Exploratory Factor Analysis (EFA) and Reliability Analysis of Financial Literacy Instrument Among Trainee Teachers

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Abstract
This study aims to evaluate the reliability and validity of tools designed to assess financial Literacy (FL) of trainee teachers. A structured questionnaire was utilized to collect data from a randomly selected sample of 100 trainee teachers from the Teacher Education Institute (IPG). EFA techniques were used by deploying IBM-SPSS version 22.0. The EFA results demonstrate four components of FL with the eigenvalue exceeding 1.0 for each construct: financial knowledge 1, financial knowledge 2, financial behaviour and financial attitude. However, through the EFA procedure, the inquiry established that only 38 items, each with weighting factors exceeding 0.50, were retained and considered suitable for assessing the FL construct. The reliability of construct knowledge 1 was 0.916, construct knowledge 2 was 0.947, construct behaviour was 0.958, and construct attitude was 0.962. This study affirms the validity and reliability of the dimensions guiding FL measurement. This research contributes to the body of knowledge on FL among pre-service teachers who would serve as mentors to students after graduating. It also intends to keep up with its ongoing research projects and pursue additional financial studies in the future.
Keywords: Financial Literacy (Fl), Financial Attitude, Financial Knowledge, Financial Behaviour.

Introduction
The primary objective of the 2019-2023 National Financial Literacy Strategy (NFLS) is clearly defined as aiming to ensure that individuals of every age in Malaysia possess the necessary skills and confidence to make informed financial choices. It can be accomplished through empowering people with knowledge and increasing their financial literacy (FL), enabling them to make informed financial decisions. Enhancements in FL education are essential to align with contemporary changes and requirements. This ensures that individuals can attain

improved well-being following the demands of the 21st century (Bank Negara Malaysia, 2020). Provided that the person is financially literate, it shows they have the information they need to use their money wisely. A person is financially literate if they understand how to save money, how to borrow money, how to budget for expenses, how credit works, and how to manage finances after retirement. FL is learned to ensure that individuals can manage their personal finances effectively as well as efficiently and thus can ensure that they achieve well-being for a lifetime. Accordingly, FL is known as an integration or relationship that exists between the three concepts of financial attitudes, financial knowledge, as well as financial behaviour (Salmah et al., 2020).

In 2016, a survey of 30 participating countries found that the global FL level was at an average value of 48% (OCDE, 2017). This finding worries the world because most countries have low levels of literacy. Therefore, appropriate action needs to be taken by all countries through the national strategy of financial education to enhance FL and also ensure the country's financial well-being (FWB) is achieved. In Malaysia, an analysis of the entire component of FL discovered that the majority of the respondents had a moderate level of FL (44%), followed by a low level of FL of 29% as well as only 27% of respondents had a high level of FL (M. A. Abdullah et al., 2017; N. Abdullah et al., 2019; M. Rahman et al., 2021). According to a study by AKPK, those who have a high living cost (36.8%), inadequate financial planning (36%), failed businesses (11.7%), lost jobs (8.9%), as well as high medical education (5.4%) have a harder time reaching FWB (AKPK, 2022). A low level of FL in an individual will make him more vulnerable to financial problems. Because of this, individuals who do not have knowledge will fail to manage their finances, causing them to be more likely to have financial problems and may face the risk of being declared bankrupt (Hussin & Rosli, 2019; Syan et al., 2020).

The youth exhibit a limited level of FL, particularly regarding topics such as interest rates, inflation, and risk diversification (Zhu et al., 2019). Nearly half of the surveyed youth are unaware of the fundamentals of investment. A significant portion lacks an understanding of various aspects of financial management, specifically in areas like takaful, credit, as well as Islamic banking (M. A. Abdullah et al., 2017; N. Abdullah et al., 2019; Aziz et al., 2019; Sabri & Zakaria, 2015). Previous research on university students found that the level of teenage literacy is at a moderate level, where students have the least knowledge about debt (M. Rahman et al., 2020; Yasmin Huzaimah et al., 2017). To avoid students struggling with handling their personal finances, it is crucial for the students to be exposed to how to manage their finances so that they are not easily deceived or caught up in any activity that promises a good return.

According to statistics proven by the Department of Statistics Malaysia, citizens of Malaysia in the year 2021 consist of 32.7 million people approximately. The biggest part of these Malaysians comes from teenagers and young adults, who hold 69.7% more than kids, who only hold 23.3% overall. At the same time, those Malaysians who have retired, aged around 65 years and above, hold the smallest amount, which is only 7.9% (Department of Statistics, 2022). The largest composition of the population in Malaysia is the main catalyst for the country that will determine the country's future since they also play a big role in their own financial activity.

