

**How digital financial literacy impacts financial behavior in Jordanian millennial generation****Laith Abdallah Aryan<sup>a\*</sup>, Alaa Alsharif<sup>b</sup>, Enass Khalil Alquqa<sup>b</sup>, Mohannad Mohammad Al Ebbini<sup>a</sup>, Nidal Alzboun<sup>c</sup>, Muhammad Turki Alshurideh<sup>d</sup> and Sulieman Ibraheem Shelash Al-Hawary<sup>e</sup>**<sup>a</sup>Department of Accounting, Ajloun National University, Jordan<sup>b</sup>College of Arts, Humanities and social sciences, University of Fujairah, UAE<sup>c</sup>The University of Sharjah, UAE<sup>d</sup>Department of Marketing, School of Business, the University of Jordan, Amman 11942, Jordan<sup>e</sup>Department of Business Administration, Business School, Al al-Bayt University, Jordan**CHRONICLE****ABSTRACT***Article history:*

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The emergence of financial technology has resulted in the rapid expansion of digital financial services and products that are accessed and delivered through digital channels. However, such technology has also exposed changes in the financial behaviors of the millennial generation. Hence, this article analyzes how digital financial literacy impacts financial behavior in the Jordanian millennial generation. A survey method was performed with 627 individuals of millennial generations from several cities in Jordan. Structural equation modeling (SEM) was conducted to estimate the relationship between the research variables. The findings revealed that digital financial literacy with its dimensions, i.e., digital knowledge, digital experience, digital skills, and digital awareness had a positive impact on financial behavior. This article depicts the level of digital financial literacy among Jordan's millennial generation. Therefore, it suggested a set of recommendations revolving around developing and promoting financial education programs for Jordanian millennials in collaboration with educational institutions, government agencies, and financial institutions.

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**1. Introduction**

Inspection of financial behavior is essential to individuals, companies, and policymakers. Understanding this behavior helps identify patterns, trends, and factors that influence financial decision-making, allowing the development of strategies and interventions to promote positive attitudes and promote financial well-being (Sabri et al., 2021). Financial behavior encompasses a wide range of decisions, including saving, spending, investing, borrowing, and budgeting (Fan, 2020). Moreover, it is influenced by various factors such as personal values, beliefs, attitudes, and socio-economic conditions (Ogunlusi & Obademi, 2021). Individuals often have biases, emotions, and cognitive limitations that influence their financial decision-making. Ballis and Verousis (2022) indicated that these influences may include loss aversion, current bias, herd mentality, and overconfidence. Being aware of these behavioral biases can help individuals and organizations make better financial choices and avoid common pitfalls (Grable et al., 2020).

Digital financial literacy is crucial for individuals and businesses to make educated financial decisions and protect themselves from possible hazards in an increasingly digital environment, where financial transactions, services, and information are largely done online (Lyons & Kass-Hanna, 2021). In the digital age, digital financial literacy through the power of technology is essential to manage people's finances, make wise financial decisions, and achieve improved financial well-being (Kumar et

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al., 2023). Several activities, such as educational programs, online resources, and digital literacy campaigns, are required to improve digital financial literacy (Setiawan et al., 2022). Governments, financial institutions, and nonprofit organizations frequently work collaboratively to provide training and assistance to both customers and businesses, assisting them in navigating the intricacies of the digital financial world and making better choices (Angeles, 2022).

Jordanian millennials are increasingly using digital financial services and technologies, as are their counterparts throughout the world. However, further research is needed to determine how Jordanian millennials' digital financial literacy influences their financial behavior. Digital financial literacy refers to the knowledge, skills, and understanding required to use and use digital financial products and services effectively. This study gives insight into the present state of digital financial literacy among Jordanian millennials, which could assist in the development of tailored educational programs and initiatives. Investigating the association between digital financial literacy and financial behavior might be useful in identifying the factors that contribute to and obstruct appropriate financial behavior, allowing policymakers and financial institutions to devise interventions that address these barriers. Furthermore, the research findings may contribute to broadening awareness of the significance of digital financial literacy in affecting financial behavior in developing countries, particularly among young people, and can serve as a foundation for future research in this area.

