promoting digital platforms or applications.

Results highlight the importance of promoting practical application and deeper engagement with digital finance tools.

Strengthening the ability of the respondents to use these platforms for budgeting, saving, investing, and long-term planning equips them with the full benefits of digital financial literacy, enhancing the digital economy's financial stability and decision-making.

Level of digital financial literacy in terms of awareness of digital financial risk. High levels of digital financial risk awareness can significantly influence digital financial inclusion. In emerging economies such as the Philippines, trust plays a central role in individuals' willingness to adopt online banking, e-wallets, and other fintech innovations. When users are confident in their ability to identify risks and protect themselves, they are more likely to engage with digital platforms, thereby broadening access to financial services for previously underserved populations. This contributes to financial inclusion by enabling greater participation in digital transactions, online remittances, and e-commerce. Results reveal that respondents generally exhibit a high level of awareness regarding digital financial risks, with an overall mean score of 4.22 (Agree).

Among the indicators, the highest rating was given to the understanding of the importance of two-factor authentication for financial security (M = 4.50, Strongly Agree), indicating that respondents place strong emphasis on this protective measure. Other highly rated items include being cautious when providing financial details on digital platforms (M = 4.48, Agree) and awareness of potential financial loss due to digital fraud (M = 4.31, Agree).

On the other hand, the lowest response was avoiding the use of Wi-Fi for online financial transactions (M = 3.89, Agree). This proposes that while respondents acknowledge cybersecurity concerns, some may still be engaging in relatively unsafe practices when accessing financial services online. This highlights a potential vulnerability in actual practice where convenience may sometimes outweigh caution in safeguarding financial data.

Notably, none of the items fell within the neutral, disagree, or strongly disagree categories, reinforcing that respondents possess a commendable awareness of digital financial risks. This aligns with Ullah's (2022) assertion that individuals with higher financial skills perceive greater utility and security in digital financial services, thereby fostering trust and encouraging the intended use of online payment systems [9].

In summary, respondents portray commendable awareness of digital financial risks but still sustained efforts are required to strengthen actual practices particularly in avoiding insecure networks and maintaining updated protective measures. Bridging this gap between awareness and behavior is important in creating a more secure and resilient digital financial system. Finally, this contributes to greater trust, wider adoption of digital finance, and more inclusive participation in the growing digital economy.

Level of digital financial literacy of knowledge of consumer rights and redress procedures. Knowledge of consumer rights and redress procedures serves as a critical dimension of digital financial literacy. It ensures that consumers are not merely aware of risks but are also empowered to act when their rights are violated. Knowledge of redress mechanisms strengthens confidence in using digital financial services, thereby influencing adoption and sustained usage. This aligns with the broader model where financial literacy is seen not just as a matter of knowledge acquisition but as a combination of awareness, skills, and empowerment that fosters secure, responsible, and resilient digital financial behavior. Respondents proved a high level of knowledge on consumer rights and redress procedures with an overall mean score of 4.03 (Agree). Items rated within the "agree" range (3.50-4.49) indicate that respondents possess awareness of their rights and the mechanisms available to safeguard them in the digital financial environment.

It can be noted that the highest-rated items include knowledge of how to reverse a transaction in case of error (Mean=4.25, Agree) and confidence in taking legal action if consumer rights are violated (Mean=4.20, Agree). This means that respondents are not only aware of their rights but are also prepared to assert them whenever necessary. Likewise, awareness of consumer protection agencies that handle digital complaints further shows familiarity with support systems that will provide recourse in case of fraud and disputes. These findings are in parallel with Hasan's (2024) conclusion that individuals with higher levels of digital financial literacy incline to have better awareness of consumer rights and are more likely to utilize the protective features of digital platforms [10]. In addition, tech-savvy consumers are typically more proactive in reporting fraudulent activity and using available security tools, which reduces their susceptibility to digital fraud.

On the contrary, the lowest yet still positive response was understanding the dispute resolution processes for digital financial services with a mean of 3.53 interpreted as agree. Respondents are generally aware of their rights but some may lack full understanding of the proper procedures for resolving conflicts in digital transactions.

Overall, results emphasize that respondents have commendable knowledge of consumer rights and redress procedures. Reinforcement is needed through education and awareness campaigns to enhance their familiarity with dispute resolution processes and regulatory protections.