Furthermore, the researchers deemed it essential to investigate effective measures for instilling FL in graduates, ensuring their financial well-being prior to graduation. This circumstance underscores the obligation of the higher education sector to play a role in preparing students, ensuring that they possess a solid foundation in FL to navigate economic challenges post-graduation. It is noteworthy that the prevalence of bankruptcy among youth

is intricately linked to substantial indebtedness. The significant debts accrued by young graduates can be attributed to their financial attitudes and their approach to overseeing as well as managing their finances (Mohd Shah et al., 2022). It is challenging to comprehend and a crucial issue how youngsters of all ages develop their FL and money management skills (Sabri & Wijekoon, 2019). The global occurrence of inadequate FL has been highlighted on a global scale (Yew et al., 2017). This issue commonly stems from a deficiency in understanding, awareness, as well as education related to finance (Wan Jusoh & Mohd Yusdi, 2022). Possessing a strong understanding of financial concepts is crucial for navigating the complexities of the current economy (Priyadarshani & Kumari, 2021). Consequently, FL holds significant importance as a fundamental component of life skills as well as basic intellectual knowledge, particularly for university students.

International empirical research demonstrates the poor degree of financial and economic knowledge among instructors. The absence of economics and finance classes in teacher preparation programmes is one of the major barriers to teachers achieving FL (Sel, 2020). Despite the fact that instructors regularly impart FL lessons to students, little has been learned about how teachers view and carry out this duty, and much less is known about how teachers conceptualise and frame FL (Björklund, 2019; Björklund & Sandahl, 2023; Lusardi, 2019).

Considering the situation of teachers who are still less skilled in financial education, this paper will focus on the study of FL toward trainee teachers. Since 2014, the IPG in Malaysia has provided financial education to its trainee teachers. The emphasis of IPG's financial education is on equipping trainee teachers with the skills to manage their finances during their academic tenure and post-graduation. All participants in the Bachelor of Teacher Education program (PISMP) at IPG are eligible for FL instruction. The Financial Literacy Course employs a module on personal finance management, and its content aligns with the FL components taught in primary as well as secondary school curricula (IPGM KPM, 2013; Salmah et al., 2020). Apart from prospective teachers, it is essential for graduates to undergo instruction and readiness in financial education. This ensures not only the attainment of FL but also the ability to share knowledge on effective financial education (Salmah et al., 2020). Despite this crucial need, there is currently a scarcity of studies on FL among trainee teachers at IPGs. To ascertain the accuracy and dependability of the FL item employed by IPG trainee teachers, a research study was carried out. The objectives of the study are as follows:

- To test the construct validation with regards to the instrument of the Financial Literacy (FL) of teacher trainers
- To test the reliability of the Financial Literacy (FL) construct of trainee teachers

Literature Review
Financial Literacy (FL)
FL is characterised by possessing a comprehensive understanding of financial concepts and risks, along with the skills and attitudes needed to apply this knowledge in making effective decisions in diverse financial situations (OECD/INFE, 2018; Shanava & Vanishvili, 2021). This multifaceted competence encompasses awareness, knowledge, as well as behaviours crucial for accurate financial decision-making, ultimately contributing to individual and communal financial well-being and facilitating active participation in economic life (OECD, 2021).

FL is defined as an individual's recognition, understanding, as well as capability to make prudent financial choices to attain financial security (Lusardi, 2019). While enhancing people's comprehension of financial products and services is achieved through financial education, the ability of individuals to apply the skills and knowledge they have acquired is denoted as FL.

The ability to manage resources effectively for the purpose of attaining financial security is provided. According to Lusardi and Mitchell, FL entails the ability to generate financial gains. It encompasses a range of awareness, knowledge, attitudes, skills, as well as behaviours that empower individuals to make informed financial decisions, ultimately leading to financial security (Prayitno et al., 2022; Sel, 2020). A strong foundation in FL not only enhances households' commitment levels but also motivates them to make sound financial choices (Idris, Krishnan, & Azmi, 2013; Krishnakumare & Singh, 2019; Németh & Zsótér, 2019; Sawandi, Abu Bakar, Shaari, Saad, & Amran, 2018).

