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Research Article

Augmenting Financial Acumen: A Qualitative Study of Strategies to Elevate Financial Literacy Among University Students in India

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ABSTRACT

The present study is a qualitative inquiry conducted with an overarching objective to unravel nuanced methods conducive to improve financial literacy among students enrolled in higher education institutions. A structured research design rooted in an interpretivist research philosophy was employed, with an inductive approach. Data collection transpired through the conduct of focus group discussions with distinguished academicians in finance, chartered accountants, and seasoned financial advisors. Expert sampling was used to ensure a purposive selection of participants with pertinent expertise. Discussions were subsequently transcribed utilizing otter.ai. A thematic analysis ensued, involving the generation of codes and extraction of themes to discern underlying patterns and insights. Thematic analysis underscored the multifaceted methods to ameliorate financial knowledge of students by leveraging technology such as use of interactive learning and gamification involving use of simulations, budgeting apps, and use of online resources like digital calculators. Besides this financial counselling and support services such as setting finance clubs, organizing finance fairs, providing one-on-one counselling, workshops, and peer support groups can be offered to students by education institutes. Methods to enhance financial literacy have not been qualitatively explored by previous researchers in Indian context, present research fills this gap.This research contributes substantively to the discourse on financial literacy in higher education, providing actionable insights for policymakers, education institutions and financial sector regulators to enhance financial literacy among students. However, this research has focussed only on experts' advice to enhance financial knowledge and fails to capture the diverse perspectives of the students.

Keywords: Financial literacy, Focus group discussions, Qualitative analysis, Financial Education and Students.

1 Introduction

India is a youth country, as stated by the National Youth Policy 2021 released by the Ministry of Youth Affairs and Sports. It has a population where the youth segment makes up more than one-third of the total population. It is emphasised that financially literate and empowered young people have the potential to become the nation's most valuable resource. Financially literate students can act as the backbone of Indian economy. Financially literate populace can not only take judicious financial decisions for promoting their own financial well-being, but at the same time they may contribute to the economic development of the country. In the contemporary era, where markets are characterized by abundance of financial products and services, rising financial frauds and ponzi schemes, financial literacy is like the guiding light. Financial literacy is the most precious asset that one can create to promote their economic prosperity and fiscal health. The acquisition of this skill provides individuals with the capacity to effectively navigate the complex realm of financial products. Individuals encounter difficulty in making informed decisions when presented with a wide range of options in the field of finance. These options can include insurance plans, mortgages, pension funds, stocks, debentures, as well as

more intricate financial instruments such as futures, options, and private equity investments. Financial literacy can assist them in making best financial choices(Lantara & Kartini, 2016). An individual possessing financial literacy has the capability to establish a well-organized budget, oversee expenditures(Andarsari & Ningtyas, 2019), adeptly select suitable insurance coverage to minimize potential losses(Dalkilic & Kirkbesoglu, 2015), engage confidently in stock market activities(Sivaramakrishnan et al., 2017), effectively manage debts, and responsibly handle credit card usage(Lusardi & Tufano, 2015). Furthermore, they are equipped to ensure their financial security in retirement through prudent retirement planning(Lusardi & Mitchell, 2011).
Financial literacy refers to the "ability of an individual to make judgements and effective decisions regarding the use of money" (Noctor et al., 1992). Some experts assert that having financial knowledge is the fundamental basis of financial literacy. According to this viewpoint, in the early stages of conceptual development, terminology like financial literacy, financial knowledge, and financial education were frequently employed interchangeably(Huston, 2010). Nevertheless, after 2010, there was a significant increase in the variety of definitions discovered in academic literature. Authors started incorporating distant areas, such as understanding of financial goods, ability to manage money, attitudes, and behaviours(Cull & Whitton, 2011). The scope of definition of financial literacy was broadened to include financial attitudes and behaviours, in addition to financial knowledge (Atkinson & Messy, 2012). They defined financial literacy as "a combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial well-being". Various researchers have recognized the multifaceted character of the construct financial literacy. Commonly cited attributes include numeracy(Carpena et al., 2011; Bhushan & Medury, 2013), comprehension of financial concepts(Remund, 2010; Ramasawmy et al., 2013), financial planning (Das & Kumar, 2015), knowledge of financial products(D.A.T, 2020) ,understanding of debt management(Lusardi & Tufano, 2009), and personal budgeting (Ciemleja et al., 2014).
Acquiring knowledge about money management is essential for individuals of all age groups. Nevertheless, academics have emphasised the importance of providing financial education and fostering financial literacy among the younger population. Beverly and Burkhalter (2005) emphasized on the importance of assessing the financial literacy of young individuals and highlighted the need of developing a solid foundation of financial literacy and promoting a favourable outlook on personal finances during the early stages of life. This is vital in order to guarantee responsible financial decision-making and a secure financial trajectory in the long run. Aydin and Akben Selcuk (2019) contended that carrying out studies on the financial literacy levels among college students is imperative, as this group is experiencing a significant transition marked by increased independence from parental supervision and the need to manage their own finances. The financial habits cultivated during this developmental stage are expected to have a significant impact on future financial management activities. Lantara and Kartini (2016) posited that providing university students with adequate financial education and instilling in them a comprehension of foundational financial concepts will prove highly advantageous, facilitating their development into conscientious contributors to societal welfare.