Level of digital financial literacy in terms of knowledge of digital financial risk and control. Risk awareness and control play a vital role in ensuring the safety and security of individuals in engaging with digital financial platforms. The results reveal that faculty members of the state university demonstrate a high level of knowledge in this area, with an overall mean of 3.93 (Agree). This indicates agreement for all items ranges from 3.64 to 4.14. The Federal Trade Commission (2023) stated that financially literate consumers can better evaluate risk, analyze product offers, and make wise choices [11]. Similarly, consumers are competently trained to handle conflicts and scheming activity when they know their rights as consumers and the terms and policies of digital platforms (Privacy International, 2023) [12]. This idea was supported by Koskelainen (2023), who stated that financially literate people can handle their finances and make wise financial decisions because they comprehend the economic fundamentals [13]. Decreasing the amount of personal information shared online helps lower vulnerability to potential threats, and using complex passwords and

changing them frequently can prevent unauthorized access to accounts (NIST,2022) [14]. Furthermore, respondents are generally aware of key security measures and are actively doing habits that safeguard their digital financial transactions. As presented in this level, the highest rated item, "I monitor my transactions regularly to detect any unusual activities" has a mean of 4.14 (Agree). This reflects that vigilance in account monitoring is a common and well-practiced behavior among the respondents. Likewise, in terms of securing digital banking accounts from unauthorized access (Mean = 4.05, Agree) and using financial literacy resources to enhance knowledge of risk control (Mean = 4.02, Agree) reflect their proactive approach to maintaining financial security and continuous learning. Faculty also agree that they set up spending limits and controls in their respective digital wallets (Mean = 3.98, Agree). More importantly, they update their passwords regularly (Mean = 3.94, Agree). This highlights their adherence to responsible digital financial practices.

On the other hand, lower ratings were reflected in educating themselves about emerging threats (Mean = 3.64, Agree) and in using fraud detection tools in banking apps (Mean = 3.88, Agree). Though it is within the "Agree" range, findings indicate that respondents may have limited exposure to advanced fraud-prevention tools or less exposure to evolving digital risks. This gap proposes the importance of strengthening awareness and implementing training programs geared on updated security technologies and emerging threats.

Findings imply that faculty members as educators and role models may influence students and peers through responsible digital financial practices. In addition, the university may strengthen the competency through trainings and workshops about emerging risks and advanced fraud detection tools. Strengthening these areas will not only enhance their personal financial resilience but also enable them to serve as effective role models and advocates of digital financial security within the university and the wider community. Faculty members' enhanced literacy equips them to extend their knowledge through research, extension, and community engagement. Thus, contributing to broader financial inclusion and security in society.

Assessment of Measurement Model. Table 1 captures model fit indices from the given variables for the Structural Equation Modeling (SEM) with Partial Least Squares (PLS). Model fit assessment measures the goodness-of-fit of the model to the surveyed data. It assists in checking how well the hypothesized model fits the data and if relationships between variables are statistically significant, as the results were presented in Table 1 below.

Table 1. Fit indices of the model

X^2	*p*-value	SRMR	NFI	CFI	TLI
1398	0.000	0.034	0.956	0.978	0.980

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The chi-square statistic with a value of x^2= 1398, suggests that the differences between the model and the data are extensive. An extensive value typically suggests poor fit, but this test is sensitive to sample size. However, A p-value of 0.000 indicates a statistically significant difference between the actual data and the model. Thus, the model does not precisely fit the data. However, the chi-square test is susceptible to sample size, meaning that even minor, practically irrelevant differences can lead to a significant result.

Therefore, while the test flags a misfit, it doesn't necessarily imply that the model is poor. The table also presents the other fit indices, such as CFI (Comparative Fit Index), TLI (Tucker–Lewis Index), NFI (Normed Fit Index), and SRMR (Standardized Root Mean Square Residual), which strongly support the model's adequacy. SRMR (0.034) presents values less than 0.08, which are considered good; in this data, SRMR suggests an excellent result. NFI (0.956) values greater than 0.90 are good; thus, this result presents a strong NFI. On the other hand, CFI (0.978) shows a strong fit since the values are greater than the threshold of 0.95. Lastly, TLI (0.980) results are greater than 0.95, which suggests a strong fit. The CFI and TLI both exceed the recommended cutoff of 0.95, further supporting the model's robustness. Taken together, these indices provide substantial evidence that the measurement model demonstrates an excellent overall fit to the data despite the significant chi-square.