The FL definition developed for PISA 2012 is still thought to be adequate and relevant. In order to recognise that a wide range of attitudes is related to cognitive components of FL and is significant for financial conduct, the words "motivation and confidence" have been replaced with "attitudes" in practice. FL is taught and learned in social studies (Björklund & Sandahl, 2023; Lusardi, 2015; OECD, 2021). FL can be characterised as the assessment of an individual's capacity to comprehend and apply information related to personal finance (Baistaman et al., 2020; Lind et al., 2020). It involves not only possessing financial knowledge but also having the skill as well as confidence to effectively utilise that knowledge in making financial decisions. The low level of FL for a country will affect the people and make them experience high indebtedness, which is burdened with debt. The consequence that they need to bear is they can't change their standard of living while having huge debts. The disadvantage of this consequence, parents can't afford to prepare such a good amount of savings for the education aid of their own children. According to Nor Fazleen Zakaria, general manager of the AKPK Operations Division, every year, participants in credit management programmes are disproportionately older (30 to 40 years old) for a variety of reasons, including poor financial planning and high living costs (Abu Bakar et al., 2019; AKPK, 2022).

Given the definition outlined earlier, it can be expressed more distinctly that FL encompasses financial attitude, financial knowledge, as well as financial behaviour (M. Rahman et al., 2021; Sabri & Poh, 2017). Numerous research studies have looked at how financial attitudes affect financial practices and behaviours. FL is the integration of attitude, knowledge, as well as behaviour in the subject of money (Khawar & Sarwar, 2021; Yong et al., 2018). Therefore, in this study, FL encompasses the construct of financial attitude, financial knowledge, as well as financial behaviour toward trainee teachers.

Financial Knowledge

Financial knowledge is described as an individual's understanding of the usage and management of personal finances to make appropriate decisions (Sabri et al., 2021; Zaimah, 2019). It is to determine a person's level of knowledge in making decisions about the use and management of individual finances.

The knowledge of finance here refers to a stock of specified knowledge regarding the personal finance concept and products. It could be measured objectively by using questions based on their financial acknowledgement while subjectively, by questioning them, the respondents to know their financial knowledge level. Financial knowledge is commonly associated with FL, even though the two are not closely connected. As quoted by Huston (2010), Financial knowledge is one of the vital dimensions but not the same as FL (Lind et al., 2020). Essential questions about financial concepts such as inflation, interest calculations, risk and return, diversification, as well as market operations were employed to gauge individuals' FL. Those demonstrating advanced financial knowledge exhibit a heightened level of FL.

Financial knowledge should be applied informally from primary school. Credit card holders among students of higher education institutions or universities lack knowledge related to credit cards, especially with interest rates and late payment fees. As a result of this lack of financial knowledge related to credit cards, students owe a lot of credit cards as well as utilise credit cards as cash advances. Students who have higher financial knowledge related to credit cards will use credit cards more prudently while in (Limbu & Sato, 2019; Lu & Micu, 2019; Yao & Meng, 2018). Therefore, financial knowledge is a necessity for students at institutions of higher learning or universities to increase the use of credit cards wisely among students.

Financial knowledge solely exists and is created to ensure that it can build FL among university students. FL is a concept and a vital skill. Therefore, this skill is extremely important towards students as they will need it to face future unique financial challenges. At this point, this knowledge will help them greatly, especially in arranging their finances. In this modern era, lifestyle changes will also affect their future planning as the challenges become much harder than in previous years. This concludes that financial knowledge is indeed an important skill they must master before leaving the campus. This course definitely becomes the best solution for this future generation to have a stable financial background before and after their study period. Furthermore, the majority of students who received PTPTN financial loans at the University find that they fall short of covering the expenses associated with living and education. Students must bear the costs of various academic and personal necessities such as accommodation, daily living expenses, meals, transportation (either public transit fares or fuel), and other essential services. Despite their efforts to minimise loan expenditures, as well as scholarships remain insufficient (Daud et al., 2018). Therefore, a few researchers suggested that university students should be given early knowledge about finances to prepare them to survive after graduation. This financial knowledge is truly beneficial for them as they could apply it on a daily basis to achieve financial equality.