## **2. Literature Review and Hypotheses Development**

### *2.1 Digital Financial Literacy*

Digital financial literacy encompasses the knowledge, skills, and understanding necessary to properly navigate and use digital financial products and services. Includes the ability to access, assess, and apply digital resources to manage personal or organizational finances in a digital setting (Setiawan et al., 2022). Digital financial literacy goes beyond standard financial literacy by concentrating primarily on the digital side of financial management (Rahayu et al., 2023). It acknowledges the expanding significance of technology in financial transactions, services, and information transmission (Kumar et al., 2023). Gallego-Losada et al. (2021) express digital literacy as a willingness to use digital technologies to solve issues, create new initiatives, improve communication, and prepare for the difficulties of an increasingly digital world. As stated by Jiguo and Wenyan (2023), digital literacy is defined as the use of information and communication technology to obtain, evaluate, generate, and transmit financial information, which necessitates cognitive and technical abilities.

Digital financial literacy develops on four dimensions mentioned by Liew et al. (2020). Digital knowledge describes the comprehension and ability to explore and use digital technology, tools, and resources to make financial decisions. It includes the capacity to access, analyze, generate, and share financial information utilizing digital platforms and devices (Lyons & Kass-Hanna, 2021). Digital experiences are exchanges, engagements, and total encounters through digital platforms to implement financial services. They cover users' holistic experiences with digital technologies such as websites, smartphone apps, and social media platforms (Angeles, 2022). Digital awareness indicates an individual's understanding, consciousness, and knowledge of the financial digital world, including its technology, hazards, possibilities, and effect on numerous parts of life. It entails being knowledgeable about digital tools, resources, and platforms, as well as being aware of the consequences and issues related to financial digital technology (Setiawan et al., 2022). Digital skills are the competencies necessary to properly use financial digital technology, tools, and resources. They cover a broad spectrum of abilities that allow people to explore, interact, create, and problem-solve in the financial digital realm (Kumar et al., 2023).

### *2.2 Financial Behavior*

Individuals should understand and manage their financial behavior to attain financial stability, security, and long-term financial goals. It entails building strategies for making educated financial decisions and adopting sustainable financial habits to successfully manage resources and accomplish targeted financial results (Sarairoh et al., 2022; Ballis & Verousis, 2022). Bhargava et al. (2022) suggested that financial behavior relates to people's behaviors, decisions, and patterns surrounding the management, usage, and allocation of financial resources. Personal ideas, attitudes, values, social and economic situations, and cultural conventions all have an influence on financial behavior (AL-Qudah et al., 2022; Sabri et al., 2021). It represents how people define their financial priorities and make decisions in order to attain financial well-being (Aryan et al., 2022; Kusnayain et al., 2023). Fan (2020) argued that excessive spending, impulsive buying, living above one's means, amassing excessive debt, neglecting to save or prepare for the future, and participating in hazardous or speculative investments without sufficient information or understanding are all examples of negative financial behavior.

Financial behavior according to Kim et al. (2019) is governed by three dimensions. Saving behavior is defined as an individual's habits, choices, and patterns related to the distribution and accumulation of money resources for future usage or emergencies. It includes the practice of saving a portion of one's earnings or financial resources rather than using them right away (Sharma & Sarma, 2022). Otherwise, Individuals' behaviors, judgments, and patterns surrounding the usage and allocation of money resources for acquiring goods or services are referred to as spending behavior. It includes the decisions and habits people make when it comes to spending money (Ogunlusi & Obademi, 2021). Investment behavior defines an individual's conduct, decisions, and processes regarding investing financial resources with the intention of earning returns or

accomplishing specified financial objectives. It involves the decisions and methods that individuals use when allocating money to various investment opportunities (Bhargava et al., 2022).