The study also explores the significant influence of the distribution of loadings of digital financial literacy, as presented in Table 2. The table reflects the indicators' factor loadings (LF) within each latent variable. The variables noted are Knowledge and Use of Digital Financial Products and Services (KU), Awareness of Digital Financial Risk (AD), Knowledge of Consumer Rights and Redress Procedures (KC), and Knowledge of Digital Financial Risk and Control (KD).

Factor loading for Knowledge and Use of Digital Financial Products and Services (KU) indicators ranging from 0.603 to 0.832 indicate a strong association between the indicators and the underlying factor. This result implies that faculty respondents exhibit consistent understanding and utilization of digital financial products and services. In the meantime, factor loading for Awareness of Digital Financial Risk (AD) varied from 0.721 to 0.863, indicating a strong loading and that the indicators suggest that the AD construct is well-defined and internally coherent. Findings suggest that faculty members demonstrate strong awareness of risks associated with digital finance, reflecting their ability to identify potential threats in digital transactions. Factor loading for Knowledge of Consumer Rights and Redress Procedures (KC) varies from 0.696 to 0.841, suggesting that all items load above 0.69 indicate a well-constructed and reliable scale. This suggests that respondents not only recognize their consumer rights but also understand the proper channels for redress in cases of financial disputes. Such awareness is crucial in fostering responsible digital financial behavior and consumer empowerment. Factor loading for Knowledge of Digital Financial Risk and Control (KD) ranges from 0.609 to

0.808, with moderate to strong loadings. While factor loading shows how strongly each observed variable is associated with a latent factor, the study must analyze Cronbach's alpha, composite reliability, and Average Variance Extracted (AVE) of digital user experience, brand perception, and customer loyalty.

Table 2. Loadings distribution of digital financial literacy

Knowledge and Use of Digital Financial Products and Services (KU)		Awareness of Digital Financial Risk (AD)		Knowledge of Consumer Rights and Redress Procedures (KC)		Knowledge of Digital Financial Risk and Control (KD)	
Items	**Loadings**	**Items**	**Loadings**	**Items**	**Loadings**	**Items**	**Loadings**
KU2	0.603	AD1	0.779	KC1	0.696	KD1	0.765
KU4	0.795	AD2	0.863	KC2	0.788	KD2	0.672
KU5	0.8	AD3	0.796	KC3	0.737	KD3	0.808
KU6	0.753	AD4	0.721	KC4	0.813	KD5	0.717
KU7	0.612	AD5	0.787	KC5	0.829	KD6	0.759
KU8	0.761	-	-	KC6	0.741	KD7	0.755
KU9	0.796	-	-	KC7	0.83	KD8	0.787
KU10	0.832	-	-	KC8	0.824	KD9	0.609
-	-	-	-	KC9	0.778	KD10	0.639
-	-	-	-	KC10	0.841	-	-

Findings reveal that while faculty members generally demonstrate strong digital financial literacy across knowledge, awareness, and rights-related dimensions, some areas such as risk control still require attention. First, faculty development programs may integrate targeted workshops on advanced risk management strategies to reinforce weaker areas reflected in moderate loadings. Second, higher education institutions can embed digital financial literacy modules into professional development and training programs to ensure that educators remain well-informed and capable of modeling responsible digital finance practices for students. Third, policymakers and financial institutions may consider collaborative initiatives that provide faculty with practical resources, simulations, or digital safety tools, thereby empowering them as both users and advocates of secure and responsible financial practices. These implications underscore the value of enhancing digital financial literacy not only for personal financial well-being but also for cultivating a financially aware academic community.

The KU exemplifies an average variance extracted (AVE) value of 0.560, surpassing the recommended threshold of 0.5, confirming concurrent validity while showing strong internal consistency reliability (Cronbach's Alpha = 0.888) and composite reliability (CR = 0.907). AD has an AVE value of 0.625, indicating acceptable validity and high internal consistency reliability (Cronbach's Alpha = 0.851) and CR (0.855).