Financial Behaviour
Financial behaviour is defined as actions undertaken over both the immediate and extended periods to enhance one's financial well-being (Ameer & Khan, 2020; Chaiphat, 2019; Mohd Kamel & Sahid, 2021; Rydzik, 2016). It is an important item to measure a person's FL relying on spending as well as financial management actions. So this study, through measuring the practice of financial behaviour of trainee teachers can see the actions taken by trainee teachers towards their finances. Both numerical prowess and financial behaviour are significantly correlated with cognitive capacity. Although having a basic understanding of finances is essential, it is not enough to lead to prudent financial behaviour. Managing FL requires more than just being aware of and having knowledge about finances (Khawar & Sarwar, 2021).

Financial behaviour refers to human actions involving the management of money, including cash, savings, and credit. When taken in a broader context, financial conduct encompasses numerous issues, such as behaviour when making short- and long-term investments, saving money, using credit, and spending money (M. Rahman et al., 2021).

Financial attitude
Financial attitudes are defined as the main factor determining financial decisions taken based on economics to produce accurate and appropriate actions (Johan et al., 2020; OECD/INFE, 2018). It is a score that measures an individual's skills and ability to make financial decisions before taking appropriate actions to achieve financial well-being. A favourable mindset

towards finances results in improved financial management practices. Therefore, it can be inferred that the financial attitudes of recent graduates play a significant role in influencing both their financial knowledge as well as practices. Enhancing financial knowledge and cultivating a positive attitude can bring about positive changes in financial behaviour. Specifically, in the realm of financial self-confidence, there exists a strong correlation between subjective financial knowledge as well as financial attitudes (Fan & Park, 2021; Lu & Micu, 2019; Swiecka et al., 2021). Saving attitudes also contribute to financial behaviour.

People who lack FL are less inclined to approach financial and investment planning with a positive mindset. Individuals may find themselves making unwise choices when they lack financial knowledge and struggle to formulate plans for the future. The financial decisions one makes are shaped by factors such as budgeting, spending patterns, as well as purchasing habits (Khawar & Sarwar, 2021). To improve one's attitude towards saving and to maintain the financial stability of one's family, one needs to become more financially literate. This is due to the fact that key aspects of financial behaviour, FL, knowledge, as well as attitudes play a crucial role in influencing one's financial well-being (Chaiphat, 2019). Therefore, engaging in financial planning, anticipating future needs, managing budgets, making investments, as well as practising saving are all indicative of financial behaviour (Chaiphat, 2019; Khawar & Sarwar, 2021).

Methodology
This research employs a questionnaire to evaluate the construct of FL's reliability and validity among IPG trainee teachers. An online survey questionnaire, self-administered by the researcher, was utilised to gather quantitative data. This research also includes a literature analysis to evaluate the items employed to gauge the FL construct. Prior to the questionnaire being distributed, 100 IPG trainee teachers were randomly chosen as respondents. The data was then assessed employing exploratory factor analysis (EFA) in IBM-SPSS version 22.0 (Abdol Jani et al., 2023; Baistaman et al., 2020; Memon et al., 2020; Munisamy et al., 2022).

Research instrument
The instrument used in this study to measure FL in accordance with the adequacy of the respondent's circumstance among trainee teachers is a 61-item instrument that has been modified from earlier studies (Mahdzan et al., 2020; Mokhtar, 2018; M. F. Sabri & Zakaria, 2015; Zaimah, 2019). Respondents were instructed to choose the statement that most accurately sums up their level of FL. Based on earlier research, the FL instrument includes the following three sub-constructs: Knowledge, attitudes, and behaviour related to money (S. A. Rahman et al., 2020; Sabri & Poh, 2017; Sel, 2020). A Likert scale of 7 points is used in this investigation. In comparison to the 5-point scale, the dependability of perception from survey respondents on the 7-point scale most definitely showcases outstanding performance. A 7-point scale offers greater flexibility and signifies a higher level of detail. In addition, the 7-point scale can boost the likelihood that the respondent's decision will match the objective truth. The 7-point scale also makes the respondent's decision-making process more prominent in their thinking (Fan & Park, 2021; J.F. Hair et al., 2021; Joshi et al., 2015; Mahdzan et al., 2020; Munisamy et al., 2022; Wu & Leung, 2017).