### 2.3 Digital Financial Literacy and Financial Behavior

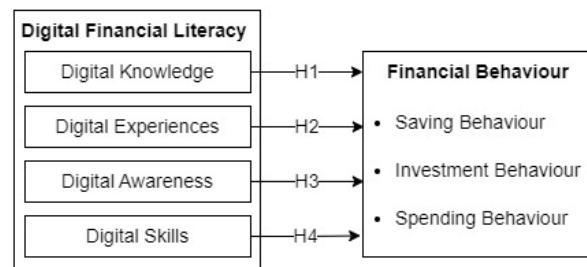
Digital financial literacy potentially enables Jordanian millennials to make informed financial decisions, access digital financial services, and protect themselves from financial risks to confidently navigate the digital financial landscape. In this context, Setiawan et al. (2022) investigated the impact of digital financial literacy on the current saving and spending behavior of Indonesian millennials. The study revealed that digital financial literacy is affected by the social and economic status of individuals and also positively affects current saving and spending behavior. Similarly, Rahayu et al. (2022) explored the association between digital financial literacy and financial behaviors, which include saving, spending, and investing, among millennials in Indonesia. Using structural equation modeling analysis of 741 participant responses, digital financial literacy had an advantageous impact on saving, spending, and investing behavior. 19. Azeez and Akhtar (2021) attempted to elucidate the determinants affecting the degree of adoption of digital financial literacy in rural areas of Aligarh district in India by analyzing 500 responses using a normal square multiple regression model. The study found that the factors of age, gender, income, religion, social groups, family size, marital status, educational level, occupation, etc. significantly influence digital financial literacy. Based on this literature review, the current research hypotheses could be formulated to include:

**Hypothesis 1 (H1):** Digital knowledge has a positive impact on financial behavior.

**Hypothesis 2 (H2):** Digital experiences have a positive impact on financial behavior.

**Hypothesis 3 (H3):** Digital awareness has a positive impact on financial behavior.

**Hypothesis 4 (H4):** Digital skills have a positive impact on financial behavior.



**Fig. 1.** Research Framework.

## 3. Methods

### 3.1 Sample and Data Collection

The research utilized a cross-sectional design to investigate the association between digital financial literacy and financial behavior within the millennial generation in Jordan. The research population involved individuals born between 1981 and 1996, ensuring their membership in the millennial generation through mandatory demographic verification.

**Table 1**  
Sample Profile (N= 627).

Variables	Categories	N	%
Gender	Male	388	61.9%
	Female	239	38.1%
Educational Level	Less than Diploma	68	10.8%
	Diploma	120	19.1%
	Bachelor's	417	66.6%
	Postgraduate	22	3.5%
Sector	Governmental	291	46.4%
	Private	151	24.1%
	Military	185	29.5%
Salary in Jordan Dinar	Less than 1000	310	49.4%
	From 100 – less than 1500	246	39.2%
	From 1500 – less than 2000	42	6.7%
	2000 and higher	29	4.7%

This research approach entailed the collection of primary data via a questionnaire distributed among the research population over a specified timeframe, following the methodology outlined by Mukherjee (2019). To facilitate data collection, an electronic questionnaire was meticulously crafted and made accessible through prominent public social platforms like LinkedIn

and Facebook. The data collection link extended from April 25, 2023, to June 12, 2023. Employing a convenience sampling strategy, a total of 850 questionnaires were diligently completed by respondents. However, the dataset included 223 responses marked by a repetitive pattern, necessitating their removal from the overall dataset. Accordingly, the final dataset for this research included 627 valid responses, constituting 73.7% of the total questionnaires initially received. This rigorous curation process ensured the quality and reliability of the data analyzed. The demographic characteristics of the final research sample are concisely presented in Table 1, offering a comprehensive summary of the participants' profiles.

### *3.2 Measures*

The research questionnaire was meticulously constructed through a comprehensive review of pertinent literature. It was intentionally designed in an electronic format to align with environmental sustainability standards, emphasizing the authors' dedication to responsible research practices and minimizing paper usage. The questionnaire consisted of three sections, in addition to an introductory section that underscored the authors' unwavering commitment to research ethics. The first section of the questionnaire was dedicated to capturing categorical variables which defined the demographic characteristics of the research's respondents. These variables provided crucial contextual and economic information about the survey participants. The subsequent sections of the questionnaire were designed to collect data on the research variables of interest. These variables were assessed using a five-point Likert scale, enabling respondents to rate items on a spectrum ranging from "strongly disagree" (assigned a value of 1) to "strongly agree" (assigned a value of 5). This scaling system allowed for nuanced measurement and interpretation of respondents' attitudes and opinions related to the research variables, enhancing the depth of data collected and analyzed in the study.