KC has Cronbach's Alpha =0.932, indicating high consistency reliability with a CR of 0.939, and an AVE of 0.623 which signifies excellent reliability and highly cohesive items. Meanwhile, KD indicates high internal consistency reliability (Cronbach's Alpha = 0.888) and CR (0.899), but an AVE value of 0.527 is slightly lower and may benefit from item refinement. presents excellent convergent validity, and the behavior construct is sharply defined and internally consistent (Cronbach's alpha=0.874, composite reliability=0.874, and average variance extracted (AVE)=0.799). Lastly, the mediating factors (MF) show high internal consistency reliability (Cronbach's Alpha = 0.856) and CR (0.872), alongside an AVE value of 0.697; mediating variables are well captured and conceptually cohesive.

Table 3. Cronbach's alpha, composite reliability, and Average variance extracted (AVE)

Construct	Cronbach's alpha	Composite reliability (CR)	Average variance extracted (AVE)
Knowledge and Use of Digital Financial Products and Services (KU)	0.888	0.907	0.560
Awareness of Digital Financial Risk (AD)	0.851	0.855	0.625
Knowledge of Consumer Rights and Redress Procedures (KC)	0.932	0.939	0.623
Knowledge of Digital Financial Risk and Control (KD)	0.888	0.899	0.527
Financial Behavior (FB)	0.874	0.874	0.799
Mediating Factors (MF)	0.856	0.872	0.697

Note: CR > 0.70 (Byrne (2016))

Overall, all constructs meet the recommended thresholds, supporting the reliability and convergent validity of the model. This creates a solid measurement foundation for analyzing the structural relationships among digital financial literacy, financial behavior, and mediating factors.

While the measurement model demonstrates reliability and validity for all constructs, the Heterotrait-Monotrait Ratio of Correlations (HTMT) compares the average correlations between indicators of different constructs. According to Hair (2021), HTMT values below the stricter threshold of 0.85 confirm strong discriminant validity, while values close to but not exceeding 0.85 remain acceptable [15]. For the outcome constructs, Financial Behavior (FB)

Table 4. Discriminant Validity (HTMT)

	Knowledge and Use of Digital Financial Products and Services (KU)	Awareness of Digital Financial Risk (AD)	Knowledge of Consumer Rights and Redress Procedures (KC)	Knowledge of Digital Financial Risk and Control (KD)	Financial Behavior	Mediating Factors
Knowledge and Use of Digital Financial Products and Services (KU)						
Awareness of Digital Financial Risk (AD)	0.511					
Knowledge of Consumer Rights and Redress Procedures (KC)	0.424	0.488				
Knowledge of Digital Financial Risk and Control (KD)	0.640	0.690	0.797			
Financial Behavior (FB)	0.748	0.359	0.550	0.590		
Mediating Factors (MF)	0.611	0.515	0.508	0.694	0.840	

Heterotrait-monotrait (HTMT) < 0.90 (Gold et.al., 2001)

Results indicate that Awareness of Digital Financial Risk (AD) and Knowledge and Use of Digital Financial Products and Services (KU) have an HTMT value of 0.511, well below the 0.85 threshold, signifying that the two constructs are conceptually distinct. Similarly, Knowledge of Consumer Rights and Redress Procedures (KC) and KU (0.424), as well as KC and AD (0.488), show moderate correlations, reinforcing their distinctiveness. The correlations between Knowledge of Digital Financial Risk and Control (KD) and KU (0.640), KD and AD (0.690), and KD and KC (0.797) are higher but remain below 0.85, confirming adequate discriminant validity while acknowledging conceptual proximity among risk-related constructs.

With respect to Financial Behavior (FB), the construct demonstrates discriminant validity with KU (0.748), AD (0.359), KC (0.550), and KD (0.590). These results confirm that while financial behavior is influenced by various aspects of digital financial literacy, it represents a unique outcome variable rather than an overlapping construct.

Finally, Mediating Factors (MF) demonstrate HTMT values of 0.611 with KU, 0.515 with AD, 0.508 with KC, and 0.694 with KD—all below the 0.85 threshold and therefore acceptable. The highest observed correlation is between MF and FB (0.840), which is relatively strong but still within the acceptable limit. This indicates that while mediating variables and financial behavior are closely linked, they remain conceptually distinguishable, supporting the validity of including them as separate constructs in the model.

Overall, the HTMT results confirm that all constructs meet the stricter discriminant validity threshold (HTMT < 0.85), ensuring that each construct in the study is conceptually distinct and not redundant. This establishes confidence in the measurement model's robustness, validating its use in further testing the hypothesized structural relationships among digital financial literacy, financial behavior, and mediating factors.