Expert Content Validation
A temporary list of items for the questionnaire is produced with the aid of the literature review. The next steps are face validity and content validity. To evaluate the used objects,

professionals were brought in as evaluators. In accordance, professionals refined construct products (Munisamy et al., 2022; Rahlin et al., 2020; Said et al., 2022). As part of the revision process, items were reworded, changed, added, and removed, and item statements were examined. After the questionnaire had been altered, it was examined for content validity as well as face validity as a pre-test by two experts: senior lecturers and professors. This was done to ensure that the instrument components matched the research's goal and were simple to use. It should be noted that a qualified statistician decides the validity requirements and confirms that the scale chosen to evaluate the data is suitable for statistical analysis. In response to the substantial remarks made by the experts, some questions were streamlined and restructured to prevent repeating ourselves. In light of the results of the pre-test, the researcher then sends the questionnaire to the respondents to gather data from a minimum of 100 respondents for EFA (Baistaman et al., 2020; Joe F. Hair & Brunsveld, 2020; Munisamy et al., 2022).

Exploratory Factor Analysis (EFA)

By employing IBM SPSS version 22.0 software, the research data were analysed. EFA with varimax rotation was used to test the concept validity and instrument validity of the analysis. It should be noted that EFA is required to develop the basic arrangement of the analysis's variables. In addition, latent constructs, or factors, are groups of items that can be assessed but not directly. The EFA technique is used provided that there is uncertainty about the number of potential factors in a set of variables (Joe F. Hair & Brunsveld, 2020; Mohd et al., 2022; Munisamy et al., 2022). Each construct needs to go through the EFA technique to see if the item dimensions differ from those from earlier studies.

As an alternative, the instrument's reliability was evaluated through the application of Cronbach's Alpha statistical test, as indicated by previous research (Hair et al., 2020; Sabri & Poh, 2017). By employing data from the pilot study to examine the categorisation of items into dimensions, the researcher utilised EFA to identify the underlying dimensions associated with each construct's scores. Researchers can rename the appropriate dimensions at this level (Kamel & Sahid, 2021; Mahdzan et al., 2020; Zainudin et al., 2018). Each construct should go through an EFA analysis to see whether there have been any changes in the dimensions between the most recent research and earlier research, as well as any modifications in demographic characteristics (Bahkia et al., 2019; Baistaman et al., 2020; Rahlin. et al., 2021).

Result
Exploratory Factor Analysis (EFA) of Financial Literacy (FL)

Table 1 presents the descriptive statistics of the 61 questionnaire items labelled Q1 to Q61, assessing the FL construct. The average values for each item range from 5.24 to 6.12, with standard deviations falling between 0.651 and 0.993.

The literature research involved the examination of the three key elements constituting the FL construct through EFA. This encompassed a simultaneous investigation of each subcomponent related to FL, namely financial behaviour, financial knowledge, as well as financial attitude. Following the application of EFA analysis, a total of 61 items were categorised into four distinct components. However, only 38 items were retained in the final analysis, as they exhibited factor loadings above 0.6. The rotatable component matrix displays the objects classified under each component in the appropriate way.

Table 1
Statistical information related to items assessing the fl construct.

Item	Statement	Mean	Std. deviation
	Financial Knowledge		
Q1	Credit card owners can spend unlimited	5.56	.935
Q2	Owning a credit card increases one's purchasing power	5.47	.920
Q3	Cash withdrawals using credit cards are a low-cost source of finance	5.69	.922
Q4	Buying on credit will reduce purchasing power in the future	6.13	.691
Q5	There are no charges for cash withdrawals via credit card	5.57	.985
Q6	A high down payment (deposit) will further reduce the cost of the loan	6.01	.718
Q7	Cash purchases are cheaper than credit purchases	6.09	.653
Q8	Credit Counseling and Management Agency (AKPK) offers Financial loans	6.05	.716
Q9	The longer the loan repayment period, the lower the overall cost of the loan	6.03	.703
Q10	Credit card applicants must have a minimum income of RM24,000 per year	6.12	.656
Q11	An increase in the price of goods reduces purchasing power	6.10	.704
Q12	We have overspent when we take out savings to buy daily necessities	6.03	.745
Q13	A person can spend more than 40% of his net income to pay monthly installments	5.75	.857
Q14	A balance sheet shows a person's financial status	5.85	.880
Q15	A cash flow statement shows the family's income and expenses on a specific date	5.63	.895
Q16	Credit reference information system (CCRIS) is a credit bureau that collects, processes, stores and creates credit information.	5.67	.900
Q17	A guarantor for a loan can also be declared bankrupt	5.89	.827
Q18	Individuals who have been declared bankrupt are not allowed to apply for loans exceeding RM1,000	5.92	.787
Q19	A person can be declared bankrupt if he fails to pay a debt of RM30,000	5.98	.696
Q20	Saving is excess income after expenses are deducted	5.88	.742
Q21	The interest rate of a normal savings account (Saving Account) is higher than the interest rate of a fixed deposit account (Fixed Deposit)	5.92	.720
Q22	All forms of investment always provide profit	5.92	.748
Q23	Families are advised to have emergency savings of at least 3 months of family income	5.82	.757
Q24	EPF contributions alone are enough to cover old age	5.87	.691