The third section of the questionnaire focused on the independent variable, namely, digital financial literacy. This construct was assessed through the inclusion of 15 items drawn from the work of Liew et al. (2020). These items were organized into four distinct first-order constructs. Digital knowledge encompassed four items that probed respondents' comprehension of digital financial concepts and principles, e.g., I have knowledge of online security practices to protect my financial information when using digital devices and platforms. Digital experiences comprise three items, this construct delved into respondents' prior experiences with digital financial tools and platforms, for instance, I frequently use mobile payment apps or platforms such as Western Union and PayPal to send or receive money. Digital awareness, with four items, explained the extent of respondents' awareness regarding digital financial opportunities and risks, e.g., I am aware of the potential risks associated with sharing personal and financial information online, such as phishing scams or identity theft. Digital skills consisted of four items that evaluated respondents' proficiency in utilizing digital tools for financial purposes, for example, I have used digital tools or software to create a budget, track expenses, or analyze my financial habits.

The fourth section of the questionnaire pertained to the dependent variable, which is financial behavior. This construct was evaluated using 12 items adopted from research by Kim et al. (2019). These items were methodically divided into three first-order constructs. Saving behavior comprises four items, this category assessed the respondents' habits and practices related to saving money, e.g., I am comfortable with my current level of savings which fulfils unexpected expenses or emergencies if will occur. Investment behavior, with four items, this construct explored respondents' tendencies and actions regarding financial investments, for example, In the past year, I have made investment decisions primarily for short-term gains rather than long-term goals. Spending behavior included four items that examined the respondents' patterns and decisions regarding their spending habits and financial choices, e.g., I review my monthly bills and statements to control my spending behavior.

## **4. Findings**

### *4.1 Measurement Model Evaluation*

Confirmatory Factor Analysis (CFA) serves as one of the statistical methodologies employed in the current research to assess the validity and reliability of the constructs embedded within the research instruments, particularly those associated with digital financial literacy and financial behavior. CFA represents a facet of structural equation modeling and is commonly employed when researchers possess a well-defined theoretical framework or prior understanding of the latent constructs and their interrelationships (Mohammad, 2020; Rahamneh et al., 2023; Sureshchandar, 2023). It plays a crucial role in determining whether the observed data aligns with the underlying theoretical assumptions (Boudlaie et al., 2022; Khalayleh & Al-Hawary, 2022). Through this rigorous statistical approach, the study ensures the robustness and trustworthiness of its measurement tools, contributing to the overall rigor and credibility of the research outcomes. Table 1 presents an overview of the outcomes pertaining to the validity and reliability assessments of the research instrument. This table encapsulates the findings derived from the CFA, shedding light on the instrument's performance and its alignment with the theoretical constructs under investigation. The findings presented in Table 2 elucidate a robust relationship between the observable variables and their latent constructs, as indicated by factor loadings ranging from 0.637 to 0.825. These factor loadings comfortably surpass the established lower limit of 0.50. This reaffirms the construct validity of the measurement model.

**Table 2**  
Results of Confirmatory Factor Analysis

Variables	Items	Loadings	AVE	MSV	$\sqrt{\text{AVE}}$	C.R	VIF
Digital Knowledge (DK)	DK1	0.825	0.560	0.482	0.748	0.835	1.371
	DK2	0.715					
	DK3	0.772					
	DK4	0.671					
Digital Experiences (DE)	DE1	0.732	0.586	0.435	0.765	0.809	1.228
	DE2	0.751					
	DE3	0.811					
Digital Awareness (DA)	DA1	0.702	0.558	0.468	0.747	0.834	1.182
	DA2	0.764					
	DA3	0.782					
	DA4	0.737					
Digital Skills (DS)	DS1	0.637	0.570	0.422	0.755	0.840	1.524
	DS2	0.806					
	DS3	0.791					
	DS4	0.773					
Saving Behavior (SAB)	SAB1	0.715	0.521	0.447	0.722	0.813	---
	SAB2	0.755					
	SAB3	0.734					
	SAB4	0.681					
Investment Behavior (INB)	INB1	0.733	0.532	0.465	0.729	0.820	---
	INB2	0.762					
	INB3	0.718					
	INB4	0.703					
Spending Behavior (SPB)	SPB1	0.741	0.531	0.452	0.728	0.819	---
	SPB2	0.676					
	SPB3	0.769					
	SPB4	0.725					