Table 5. Assessment of Structural Model

Hypotheses	**Structure**	***β***	**f^2**	**SE**	***p*-value**	**Remarks**
H1	KU => FB	0.510	0.645	0.193	0.001	**Significant**
H2	AD => FB	-0.137	0.001	0.189	0.331	Not Significant
H3	KC => FB	0.342	0.487	0.227	0.040	**Significant**
H4	KD => FB	-0.445	0.158	0.244	0.102	Not Significant
H5a	KU => MF => FB	0.220	0.312	0.145	0.038	**Significant**
H5b	AD => MF => FB	0.050	0.214	0.181	0.710	Not Significant
H5c	KC => MF => FB	0.031	0.002	0.204	0.834	Not Significant
H5d	KD => MF => FB	0.336	0.153	0.235	0.201	Not Significant

For H1, KU => FB, relationship between Knowledge and Use of Digital Financial Products (KU) and Services and Financial Behavior (FB), presents that KU positively influences FB with the path coefficient value of 0.510, indicating the strength and direction of the relationship between KU and FB. The path coefficient value of 0.510 indicates a moderately strong positive relationship. As KU increases, FB tends to increase as well. The moderately strong effect indicates that as faculty members improve their knowledge and use of digital financial products, their financial behavior also improves. Faculty members who are more familiar and actively use digital financial tools show better financial behaviors such as saving, spending wisely, and investing. The large effect size ($f^2 = 0.645$) further suggests that KU is a powerful predictor of FB, underscoring the practical importance of digital product knowledge in shaping behavior. Moreover, it implies that the standard error (SE) is slightly lower than the other norm, suggesting that the prediction is consistently unbothered; however, the standard error of the path coefficient, 0.193, reflects variability around the estimate. The p-value of 0.001 further establishes the statistical significance of the association; thus, the result is highly significant and robust evidence against the null hypothesis. These results confirm that KU is a statistically significant predictor of FB.

For H2, AD => FB, relationship between Awareness of Digital Financial Risk (AD) and Financial Behavior (FB), AD indicates a weak negative relationship with FB, with a path coefficient value of -0.137. Additionally, the standard error of the path coefficient of 0.189 is relatively high compared to the beta, suggesting instability in the estimate. The small standard error and a significant p-value of 0.331 suggest no substantial evidence to support the hypothesis. This implies that risk awareness alone does not directly translate into positive financial behavior. The very small effect size ($f^2 = 0.001$) highlights that AD contributes minimally to predicting FB, suggesting that awareness must be paired with applied knowledge or control mechanisms to influence behavior effectively. Thus, the data does not support a meaningful link between AD and FB.

For H3, KC => FB, Knowledge of Consumer Rights and Redress Procedures (KC) significantly influenced Financial Behavior (FB) with the path coefficient value of 0.342, indicating the moderate positive relationship of KC and FB, that is, as KC increases, FB also increases. This indicates that faculty who understand consumer rights and redress procedures are more likely to practice responsible and proactive financial behavior. Faculty who are knowledgeable of their rights as digital financial consumers are more likely to engage in protective and proactive financial behaviors. As to the standard error, a value of 0.227 is slightly high, but still within an acceptable range for interpretability. A p-value of 0.040 suggests a reliable effect as it is statistically significant (below the 0.05 threshold). The moderate effect size ($f^2 = 0.487$) suggests that KC meaningfully contributes to shaping FB, particularly in empowering users to act when confronted with digital financial issues. Thus, the data signify that KC is a meaningful predictor of FB.

Meanwhile, H4 presents the relationships of KD => FB, Knowledge of Digital Financial Risk and Control (KD) and Financial Behavior (FB) with the path coefficient value of -0.445, indicating the moderate negative relationship of KD and FB. As KC increases, FB decreases. As to the standard error, a value of 0.244 is relatively high, suggesting some variability in the estimate. A p-value of 0.102 indicates a statistically nonsignificant result. This means that while faculty members may be aware of control measures, such knowledge alone does not guarantee positive financial behavior. Despite a moderate effect size ($f^2 = 0.158$), the lack of statistical significance suggests that while participants may possess risk-control knowledge, it may not directly influence their financial behavior. This could indicate a gap between theoretical knowledge of risk control and its actual application in practice. Thus, no substantial evidence supports KD as a predictor of FB.