Item	Statement	Mean	Std. deviation
Q25	A will is necessary for a family	5.87	.734
Q26	Islamic banking methods are interest-free	5.83	.667
Q27	Deposits with Islamic banking have higher interest rates and different returns.	5.98	.696
	Financial Behaviour		
Q28	I keep a record of expenses	5.59	.954
Q29	I plan expenses or budget	5.51	.905
Q30	I make investments every month (trust shares like ASB/ASN)	5.58	.878
Q31	I don't lease stuff to get cash	5.58	.901
Q32	I make loan/credit payments according to the schedule	5.54	.919
Q33	I pay all bills on time (utility bills such as water and electricity)	5.45	.968
Q34	I don't use credit facilities even for daily needs	5.43	.913
Q35	I do not borrow money from family, friends, relatives or employers	5.52	.910
Q36	I am trying to pay off the loan/debt early	5.46	.977
Q37	I pay the debt consistently every month	5.77	.709
Q38	I don't borrow money from ceti haram/ ah long	5.89	.709
Q39	I reduced the usual expenses made to cover the financial constraints	5.43	.782
Q40	I minimise tax payments (e.g., keep book purchase receipts)	5.70	.798
Q41	I made a zakat payment	5.24	.993
	Financial Attitude		
Q42	I believe money can solve all my problems	5.72	.740
Q43	I feel that money is the only thing I can depend on	5.80	.816
Q44	I feel proud to have better finances than those who lack money.	5.68	.750
Q45	I want my friends to know about my financial achievements.	5.73	.763
Q46	I don't feel guilty buying essentials	5.75	.796
Q47	I often have no difficulty in making My decisions about spending money	5.68	.777
Q48	I often don't worry about my finances	5.66	.742
Q49	I often worry about money and what I can do with it	5.78	.690
Q50	I often feel no anxiety when asked about my personal finances	5.73	.763
Q51	I am proud of my ability to save	5.59	.780
Q52	I feel like most of my friends have more money than me	5.69	.787
Q53	I will allocate money for fun things	5.70	.759
Q54	I will often spend money on myself when I am stressed	5.99	.772
Q55	I will often buy something unnecessary just to impress people	5.94	.722

Item	Statement	Mean	Std. deviation
Q56	I prefer to save because I am not sure what will happen in the future	5.97	.658
Q57	I will be very generous just to get people to like me	5.99	.689
Q58	I believe my current income is worthy for me to earn and in line with my career	6.03	.658
Q59	I believe that the amount of money a person earns is closely related to his ability and efforts	6.02	.681
Q60	I am proud of my ability to save money	6.02	.651
Q61	I thought I always knew how much money I had in the bank or my credit/loan	5.88	.656

The examination of the EFA process involved an analysis of three fundamental elements derived from the literature review pertaining to the FL construct. Additionally, a thorough analysis was conducted on each subcomponent of FL, namely financial behaviour, financial knowledge, as well as financial attitude. Regrettably, the rotation analysis separated the 61 items into four components. The researcher can see the same data in new ways using factor rotation (Ehido et al., 2020; Joe F. Hair & Brunsveld, 2020).

Kaiser-Meyer-Olkin (KMO)

EFA was carried out using the main component extraction method and varimax rotation (variation maximisation) on 61 items that measure the FL construct. Table 2 displays the outcomes, revealing a significant Bartlett's Test of Sphericity value (p-value 0.05). Moreover, the KMO measure of sample accuracy is favourable, meeting the specified threshold of 0.6 (Dehisat and Awang, 2020; Hoque et al., 2018; Munisamy et al., 2022). The satisfactory results from both Bartlett's Test and KMO (> 0.6) affirm that the data qualify for progression to the next phase of the data reduction process.

