

Research Article

Re-conceptualizing financial literacy in China's higher education: An exploratory qualitative study

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With rapid economic development, financial literacy plays an increasingly important role in helping individuals navigate the complexities of modern financial systems and products. The importance of financial literacy is particularly pronounced in China, one of the largest economies in the world, especially for university students who are encountering increasing challenges in financial management. To address the lack of context-specific, up-to-date interpretations of financial literacy for Chinese university students and the lack of targeted financial education programs, this qualitative study recruited 25 students from China's higher education providers. Interview data highlighted two aspects of financial literacy: knowledge-informed financial behavior (including budgeting and expense management, savings and investments, credit and debt management, consumer rights and protection, digital financial literacy, and financial security) and financial attitude (proactive attitude, responsible attitude, future-oriented attitude, and adaptability). Furthermore, academic and extracurricular support, enhanced accessibility of financial education, collaborations with financial institutions, and the role of faculty advisors were identified as important resources that higher education providers can offer to enhance students' financial literacy. Implications for higher education providers include the need to consider students' needs and challenges when offering financial education opportunities and facilitating collaboration with stakeholders.

Keywords: China; Financial literacy; Financial skills; Higher education; University students

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1. Introduction

The importance of financial literacy has never been more pronounced than in the aftermath of the COVID-19 pandemic. The global crisis has underscored the need for individuals to manage their finances wisely, navigate economic uncertainties, and make informed financial decisions (Yulfiwandani et al., 2022). Financial literacy empowers individuals with the knowledge and skills necessary to handle financial challenges, secure their economic future, and contribute to broader economic stability (Juita, 2022; Shaharuddin et al., 2021). As economies worldwide strive to recover, enhancing financial literacy has become a priority for governments, educational institutions, and communities.

In China, financial literacy is particularly crucial due to several factors. As the world's second-largest economy, China is experiencing rapid economic transformation and integration into the

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global market. The complexity and accessibility of financial products and services have increased, necessitating a population that is financially knowledgeable and capable of making sound financial decisions (Mei, 2022; Wu & Ma, 2022). This need is underscored by various national policies and initiatives, such as the “Outline of the National Medium- and Long-Term Education Reform and Development Plan (2010-2020),” which emphasizes the importance of improving citizens’ financial literacy to support sustainable economic growth (Li, 2023).

For Chinese university students, financial literacy holds significant importance. Unlike previous generations, today’s students are exposed to a variety of financial products such as credit cards, online payment systems, and various investment options (Yao et al., 2022). They must navigate these financial decisions largely on their own, often without the direct supervision of their parents. University life typically marks the transition to financial self-sufficiency, making it a critical period for instilling good financial habits. With the rising costs of education and living expenses, students need to be adept at budgeting, saving, and avoiding debt (L. Li, 2024). Their stage of life, characterized by this newfound autonomy and exposure to complex financial products, makes them particularly vulnerable to financial missteps (Guan, 2022). Unlike older adults who may have more experience and resources, or younger students who still rely heavily on parental guidance, university students must navigate a critical period of financial independence. This unique position underscores the importance of targeted financial education for this group, as their financial behaviors and decisions can have long-term implications on their future stability and success (Cheng & Liu, 2022).

Considering the dynamic nature of China’s economic development, it is imperative to reconceptualize financial literacy to align with current realities. Although there are many established financial literacy frameworks in academic literature (e.g., Quang & Anh, 2019; Rudeloff, 2019; Schuhen & Schürkmann, 2014; Świecka, 2019), those primarily developed in Western contexts or for general populations may not provide a nuanced understanding relevant to China’s specific situation and the unique needs of its university students. There is a clear gap in the literature for a financial literacy framework that considers China’s socio-economic environment and the specific challenges faced by Chinese university students.

Thus, this study aims to fill this gap by exploring the perceptions of financial literacy among Chinese university students and identifying the resources that higher education providers can offer to enhance financial literacy. Using a qualitative research design, this study seeks to answer the following research questions:

RQ 1) What do Chinese university students perceive as important aspects of financial literacy and the corresponding skills required?

RQ 2) What resources and support can higher education providers [HEPs] offer to improve the financial literacy of their students?

By addressing these questions, the study endeavors to contribute to a more relevant and effective conceptualization of financial literacy in the context of China’s higher education, ultimately aiding in the development of financially capable graduates ready to thrive in a complex economic landscape.