2 Review of literature

Previous researchers have assessed the level of financial literacy across the globe and found that the level of financial literacy among students is extremely low. Furthermore, irrational financial behaviour was witnessed among youngsters which necessitates need of exploring the methods to ameliorate financial literacy among students. Garg and Singh (2018) conducted a thorough examination of existing literature on financial literacy and their findings indicate that there is pervasive lack of financial acumen among young individuals worldwide. Herawati et al. (2020) examined the impact of financial learning on financial literacy and also acknowledged the deficiency in financial knowledge among students, and thereby suggested educational institutions to modify their curriculum and include a wide range of pertinent financial courses, guaranteeing their compulsory integration across all disciplines. Kiliyanni and Sivaraman (2016) also reported that the average young adult in Kerala demonstrates a relatively poor degree of financial literacy. Nevertheless, the level of expertise in this area differs greatly depending on various criteria, including gender, age, educational background, subject of study, occupation, years of work experience, income as well as the educational level and profession of their parents. Sabri et al. (2010) examined financial literacy of students and found that survey participants got less than half of the financial literacy questions right, with an average score of 11.77 out of 25. Thomas and Subhashree (2020) revealed deficiency in financial literacy among engineering students, underscoring the importance of implementing robust financial education initiatives to cultivate greater financial confidence among these aspiring entrepreneurs.
College students often face challenges in multiple areas, including managing bills, using credit cards responsibly, finding employment, saving money, controlling their budget, and managing debt. Therefore, it is necessary to offer them a comprehensive financial education in order to provide them with the essential skills and knowledge to effectively navigate these complexities (Peng et al., 2007). Researchers argue that modern youth do not fully understand or value the significance of saving and investing. A significant proportion, believed to be seventy percent or more, of their expendable income is dedicated to leisure pursuits, such as holidays, indicating a preference for immediate gratification rather than long-term financial planning(Permanasari et al., 2020). Similar results were found by Dewi and Rusdarti (2017) which revealed that students exhibit insufficient competence in credit management. Students prioritise spending a larger

proportion of their funds on entertainment rather than meeting necessary living and educational expenses. Murthy and Anthony Mariadas (2017) stated that young individuals and graduate students face heightened vulnerability to bankruptcy, attributable to deficiencies in financial planning and poor spending practices. Therefore, educating the present generation about personal finance is a pressing need(Siraj et al., 2020). Young adults in college are at a crucial stage of their growth, where learning money management skills is quite important. For several individuals, the college years are the final chance to develop important skills before starting their professional careers. At this stage, pupils have the mental capacity required to gain financial literacy(Jobst, 2012).