Table 2
Bartlett's and KMO for FL

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.841
Bartlett's Test of Sphericity	Approx. Chi-Square	7065.735
	df	1830
	Sig.	.000

Components and Total Variance

The findings presented in Table 3 reveal the identification of four dimensions or elements through the EFA method, characterised by Eigenvalues surpassing 1.0. Specifically, Component 1 exhibits a variance of 46.78%, Component 2 accounts for 7.36%, Component 3 for 5.30%, and Component 4 for 4.64%. Consequently, the cumulative variance across these four components amounts to 64.075%. This suggests that the number of components and items within each component is suitable for evaluating the FL construct, as the total variance surpasses the 60% threshold (Dehisat & Awang, 2020; Shkeer & Awang, 2019).

Table 3
Components and total variance interpreted for the FL constructs

Components	Initial eigenvalues			Extraction sums of squared loadings		
	Total	Variance (%)	Cumulative	Total	Variance (%)	Cumulative
Component 1	28.534	46.778	46.778	28.534	46.778	46.778
Component 2	4.490	7.360	54.138	4.490	7.360	54.138
Component 3	3.232	5.298	59.436	3.232	5.298	59.436
Component 4	2.830	4.639	64.075	2.830	4.639	64.075

The 38 items are then divided into four components by the screen plot for the FL construct (Figure 1). The screen plot in Figure 1 shows how the EFA approach produced four components for this construct. The EFA approach was then used to divide the 38 elements into four categories. Each component has a certain number of pieces, which are listed in the rotatable component matrix under their respective components (Ehido et al., 2020; Jani et al., 2023). In conclusion, the Cumulative Value, the Eigenvalue, as well as Scree Plot suggest that FL comprises four components.
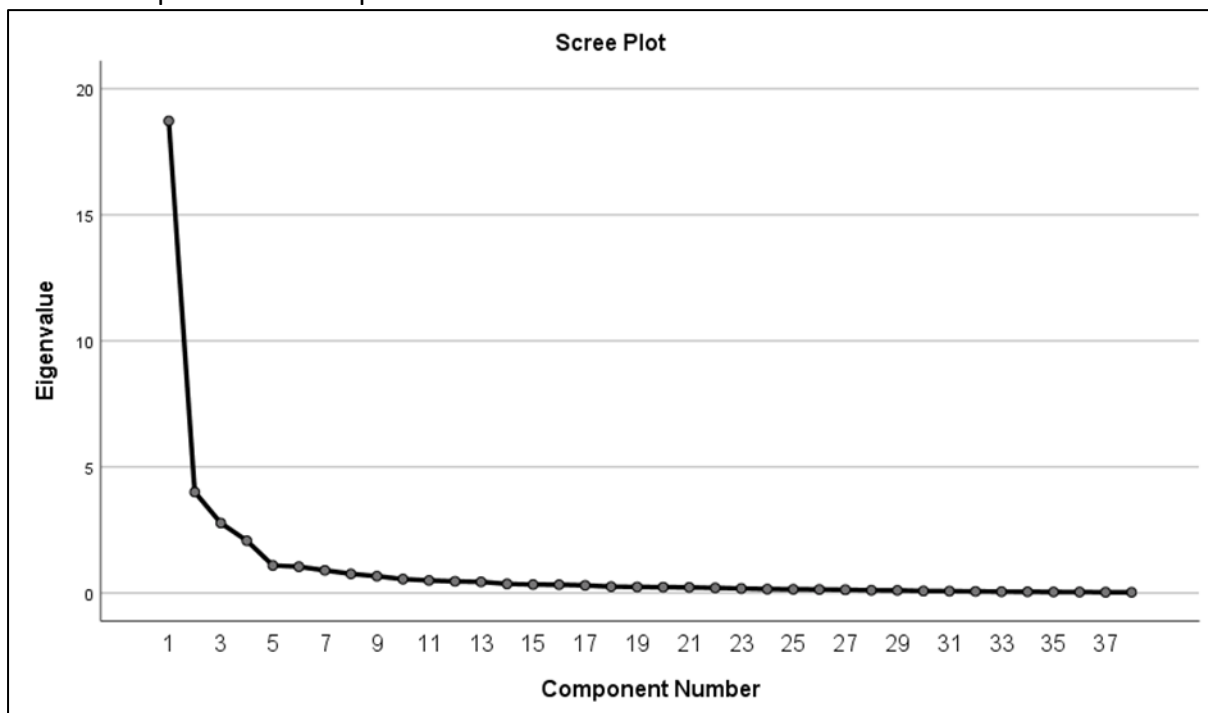

Figure 1. Screen plot of the Financial Prominence construct

Rotation Component Matrix
The selection of how to divide the dimensions or components follows. Table 4 displays the three dimensions or elements generated by the EFA method across 38 items. Each item's latent factor value exceeds 0.6. Consequently, 23 items must be excluded as they possess

latent factor values that fall below the specified threshold of 0.6 (Zainudin et al., 2018). Hence, only 38 items that have a latent factor above 0.6 then divided into four components.