2. Literature Review

According to Mistrean (2024), financial literacy generally refers to “people’s ability to understand how money works: how it is earned, managed, and invested” (p. 27). This definition, though simple, sheds light on a broad spectrum of skills and knowledge essential for effective financial management. Lusardi and Mitchell (2014) emphasize that financial literacy encompasses knowledge of financial concepts and the ability to apply such knowledge to make informed and effective financial decisions. The importance of financial literacy lies in its impact on individuals’ ability to navigate the complexities of the financial world, ultimately influencing their financial health and stability (Sahadeo, 2018; Zokaityte, 2017).

Financial literacy has been approached in various ways. One influential framework is proposed by Lusardi and Mitchell (2011), focusing on three core areas of financial literacy: basic financial knowledge (understanding fundamental financial concepts), advanced financial knowledge (understanding more complex concepts), and numeracy skills (the ability to perform basic mathematical operations related to financial decisions). This framework highlights the layered complexity of financial literacy, from basic to advanced levels of understanding and application. Lusardi and Mitchell's (2011) proposal has been well reflected in the framework proposed by the Organisation for Economic Co-operation and Development (2013). It identifies four key dimensions of financial literacy: financial knowledge (understanding basic financial concepts and having the ability to apply this knowledge to financial decisions), financial behavior (exhibiting behaviors that lead to sound financial decisions), financial attitudes (having a positive attitude towards financial planning and long-term financial goals), and financial skills (the ability to manage personal finances effectively). This serves as a well-established classification, with scholars (e.g., Moko et al., 2022; Quang & Anh, 2019; Ying & Jamal, 2023) in this field frequently using these dimensions to assess and analyze financial literacy levels across different populations and contexts.

However, the classifications of financial literacy vary in literature, with researchers, considering the evolving economy, continually updating the framework of financial literacy with new elements, such as digital financial literacy (understanding and effectively using digital financial services and tools) (Godlen & Cordie, 2022), behavioral finance (insights into how psychological factors and biases influence financial decision-making and behavior) (Statman, 2019), sustainability and ethical investing (knowledge about sustainable financial practices, ethical investing, and the impact of environmental, social, and governance criteria on investment decisions) (Silvola & Landau, 2021), consumer protection (understanding consumer rights and recognizing financial scams and fraud) (Dsouza & Prakash, 2023), global financial literacy (understanding global financial systems, international trade, currency exchange, and the impact of global economic events on personal finances) (Zokaityte, 2017), among others. These additional elements reflect the dynamic nature of financial literacy, recognizing the need for individuals to be equipped with the skills and knowledge to navigate an increasingly complex and interconnected financial world.

However, as mentioned, these interpretations of financial literacy have been proposed and mostly studied outside of China's context. Consequently, there is a growing recognition of the need to adapt and expand these frameworks to better reflect the unique financial environment, cultural nuances, and economic conditions prevalent in China. However, Liu et al.'s (2018), Peng's (2020), and Wang and Xing's (2021) systematic reviews of financial literacy research in China suggest that most local scholars have adopted well-established classifications of financial literacy in the global academia, such as Lusardi and Mitchell's (2011) or similar ones, neglecting how China's social, political, and cultural characteristics may impact financial literacy. Thus, according to Jin and Yuan (2019), "financial literacy is a context-based concept", and it is essential to define it "its valid measurement within the Chinese context" (p. 147).

For Chinese university students, as mentioned, they represent a unique cohort because they face more challenges than previous generations or other age groups. Numerous studies indicate that Chinese university students have low financial literacy; however, how they have approached this notion remains under investigation. For example, Cheng and Liu (2022), adopting a survey approach, analyzed 1,792 students' subjective and objective financial literacy. The former focused on students' confidence in using debit and credit cards and managing daily expenses, while the latter assessed knowledge about interest rates, inflation, bonds, mortgages, stocks, credit cards, and collateral. Although the study indicates university students' less-than-satisfactory financial literacy, a concern is that Chinese university students, due to their financial dependence on their parents, may not be using credit cards, purchasing bonds and stocks, or engaging in mortgages or collateral (Zhai et al., 2021). Similarly, in the quantitative research by Guan and Zhang (2023) and Yin and Dong (2020), although the researchers acknowledged the importance of contextualizing

financial literacy for university students, they still approached it from several less related perspectives, such as financial knowledge about purchasing financial products (e.g., bonds) and understanding the risk-return ratio, as well as financial awareness of responsibly using credit cards.

In contrast, the large-scale survey conducted by Shanghai Better Education Consulting Center (2015), which involved 3,361 university students across China, utilized a self-developed questionnaire that approached financial literacy through various lenses. These included income (e.g., understanding of income classification), expenses (e.g., habits of record-keeping and money management), saving (e.g., awareness of saving money), credit (e.g., situations of borrowing money), investment (e.g., understanding investment methods and risks), and insurance (e.g., perceived significance of buying insurance). This study is commendable because it accurately reflected the common financial activities undertaken by Chinese university students about a decade ago (Li, 2014; Liang, 2013; Song et al., 2015).