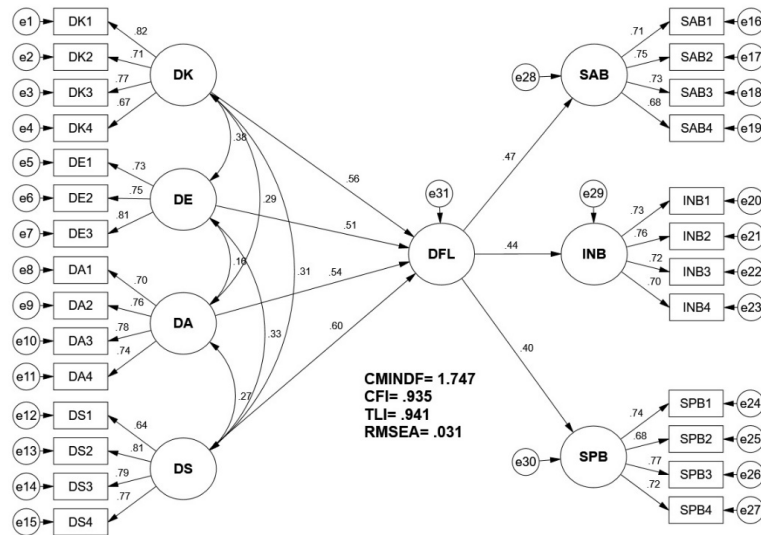
The average variance extracted (AVE) values exceeded the minimum threshold of 0.50, confirming the attainment of convergent validity, in accordance with the criteria outlined. Additionally, the measurement model demonstrated discriminant validity, as evidenced by AVE values surpassing the maximum shared variance (MSV) values the square root values of AVE exceeding the minimum threshold of 0.70.

The reliability of the measurement model was assessed using MacDonald's omega coefficients, with results falling within the range of 0.809 to 0.840. These values comfortably surpassed the 0.70 threshold typically used for assessing composite reliability, as highlighted by AlTaweel and Al-Hawary (2021). Furthermore, the independent constructs, representing different dimensions of digital financial literacy, were found to be free from multicollinearity. This conclusion is supported by the Variance Inflation Factor (VIF) values, which were well below the upper limit of 5, as recommended by Attiany et al. (2023). These results collectively affirm the robustness and reliability of the measurement model, substantiating the soundness of the research instrument used in the research.

#### 4.2 Structural Model Evaluation

The research employed structural equation modeling (SEM) to investigate the influence of digital financial literacy on the financial behavior of the Jordanian millennial generation. SEM is a powerful statistical technique that enables the examination of hypotheses concerning both direct and indirect relationships among latent constructs (Tariqa et al., 2022). Furthermore, SEM provides various fit indices to evaluate the extent to which the assumed model aligns with the observed data, enhancing the assessment of model validity and goodness of fit (Al-Rwaidan et al., 2023). Figure 2 visually represents the structural model utilized in the study, offering a graphical depiction of the relationships and pathways through which digital financial literacy impacts financial behavior within the millennial cohort. This graphical representation aids in conveying the complex interplay between these latent constructs, providing a clear and comprehensive framework for understanding the research hypotheses and their implications.

The findings derived from Fig. 2 indicate that the Chi-Squared test (CMIN/DF) yielded a value of 1.747, which falls below the widely accepted upper threshold of 3. This suggests a good fit between the assumed structural model and the observed data. Furthermore, both the Comparative Fit Index (CFI) and the Tucker-Lewis Index (TLI) surpassed the minimum threshold of 0.90, reaffirming the model's adequacy in capturing the relationships between latent constructs effectively. Additionally, the Root Mean Square Error of Approximation (RMSEA) was calculated to be 0.031, well below the maximum recommended value of 0.80. This low RMSEA value signifies that the model is consistent with the observed data and fits well, bolstering its validity. In light of these results, the structural model used to examine the impact of digital financial literacy on financial behavior in the Jordanian millennial generation is deemed to be a good fit for the data. Table 3 provides a comprehensive summary of the path coefficients extracted from the analysis, offering insights into the hypothesized relationships and their magnitudes, which help evaluate the proposed impacts of digital financial literacy on financial behavior.