Table 4

Efa and the Individual Item within the Components

Item	Component 1	Component 3	Component 3	Component 4
Q1				0.6
Q6				0.7
Q7				0.715
Q8				0.688
Q9				0.745
Q10				0.699
Q11				0.69
Q17		0.681		
Q18		0.666		
Q19		0.693		
Q20		0.775		
Q21		0.7		
Q22		0.761		
Q23		0.783		
Q25		0.647		
Q26		0.631		
Q27		0.645		
Q28			0.731	
Q29			0.655	
Q30			0.765	
Q31			0.827	
Q32			0.88	
Q33			0.783	
Q34			0.827	
Q35			0.851	
Q36			0.849	
Q42	0.746			
Q43	0.766			
Q44	0.663			
Q45	0.712			
Q46	0.703			
Q47	0.771			
Q48	0.731			
Q49	0.705			
Q50	0.735			
Q51	0.734			
Q52	0.663			
Q53	0.723			

Reliability

The final step is to determine each construct's internal reliability. Knowing Cronbach's Alpha for each component is crucial because there are three components used to measure this construct. This is crucial in assessing the internal consistency of specific measurement components for the construct. Table 6 shows that the Cronbach's Alpha test for all three components met and exceeded 0.9, demonstrating the component's reliability (Ali et al., 2021; Dehisat & Awang, 2020; Ehido et al., 2020; Munisamy et al., 2022).

Table 6
Cronbach's Alpha for individual components and construct

No	Component	Number of items	Cronbach's Alpha
1	Financial knowledge 1	7	0.916
2	Financial knowledge 2	10	0.947
3	Financial behaviour	9	0.958
4	Financial attitude	12	0.962

Discussion

This study uses the EFA approach to evaluate the reliability as well as validity of FL items among IPG trainee teachers. A 7-point interval scale is utilised instead of a 5-point scale because it offers the measuring model better precision and more options and freedom. In order to measure utilising EFA, this study's sample size of 100 trainee instructors is enough (Abdol Jani et al., 2023; Baistaman et al., 2020; Munisamy et al., 2022). The four components that measure the FL construct account for 60.0% of the variance in the connection between items, according to the EFA results. Since the items associated with the FL construct exhibit factor loadings exceeding 0.50, all 61 items from the questionnaire were kept. Four components have been constructed for the FL construct based on the study's final findings. The four components are quite reliable as well since Cronbach's α are from 0.916 to 0.962 (Dehisat & Awang, 2020; Hoque et al., 2018; Munisamy et al., 2022). Confirmatory factor analysis (CFA) methodologies still need to be used in additional studies to ascertain the latent variables' current associations.

Limitations and Recommendations

Obtaining respondents from the trainee teachers is a difficult task that is outside the researcher's control. Researchers have used email-based online questionnaire administration during the epidemic era. Then, responders are chosen at random from an email table using an Excel program. However, getting responsive feedback is challenging. It is advised that the questionnaire be given out in person for future studies. As the participants in this research consist exclusively of trainee teachers from IPG, the first restriction is that you must attend in person on campus. As a result, the following study can include trainee teachers from HEIs that provide teacher education programs. The FL questionnaire used in this study only includes four variables: financial knowledge 1, financial knowledge 2, financial behaviour, as well as financial attitude. There may be alternative assessments available to gauge the foreign language proficiency of trainee teachers.

Conclusion

According to the EFA findings, there are various components that may be used to measure the construct of FL, and a variety of associated items symbolise each of them. The

instrument's reliability findings indicate that the measurement of the four facets of financial knowledge—financial knowledge 1, financial knowledge 2, financial attitude, and financial behaviour—can be assessed through their respective items. All four constructs demonstrate strong internal consistency, as evidenced by Cronbach's Alpha values surpassing the established threshold of 0.7. To gauge the FL construct, researchers can reorganise the items within each component, facilitating their utilisation in data collection for the actual study.

Contribution of this Research

This research has contributed to enhancing the credibility and dependability of FL by employing EFA. This lays the groundwork for advancing the current investigation to the next stage, involving a larger sample size. It is recommended that subsequent studies focus on obtaining essential elements to refine the measurement of FL with greater accuracy.

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