Nevertheless, as China's economy continues to develop, university students are increasingly exposed to a variety of financial activities and products (J. Li, 2024). This makes it necessary to develop an up-to-date understanding of what aspects of financial literacy are deemed important (Li, 2023). With previous research mostly adopting a quantitative approach, as reflected in Wang and Xing's (2021) systematic review, utilizing a qualitative approach is essential for gaining deeper insights because it allows researchers to explore students' attitudes, beliefs, and behaviors in a more nuanced manner, providing a richer understanding of how financial literacy is perceived and practiced in their daily lives. This methodological shift can reveal important factors that quantitative surveys might overlook, such as cultural influences and personal experiences (Amiranashvili, 2023).

This context-specific and up-to-date understanding is important, especially for financial education within China's HEPs. For Chinese university students, financial education on campus, whether formal or informal, plays a crucial role in shaping their financial behaviors and attitudes (Mei, 2022). Formal financial education includes structured courses and modules integrated into the curriculum, while informal education may involve workshops, seminars, and peer-to-peer learning initiatives (Yin & Dong, 2020). However, although financial education is emphasized by national policies and initiatives (Zhang & Zhang, 2023), HEPs normally fail to effectively implement these guidelines. Often, financial education is either integrated into unrelated courses or offered as optional activities, which results in inconsistent exposure and engagement among students (Cheng & Liu, 2022; Ke, 2023). Furthermore, the curriculum is frequently outdated and does not address the rapidly changing financial landscape or the specific financial challenges faced by modern students (Hu & Wang, 2024; Lin & Zeng, 2021). Thus, understanding the aspects of financial literacy and the skills perceived to be important, as well as the resources expected to be provided by HEPs, is essential. This understanding can inform the development of targeted educational programs that effectively address the specific needs and challenges faced by Chinese university students. By identifying the key areas where students feel less confident or knowledgeable, HEPs can tailor their financial education efforts to focus on those critical aspects.

3. Methodology

The study adopted an exploratory qualitative design, which was practical because it allowed for an in-depth understanding of the nuanced perspectives and experiences of Chinese university students regarding financial literacy. This approach facilitated the exploration of complex, context-specific issues that quantitative methods might overlook, enabling the researchers to capture rich, detailed data (Hennink et al., 2020). This provided insights into students' attitudes, beliefs, and expectations related to important aspects of financial literacy skills and desired methods for improving financial literacy.

A snowball sampling technique was used to recruit participants. This method was particularly effective in reaching a diverse range of students from different academic disciplines and

socioeconomic backgrounds. However, students majoring in finance or similar areas were excluded from the study due to their expertise in financial issues (Zhang & Zhang, 2023). Initially, a few students known to the researchers were invited to participate, and these students then referred other potential participants from their networks. This approach ensured a broader and more varied sample, which was crucial for capturing a wide range of perspectives and experiences (Wu & Thompson, 2021). Consequently, 25 participants, a sample size deemed satisfying for qualitative saturation, were recruited with informed consent.

As shown in Table 1, the participants were undergraduate students from various disciplines, ages, regions of China, and types of HEPs. Particularly, the classification of disciplines adhered to the one regulated by the government, including broad areas such as law, education, science, engineering, art, among others (Qiu, 2023).

Table 1
Participants' demographic information

| <i>Variable</i> | <i>n</i> |
|------------------------------|----------|
| Gender | |
| Male | 12 |
| Female | 13 |
| Age | |
| 18-19 (Freshmen) | 4 |
| 20-21 (Sophomores) | 6 |
| 22-23 (Juniors) | 8 |
| 23-24 (Seniors) | 7 |
| Discipline | |
| Law | 3 |
| Education | 2 |
| Literature | 2 |
| History | 1 |
| Science | 6 |
| Engineering | 5 |
| Art | 3 |
| Medicine | 2 |
| Agriculture | 1 |
| Hometown | |
| City | 13 |
| Town | 7 |
| Village | 5 |
| Type of HEPs | |
| Project-985/211 universities | 3 |
| First-tier universities | 5 |
| Second tier universities | 9 |
| Third-tier universities | 5 |
| Vocational colleges | 3 |

Additionally, according to China's classification of urban and rural areas, the participants' hometowns were divided into cities, towns, and villages, representing different levels of socio-economic development (Yan et al., 2020). Moreover, the participants came from various types of HEPs, ranging from Project-985/211 universities to vocational colleges, indicating the different levels of HEPs in China (Zhang et al., 2020). This diversity allowed the study to encompass a broad spectrum of financial literacy levels and educational experiences, providing a comprehensive overview of the financial literacy landscape among Chinese university students. This variety enriched the data (Sensing, 2022), offering multiple viewpoints and experiences that contributed to a deeper understanding of the financial literacy challenges and needs of Chinese university

students. However, despite this diversity, all participants had received compulsory financial education courses and/or participated in relevant activities (e.g., financial knowledge popularization activities) as integral parts of the higher education agenda. This commonality ensured that every participant, regardless of their discipline, background, or type of institution, had some understanding of financial concepts. This shared experience provided a baseline for the study, allowing for the collection of rich and insightful data.