**Fig. 2.** Structural Model Used to Evaluate Research's Hypotheses.

**Table 3**

Results of SEM Path Coefficients

Assumed Paths	B	S.E	$\beta$	t	p
Digital Knowledge→Financial Behavior	0.577	0.056	0.561	10.30	0.000
Digital Experiences→Financial Behavior	0.525	0.058	0.506	9.05	0.000
Digital Awareness→Financial Behavior	0.551	0.059	0.539	9.34	0.000
Digital Skills→Financial Behavior	0.624	0.058	0.602	10.75	0.000

Table 3 provides a comprehensive view of the relationships between four digital factors (Digital Knowledge, Digital Experiences, Digital Awareness, Digital Skills) and their impact on Financial Behavior. Each path coefficient represents the strength and direction of the relationship between a specific digital factor and financial behavior. The digital knowledge path coefficient of 0.577 signifies a robust and statistically significant positive relationship between individuals' digital knowledge and their financial behavior, which supports the first hypothesis. The digital experiences path coefficient of 0.525 indicates a significant positive relationship between individuals' digital experiences and their financial behavior, which supports the second hypothesis. Similarly, with the digital awareness path coefficient of 0.551, the SEM analysis highlights a notable positive link between digital awareness and financial behavior, which leads to support the third hypothesis. Finally, the digital skills path coefficient of 0.624 represents a particularly strong positive relationship between digital skills and financial behavior, which means that the fourth hypothesis was supported. In conclusion, the SEM analysis provides compelling evidence that all four examined digital factors play crucial roles in shaping individuals' financial behavior.

## 5. Discussion and Conclusion

The objective of this research is to examine the impact of digital financial literacy on the Jordanian millennial generation's financial behavior. The findings revealed that all dimensions of digital financial literacy, i.e., digital knowledge, digital experience, digital skills, and digital awareness, had a positive effect on financial behavior. Therefore, digital financial literacy equips Jordanian millennials with the knowledge and skills to make informed financial decisions. Rahayu et al. (2023) mentioned that they can access financial information online, research and compare financial products, and evaluate investment opportunities. This leads to more confident and informed financial decisions, enabling them to choose appropriate financial products, manage their financial affairs effectively, and pursue their financial goals. The capacity to engage in online banking, make mobile payments, invest in digital platforms, and access online financial tools and resources may all be improved with digital financial literacy. This enhanced access supports financial inclusion by allowing millennials to easily manage their accounts, acquire loans, and engage in financial transactions regardless of their geographic location, as found by Azeez and Akhtar (2021). Additionally, Jordanian millennials may use digital financial literacy to build and manage budgets, set financial objectives, and correctly measure their financial success. They may successfully manage their income and spending by using digital budgeting applications, online financial calculators, and expense monitoring tools. Lyons and Kass-Hanna (2021) stated that this encourages disciplined financial conduct, assists people in understanding their spending habits, and allows them to save for the future and attain their financial objectives. Digital tools and platforms may be used to automate savings, set up automatic contributions to savings accounts, and track progress toward savings objectives. This encourages millennials to save, assists them in accumulating emergency cash, and lays the groundwork for long-term financial stability and asset building. Jordanian millennials benefit from online financial education materials, courses, and interactive tools through digital

financial literacy. They may improve their financial knowledge, learn about investment methods, comprehend personal finance principles, and develop the ability to handle their funds successfully. According to Kumar et al. (2023), having access to financial education allows people to make educated financial decisions and build a solid financial foundation. On the other hand, Angeles (2022) suggested that they understand the necessity of internet security measures such as strong passwords, two-factor authentication, and safe surfing habits. This knowledge aids in the protection of their personal and financial information from cyber dangers, lowering the risk of financial fraud and identity theft.

## 6. Recommendations

The favorable influence of digital financial literacy on financial behavior is based on a variety of implications. First, develop and promote financial education programs for Jordanian millennials in collaboration with educational institutions, government agencies, and financial institutions. Digital financial literacy components should be included in these programs, offering practical skills and information relating to digital technologies, online security, budgeting, investing, and financial decision-making. Second, launch public education initiatives to emphasize the necessity of digital financial literacy among Jordanian millennials. These campaigns can use a variety of channels to promote the benefits of digital financial literacy, share success stories, and give resources for additional learning, such as social media, online platforms, and community events. Third, introduce gamification features and interactive learning platforms to make Jordanian millennials' digital financial literacy more engaging and pleasurable. Gamified applications, quizzes, and simulations may help millennials strengthen their financial knowledge, stimulate active involvement, and push them to continue their financial education path. Finally, Create or improve mobile applications and digital technologies that are tailored to the requirements and interests of Jordanian millennials. These applications may contain budgeting tools, cost trackers, investment calculators, and instructional materials to aid with financial planning, goal setting, and progress monitoring.

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