Regarding the mediating effects, (H5a–H5d), only H5a was significant. H5a, KU => MF => FB means that Knowledge and Use of Digital Financial Products (KU) influences Mediating Factors (MF), affecting Financial Behavior (FB) with the path coefficient value of 0.220, indicating a positive mediation pathway in which KU boosts MF, which enhances FB. However, SE = 0.145 indicates Moderate variability in the estimate. The p-value of 0.038 further implies that the results are significant, thus the data support the mediation effect. H5b, AD => MF => FB, were also analyzed with the path of Awareness of Digital Financial Risk **(**AD) influences Mediating Factors (MF), which affects Financial Behavior (FB). Although the indirect impact of affective essence on FB via MF was moderately strong ($\beta = 0.50$), the result was not statistically significant (SE = 0.181, $p = 0.710$), suggesting that MF may not be a mediating effect of AD and FB. Further, H5c shows the path KC => MF => FB, meaning Knowledge of Consumer Rights and Redress Procedures (KC) influences MF and affects FB. As observed in Table 7, although KC is conceptually linked to MF, the indirect effect was minimal and statistically insignificant ($\beta = 0.031$, SE = 0.204, $p = 0.834$), suggesting that MF may not be a mediating effect of KC and FB. Lastly, H5d shows the path of KD => MF => FB, which implies that KD influences MF and affects FB.

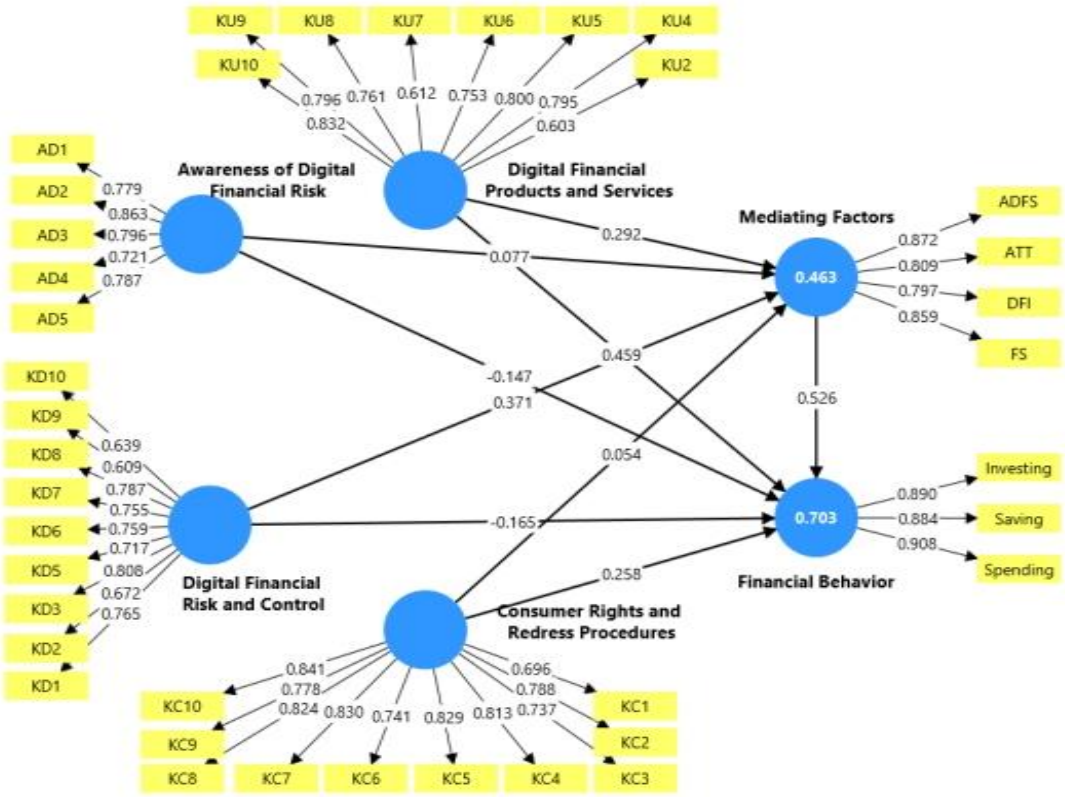
Results suggest that although the indirect effect of Knowledge of Digital Financial Risk and Control (KD) on FB via MF is moderately strong ($\beta = 0.336$), the result is not statistically significant (SE = 0.235, $p = 0.201$), indicating that MF alone may not mediate KD towards FB. In summary, results suggest that while knowledge and awareness are important, their influence on behavior through mediating variables may be limited, unless supported by more practical or experiential interventions.