Semi-structured interviews were conducted online individually with the participants. An interview protocol was developed, containing basic questions regarding financial literacy and useful resources (e.g., "What challenges do you face in managing your financial issues?", "What skills do you think are important for managing your personal finances?", "What can the university do to improve your financial skills?") as well as probing questions (e.g., "Can you provide an example of a financial decision you found difficult?", "How do you usually seek information or help when facing financial problems?", "In what ways do you think the current financial education at your university is lacking?"). The interviews were designed to be flexible, allowing participants to share their experiences and perspectives in their own words. This approach ensured that the data collected was rich and detailed, capturing the complexity of students' financial literacy experiences. Each interview lasted approximately 45 to 60 minutes and was recorded with the participants' consent for later transcription and analysis.

Thematic analysis was employed to analyze the interview data, which were transcribed and translated into English, in NVivo 14.0. This method involved coding the transcriptions to identify recurring themes and patterns related to financial literacy challenges, skills, and educational needs. Particularly, the analysis followed the steps of familiarization, coding, theme development, and refinement (Hu, 2023). To ensure the trustworthiness of the research, an endeavor was made to achieve member checking. This involved sharing the preliminary findings with the participants to verify the accuracy and resonance of the themes and interpretations (Hennink et al., 2020). Furthermore, the research team conducted peer debriefing sessions where independent researchers reviewed the coding process and theme development (Hennink et al., 2020). These sessions provided an external perspective on the data analysis, helping to identify any potential biases or overlooked aspects in the initial analysis.

As a result, issues such as inconsistencies in the interpretation of certain themes were addressed, and additional nuances in the data were uncovered. For example, when identifying the themes and subthemes related to financial literacy and corresponding skills, the analysis revealed a complex interplay between students' perceived financial knowledge and their confidence in applying these skills in real-life situations. Although this insight was initially overlooked, both participants and independent researchers agreed that it could lead to a deeper exploration of the barriers students face in transitioning from theoretical understanding to practical application of financial concepts. The refined themes were then synthesized into a comprehensive framework that reflected the various dimensions of financial literacy among Chinese university students.

4. Findings

4.1. Financial Literacy

Interviews with participants disclosed two aspects of financial literacy deemed important, along with corresponding sub-themes and skills, as shown in Table 2. The first aspect was knowledge-informed financial behavior, which suggested that appropriate and responsible financial behavior was an integral part of financial literacy built on the foundation of financial knowledge. This aspect included six sub-themes: budgeting and expense management, savings and investments, credit and debt management, consumer rights and protection, digital financial literacy, and financial security. Additionally, financial attitude emerged as the other aspect of financial literacy, comprising proactive attitude, responsible attitude, future-oriented attitude, and adaptability.

Table 2
Summary of financial literacy and skills deemed important by participants

| <i>Aspect of Financial Literacy</i> | <i>Sub-Themes</i> | <i>Skills</i> |
|---------------------------------------|----------------------------------|---|
| Knowledge-Informed Financial Behavior | Budgeting and Expense Management | <ul style="list-style-type: none"> • Creating and maintaining a budget • Tracking and categorizing expenses |
| | Savings and Investments | <ul style="list-style-type: none"> • Differentiating between needs and wants • Saving money and building an emergency fund • Choosing among investment options, especially purchasing wealth management products in Alipay |
| | Credit and Debt Management | <ul style="list-style-type: none"> • Responsible use of credit-purchase and credit loan services (e.g., Huabei and Jiebei in Alipay) |
| | Consumer Rights and Protection | <ul style="list-style-type: none"> • Strategies for managing and repaying debt • Protecting consumer rights and avoiding financial scams |
| | Digital Financial Literacy | <ul style="list-style-type: none"> • Protecting personal financial information • Using digital payment methods (e.g., Alipay, WeChat Pay) |
| | Financial Security | <ul style="list-style-type: none"> • Awareness of fintech developments and their implications • Recognizing and avoiding emerging/common types of financial fraud (phishing, identity theft, scams) |
| Financial Attitude | Proactive Attitude | <ul style="list-style-type: none"> • Taking initiative to learn about and manage personal finances |
| | Responsible Attitude | <ul style="list-style-type: none"> • Seeking advice and information when needed • Being accountable for financial decisions and actions |
| | Future-Oriented Attitude | <ul style="list-style-type: none"> • Understanding the long-term impact of financial behaviors • Planning for future financial needs and goals |
| | Adaptability | <ul style="list-style-type: none"> • Valuing long-term financial stability over short-term gratification • Being willing to adjust financial plans in response to changing circumstances • Embracing new financial technologies and tools while understanding their implications |

4.1.1. Knowledge-informed financial behavior

Participants highlighted several aspects of knowledge conducive to effective financial behavior. Firstly, they emphasized the importance of budgeting and expense management, noting that this knowledge could help them create and maintain a budget, track and categorize daily expenses, and differentiate needs from wants. One participant explained, "Budgeting my monthly allowance has really helped me avoid unnecessary spending and save more efficiently." This underscores the critical role that budgeting plays in effective financial management (Billingsley et al., 2020), providing students with a clear framework for managing their money and making informed financial decisions.

Secondly, participants underscored the significance of savings and investments. They mentioned that understanding the basics of saving money and building an emergency fund, along with knowledge of interest rates and various investment options, particularly purchasing internet funds on mobile payment platforms such as Alipay and WeChat Pay (Qiang & Wu, 2019), is crucial. This includes an introduction to purchasing wealth management products in platforms like Alipay. As one participant noted, "I realized that just saving money in a bank is not enough; making investments has opened up new ways for me to grow my savings." This highlights the need for students to diversify their financial strategies to build a more robust financial future (Diachkova et al., 2020).

Thirdly, credit and debt management emerged as a critical area of knowledge. Participants expressed the need to understand credit scores, responsible use of credit-purchase and credit loan services such as Huabei and Jiebei in Alipay, and strategies for managing and repaying debt. "Managing credit products and services responsibly can really impact my financial future. It is something everyone should learn." This indicates that a solid understanding of credit can prevent financial pitfalls and enable students to build a healthy credit history (Yao et al., 2022). Consumer rights and protection were also highlighted as essential knowledge areas. Participants stressed the importance of being aware of consumer rights, recognizing financial scams, and protecting personal financial information. "Being able to spot scams and understanding my consumer rights has saved me from potential financial losses". This shows that financial literacy is not just about managing money but also about protecting oneself from financial fraud and ensuring one's consumer rights are upheld (Yin & Dong, 2020).

Digital financial literacy was another key aspect identified by participants. With the increasing use of digital payment methods and online banking, knowledge about secure online practices and digital financial tools is vital. "I'm trying to use digital payment apps safely and avoid the risks involved in online transactions... This is something every student should do." This suggests that as financial transactions become more digital, the ability to navigate these platforms securely is becoming an essential skill (Godlen & Cordie, 2022). Finally, financial security, including knowledge about insurance and how to protect against identity theft and fraud, was deemed important. Participants acknowledged that understanding different types of insurance and how to secure personal financial information could provide peace of mind. "With the increase in telecommunication fraud in China, it is important to know how to protect our information and money," maintained one participant. This emphasizes that comprehensive financial literacy includes understanding protective measures to safeguard one's financial well-being (Shaharuddin et al., 2021).

4.1.2. Financial attitude

The study also indicated that financial attitude is the other dimension of financial literacy, and participants believed it could significantly influence their financial behaviors and decisions. Firstly, a proactive attitude involves taking the initiative to learn about and manage personal finances, as well as seeking advice and information when needed. Participants highlighted that being proactive could help them stay ahead of financial challenges and make informed decisions. One participant noted, "Being proactive about my finances means I regularly check my accounts, keep up with

financial news, and always look for ways to improve my financial situation.” This proactive approach ensures that individuals are not only aware of their current financial status but are also prepared for future financial opportunities and risks (Yuliarto et al., 2024). It involves actively engaging with financial tools, resources, and learning opportunities to continuously improve financial knowledge and skills (Sahadeo, 2018). Secondly, a responsible attitude entails being accountable for one’s financial decisions and actions and understanding the long-term impact of financial behaviors. Participants expressed that having a responsible attitude helped them avoid unnecessary debt and make prudent financial decisions. One participant shared, “I make sure to think carefully before making any major purchases and always consider how it will affect my future finances.” This means that responsible individuals carefully evaluate their spending habits, avoid impulsive purchases, and consider the long-term consequences of their financial actions (Gangi et al., 2021). It also involves maintaining transparency and integrity in financial dealings, which can build trust and reliability in financial relationships (Gangi et al., 2021).