To further validate the model, Table 6 presents the Variance Inflation Factor (VIF) results for all items under the four constructs, Knowledge and Use of Digital Financial Products and Services (KU), Awareness of Digital Financial Risk (AD), Knowledge of Consumer Rights and Redress Procedures (KC), and Knowledge of Digital Financial Risk and Control (KD). All recorded VIF values fall well below

the accepted threshold of 5.0, with values ranging between 1.000 and 2.011.

Table 6. Variance Inflation Factor (VIF) results.

Knowledge and Use of Digital Financial Products and Services (KU)		Awareness of Digital Financial Risk (AD)		Knowledge of Consumer Rights and Redress Procedures (KC)		Knowledge of Digital Financial Risk and Control (KD)	
Items	**Loadings**	**Items**	**Loadings**	**Items**	**Loadings**	**Items**	**Loadings**
KU2	1.518	AD1	1.253	KC1	1.456	KD1	1.317
KU4	1.000	AD2	1.327	KC2	1.420	KD2	1.764
KU5	1.306	AD3	1.318	KC3	1.316	KD3	1.000
KU6	1.511	AD4	1.601	KC4	1.432	KD5	1.367
KU7	1.338	AD5	1.322	KC5	1.463	KD6	1.306
KU8	1.610	-	-	KC6	1.000	KD7	1.228
KU9	1.365	-	-	KC7	1.000	KD8	1.300
KU10	1.467	-	-	KC8	2.011	KD9	1.519
-	-	-	-	KC9	1.429	KD10	1.739
-	-	-	-	KC10	1.335	-	-



VIF < 5.00

Figure1: Structural model

These results signify that the indicators of each construct are not highly correlated with one another, thereby confirming the absence of multicollinearity. In structural equation modeling (SEM), low VIF values strengthen the validity of the model since each item uniquely contributes to measuring its construct. For instance, the highest loading was found in KC8 (2.011), which is still within the acceptable limit, while several items such as KU4, KC6, and KC7 recorded the lowest value of 1.000, demonstrating independent contributions.

The absence of multicollinearity supports the stability and reliability of the estimated path coefficients in the structural model. This means that the predictive relationships found between digital financial literacy constructs and financial behavior can be interpreted with confidence, knowing that the results are not distorted by overlapping variance among the predictors.

4. CONCLUSION AND RECOMMENDATIONS

In conclusion, the findings revealed that knowledge and use of digital financial products and knowledge of consumer rights and redress procedures significantly influence responsible financial behavior, particularly in saving, spending, and investing practices. On the other hand, awareness of risks and risk-control knowledge did not show significant direct effects, suggesting that awareness alone is

inadequate without practical application. Mediation analysis further indicated that only knowledge and use of digital products influenced financial behavior through mediating factors such as self-efficacy and attitudes toward technology. Overall, the results highlight that applied knowledge and consumer protection awareness are stronger predictors of financial behavior than risk-related awareness, pointing to the importance of practical engagement and empowerment in shaping financial decision-making.

In the light of these findings, it is recommended that universities may enhance faculty members' digital financial literacy through structured training that emphasizes on practical use of digital tools for budgeting, saving, investing, and exercising consumer rights. Faculty may also be empowered as literacy advocates by integrating DFL into teaching, research, and extension activities, supported by partnerships with financial institutions and government agencies. Policy makers are encouraged to institutionalize national programs that include digital financial literacy into higher education and professional development, while also strengthening consumer protection laws, fraud reporting mechanisms, and public awareness campaigns. Financial service providers, on the other hand, should design secure, user-friendly platforms and offer continuous education through webinars, tutorials, and responsive support systems. Stronger redress procedures, proactive fraud alerts, and collaborations with universities can further build trust and improve financial engagement.

A coordinated effort among universities, policy makers, and financial service providers is essential to ensure that faculty members remain adaptive, resilient, and empowered in navigating the digital financial landscape responsibly.

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