Thirdly, a future-oriented attitude is characterized by planning for future financial needs and goals, as well as valuing long-term financial stability over short-term gratification. Participants believed that thinking ahead and setting financial goals could provide motivation and direction for their financial activities. “Setting financial goals, like saving for a computer or a car, helps me stay focused and disciplined with my money,” explained another participant. This forward-thinking approach involves setting both short-term and long-term financial objectives and creating actionable plans to achieve them. It encourages individuals to prioritize their financial well-being, save and invest wisely, and prepare for life events that require significant financial resources (Zokaityte, 2017). Lastly, adaptability involves being willing to adjust financial plans in response to changing circumstances and embracing new financial technologies and tools while understanding their implications. Participants recognized the importance of being adaptable, especially in a rapidly changing financial landscape. “The ability to adapt to new financial situations and technologies has been crucial for me, especially with the rise of digital finance,” remarked one participant. Adaptability means being open to change and resilient in the face of financial challenges or opportunities. It involves adjusting spending habits, investment strategies, and saving plans to accommodate new financial realities, such as economic downturns, changes in income, or the advent of new financial technologies. Adaptable individuals can quickly pivot their financial strategies to remain effective and relevant in a dynamic environment (Moko et al., 2022).

4.2. Important Resources

Table 3, on the other hand, summarizes the resources that participants expect HEPs to provide to enhance their financial literacy. These include academic and extracurricular support, enhanced accessibility of financial education, collaborations with financial institutions, and the role of faculty advisors. The findings indicate that a collective effort is needed, ranging from providing institutional support to facilitating university-industry collaboration.

Participants emphasized the importance of both academic and extracurricular support in enhancing their financial literacy. They highlighted the availability and effectiveness of financial literacy courses offered by the university, noting that these courses should be comprehensive and tailored to cover various aspects of personal finance. Workshops, seminars, and online resources were mentioned as valuable tools provided by the institution to support financial education. These initiatives help students engage with financial topics in interactive and practical ways (Yin & Dong, 2020). One participant stated, “The workshops and seminars organized by the university have been very informative and practical.” Moreover, students appreciated the ongoing nature of these educational opportunities, which allow for continuous learning and reinforcement of financial concepts. Additionally, student engagement and feedback on these initiatives were seen as crucial for continuous improvement. “We often provide feedback after sessions, and it seems the university takes our suggestions seriously,” another participant shared. This feedback loop ensures that the programs remain relevant and effective in addressing students’ needs.

Table 3
Summary of resources expected to be provided by HEPs

| <i>Resources</i> | <i>Explanation</i> |
|---|---|
| Academic and Extracurricular Support | <ul style="list-style-type: none"> • Availability and effectiveness of financial literacy courses • Workshops, seminars, and online resources provided by the university • Student engagement and feedback on these initiatives |
| Enhanced Accessibility of Financial Education | <ul style="list-style-type: none"> • Offering financial education resources in multiple formats (online, print, in-person) • Ensuring resources are accessible to students with different learning needs |
| Collaborations with Financial Institutions | <ul style="list-style-type: none"> • Partnerships with banks and financial institutions for workshops and resources • Internship and practical experience opportunities in financial institutions • Collaborative projects and case studies involving real-world financial scenarios |
| Role of Faculty and Advisors | <ul style="list-style-type: none"> • Support and guidance from academic advisors on financial matters • Faculty involvement in promoting financial literacy • Integration of financial literacy into mentoring and advising session. |

Ensuring that financial education resources are accessible in multiple formats—online, print, and in-person—was another key point raised by participants. They stressed the need for resources to be inclusive and tailored to different learning needs. “Having access to online modules has been really helpful for me because I can learn at my own pace,” said one participant. This flexibility is particularly important for students with demanding schedules or those who prefer self-directed learning (Kim et al., 2017). Additionally, offering resources in various formats ensures that all students, regardless of their preferred learning style, can benefit from the financial education provided (Nicolăescu & Toderaşcu, 2023). Participants also mentioned the importance of providing resources that are accessible to students with disabilities or learning differences, ensuring an inclusive approach to financial education.

Moreover, participants recognized the value of collaborations with financial institutions, emphasizing that partnerships with banks and other financial entities could play a crucial role in popularizing financial knowledge and contextualizing it within real-world settings. They suggested that such collaborations could bring valuable industry insights directly into the academic environment, thereby enhancing the relevance and applicability of financial education (Yin & Dong, 2020). One participant noted, “Learning from industry professionals during these sessions made the financial concepts come alive; it’s one thing to read about it, but another to hear it from someone who works in the field.” By integrating industry expertise and perspectives, these partnerships could help bridge the gap between theoretical knowledge and its practical application, ensuring that students are better equipped to navigate real-world financial challenges.

Lastly, the role of faculty and advisors was highlighted as essential in promoting financial literacy. Participants mentioned the support and guidance they receive from academic advisors on financial matters as highly beneficial. Faculty involvement in promoting financial literacy through integrating relevant topics into their courses and discussions was also appreciated. “My advisor has been instrumental in guiding me through financial decisions related to my studies and future career,” commented a participant. This close guidance helps students make informed financial decisions and plan for their futures. Furthermore, the integration of financial literacy into mentoring and advising sessions was seen as a crucial element for reinforcing financial education. Faculty and advisors can provide personalized advice and support, addressing individual student

needs and concerns (Hu & Zhang, 2024; Yin & Dong, 2020). This personalized approach ensures that students receive relevant and practical guidance tailored to their specific financial situations and goals.

5. Discussion

The findings of this study provide valuable insights into the multifaceted nature of financial literacy among Chinese university students, emphasizing the importance of both knowledge and attitude in shaping financial behaviors. The concept of knowledge-informed financial behavior proposed in this study aligns with the literature that underscores the integration of financial knowledge and behavior (Amiranashvili, 2023; Moko et al., 2022; Sabri et al., 2021). This approach suggests that extensive financial knowledge forms the foundation for responsible financial behavior, supporting effective financial management and decision-making.

The sub-themes identified under knowledge-informed financial behavior highlight the comprehensive scope of financial literacy required by students. Most of these broad areas, such as budgeting and expense management (Billingsley et al., 2020), savings and investments (Diachkova et al., 2020), credit and debt management (Yao et al., 2022), and financial security (Shaharuddin et al., 2021), have been well reflected in abundant literature on necessary financial literacy skills. However, other skills identified in the study, such as consumer rights and protection and digital financial literacy, can be considered emerging financial literacy skills. Although they have not been widely acknowledged in traditional frameworks of financial literacy, literature suggests that, with the rapid advancement of the economy and increasing digitization of financial services, these skills are becoming increasingly important (Dsouza & Prakash, 2023; Godlen & Cordie, 2022; Yao et al., 2022).

Moreover, the study reveals a novel aspect of financial literacy by emphasizing the importance of specific financial attitudes that Chinese university students should uphold. These include a proactive attitude (taking the initiative to learn about and manage personal finances, as well as seeking advice and information when needed), a responsible attitude (being accountable for financial decisions and actions, and understanding the long-term impact of financial behaviors), a future-oriented attitude (planning for future financial needs and goals, and valuing long-term financial stability over short-term gratification), and adaptability (being willing to adjust financial plans in response to changing circumstances and embracing new financial technologies and tools). This emphasis on financial attitudes is a significant addition to the traditional understanding of financial literacy, which has largely focused on knowledge and skills (Juita, 2022; Peng, 2020; Wu & Ma, 2022). By integrating these attitudinal components, the study provides a more holistic approach to financial literacy, highlighting that fostering these attitudes can help students develop a resilient and informed approach to their finances. This enables them to make sound financial decisions, adapt to economic changes, and leverage new financial technologies effectively (Ying & Jamal, 2023). This comprehensive view of financial literacy, which integrates both knowledge and attitude, aligns with contemporary literature that emphasizes the importance of behavioral and attitudinal components in achieving financial competence and stability (Moko et al., 2022; Yulianto et al., 2024).

Although all these aspects of financial literacy have been more or less reflected in relevant literature, this study presents a context-specific understanding of financial literacy for Chinese university students. In particular, there are some points to be noted in light of this cohort's experiences. Firstly, while previous interpretations and studies of financial literacy have focused on university students' use of credit cards, the present study highlights the dimension of using credit-purchase and credit loan services, such as Huabei and Jiebei, as part of Chinese university students' credit and debt management. This shift reflects the unique financial behaviors and preferences of Chinese students, who are increasingly utilizing these digital financial products over online payment applications (Qiang & Wu, 2019; Zhai et al., 2021). Secondly, the study underscores the significance of digital financial literacy as a core component of financial education.

With the widespread use of mobile payment platforms such as Alipay and WeChat Pay in China (Gong & Shen, 2021), it is essential for students to develop the skills to navigate these platforms securely and efficiently. This aspect of financial literacy is particularly relevant in the Chinese context, where digital transactions are becoming the norm and understanding the associated risks and benefits is crucial for effective financial management (Zhai et al., 2021). Meanwhile, as Chinese university students are exposed to a variety of financial products and services, they must understand how to protect themselves from fraud and scams. This focus on consumer protection highlights the importance of empowering students with the knowledge to make informed financial decisions and safeguard their personal financial information.

However, financial literacy involves various interconnected skills, the improvement of which relies on a collective effort within HEPs, another important finding of the study. It suggests that financial education is crucial for students' financial literacy, and both formal learning that integrates financial literacy into the curriculum and informal learning through workshops, seminars, and online resources play significant roles in this regard. This aligns with the literature emphasizing the multifaceted nature of financial education and the necessity of a comprehensive approach to cultivate financial literacy among students (Cheng & Liu, 2022; Nicolăescu & Toderaşcu, 2023). The study also emphasizes the importance of accessibility in financial education. Ensuring that financial literacy resources are available in multiple formats—online, print, and in-person—can accommodate different learning preferences and needs (Li, 2023). Additionally, making these resources accessible to students with disabilities or learning differences is crucial for an inclusive approach to financial education. Providing resources that cater to a diverse student body ensures that all students have the opportunity to improve their financial literacy (Kim et al., 2017). This inclusive approach is supported by the Organisation for Economic Co-operation and Development (2017), which advocates for equitable access to financial education to reduce disparities and promote financial inclusion.

Collaborations with financial institutions were identified as another key factor in enhancing financial literacy among students. Partnerships with banks and other financial entities can provide valuable resources and practical experiences. For example, internships and collaborative projects with financial institutions can give students hands-on experience and deeper insights into financial practices (Lin & Zeng, 2021). These real-world experiences are invaluable in bridging the gap between theoretical knowledge and practical application, helping students to develop a more comprehensive understanding of financial concepts. According to Ke (2023) and Yin and Dong (2020), such partnerships can offer students insights into the financial industry's workings, thereby enhancing their practical skills and employability. The role of faculty and advisors is also critical in promoting financial literacy. Academic advisors and faculty members can provide personalized guidance and support to students, helping them navigate their financial decisions and plan for their financial futures. Integrating financial literacy into mentoring and advising sessions can reinforce the importance of financial education and provide students with tailored advice that addresses their specific financial situations and goals (Świecka, 2019; Zhai et al., 2021). L. Li (2024) argues that the involvement of educators and advisors is essential in reinforcing financial literacy concepts and encouraging students to apply them in their daily lives.

Therefore, an important implication of the study is that HEPs play a leading and coordinating role in improving students' financial literacy. This role encompasses designing and implementing comprehensive financial education programs that integrate both formal and informal learning opportunities. By embedding financial literacy into the curriculum, offering practical workshops, and leveraging online resources, HEPs can ensure that all students receive a well-rounded financial education. Additionally, HEPs can facilitate partnerships with financial institutions to provide students with real-world financial experiences and insights, thus bridging the gap between theoretical knowledge and practical application. Moreover, HEPs must actively engage with students to understand their specific financial literacy needs, preferences, and challenges. This can be achieved through regular feedback mechanisms, surveys, and focus groups that gather

students' perspectives and experiences. By doing so, HEPs can continuously refine and adapt their financial education programs to address emerging issues and incorporate relevant, up-to-date content that resonates with students' real-life financial situations.

6. Conclusion

Contextualized in China's higher education settings, the study spotlights knowledge-informed financial behavior (including budgeting and expense management, savings and investments, credit and debt management, consumer rights and protection, digital financial literacy, and financial security) and financial attitude (proactive attitude, responsible attitude, future-oriented attitude, and adaptability) as crucial aspects of financial literacy for university students. HEPs are expected to play a significant role in enhancing students' financial literacy by offering both formal and informal financial education opportunities, improving the availability of financial education resources, and coordinating the engagement of faculty, academic advisors, and financial institutions in students' financial literacy development.

While the study provides a context-specific understanding of financial literacy for Chinese university students, several limitations necessitate more in-depth research. For example, the study does not extensively consider the possible influence of students' demographic factors, such as ethnicities, socio-economic backgrounds, and gender, on financial literacy. These factors can significantly impact financial behaviors and attitudes, and understanding their role could provide a more nuanced view of financial literacy. Additionally, the study primarily focuses on the financial literacy needs of university students in a specific region or set of institutions, which may not fully represent the diverse educational contexts across China. Future research should aim to include a broader range of institutions, including those in rural areas or with different levels of resources, to gain a more comprehensive understanding of financial literacy across various educational settings. Another limitation is the nature of the study, which captures a snapshot of financial literacy at a particular point in time. Longitudinal studies that track changes in financial literacy over time would be valuable in understanding how students' financial knowledge, behaviors, and attitudes evolve, particularly as they transition from university to the workforce.

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