Several experimental studies were conducted to find the impact of financial literacy interventions on the financial capability of students. Kuntze et al.(2019) conducted experiments to assess the efficacy of online video teaching module involving 67 minutes of micro lectures in enhancing financial literacy among undergraduate business students and reported that the online module was more effective than traditional personal finance courses. Cordero and Pedraja (2019) using difference-in-differences (DiD) approach, suggested that incorporating financial education programmes into other disciplines, through a cross-curricular approach, leads to significant results. (Yin Yin et al., 2022) supported the use of digital tools to upgrade financial literacy among students by conducting a quasi-experimental study which highlighted that Finlite mobile application significantly boosts students' motivation to save, promotes better financial habits, nurtures informed decision-making, develops accountability, emphasises values, and augments financial literacy. Nevertheless, Finlite exhibits restricted effectiveness in tackling students' financial difficulties, specifically regarding credit card debt and insufficient spending habits. Khoo and Fitzgerald (2017) using quasi experimental approach investigated how economics undergraduates in Malaysia are benefitted from the use of cartoons shared via mobile devices to improve their financial literacy and communication skills. Financial gamification apps affects knowledge and expertise, as well as intents to save(Bayuk & Altobello, 2019). Lusardi et al.(2017) suggested various tools to improve financial literacy, such as videos, written descriptions, brochures, and visual aids and found that visual aids and videos were more beneficial than written materials.

Educators in business and economic journalism deploy innovative approaches, including eschewing conventional course labels and incorporating interactive methods like stock market contests, to effectively engage and educate students(Weber, 2016). In contrast to traditional lecturing, active learning methodologies exhibit a notably positive and significant influence on savings and investment outcomes(Kaiser & Menkhoff, 2022). Isomidinova et al.(2017) asserted that providing financial education to university students in Uzbekistan had a beneficial effect on financial literacy. A significant correlation is found between financial education and financial literacy(Albeerdy & Gharleghi, 2015; Bucher-Koenen & Lusardi, 2011). Management students at the University of Mauritius expressed scepticism about the effectiveness of radio or television programmes that teach money management. However, they strongly supported introducing financial literacy courses in the curriculum to improve their capacity to make wise financial choices (Ramasawmy et al., 2013). Johnson and Schumacher (2016) demonstrated that individuals who participated in a webinar-based financial education programme witnessed significant enhancements in their financial literacy and behaviour immediately following the initiative.

Gudjonsson et al. (2022) revealed three main themes identified from qualitative research which included students advocating for improved financial literacy instruction, acknowledging the immediate impact of financial education on their present circumstances and future preparedness, and notably, proposing mandatory financial literacy education in elementary school curriculum. Özdemir and Uyanik (2021) interviewed students and found that pupils emphasised the positive impacts associated with financial literacy programmes. Students demonstrated improved perspectives on money, ascribing beneficial impacts from the programme to their personal lives, and showed a preference for early exposure to training initiatives.

3 Research Methodology

The aim of this research endeavour is to investigate novel and technological approaches that higher education institutions can employ to enhance the financial literacy of students. Research methodology based on an interpretivist research philosophy was used, employing a structured study design and an inductive approach. Related to methodological choices qualitative method was used, whereby data was gathered via online focus group discussions (FGDs) with experts of finance including academicians of finance, financial advisors, Chartered Accountants. Online session was preferred over traditional face-to-face Focus Group Discussions (FGDs), as it is cost savings and provide improved accessibility. It also eliminates geographical obstacles which facilitates higher participation (Halliday et al., 2021). Sample was chosen via expert sampling, a subset of purposive sampling. Expert sampling, entails the selection of individuals with substantial knowledge and expertise within the targeted domain of inquiry(Etikan & Bala, 2017). It is beneficial to seek the perspectives of experts, particularly in areas where their insights offer valuable information beyond quantitative data alone(Kumar et al., 2021). Experts in finance were contacted through LinkedIn, emails were sent to several academicians teaching finance related subject in colleges & universities, chartered accountants, and independent financial advisors, requesting them to participate in FGDs. Out of the total 125 experts contacted, around 35% of them showed willingness to share their insights and attend the FGDs. 43 experts who gave their consent to join the study were then personally contacted through telephonic conversations to set the date and timings for FGDs. Once the details were finalized formal invitations were sent to the participants. They were also sent reminder mails, a day before the FGD. Coming to final sample size determination for this qualitative research, it was more about reaching data saturation than rigidly adhering to a fixed number(Guest et al., 2006). The data was collected until we reached the point of saturation where no more new ideas and themes are generated. In qualitative research, the range that is frequently mentioned for reaching data saturation is usually between 20 and 30 participants(Creswell & Poth, 2016). Saturation was achieved in fifth FGD giving a sample size of 33 experts. Regarding number of participants in each FGD, prior studies have recommended involving 6-8, or alternatively, 8-10 participants for a focus group discussion(Masadeh, 2012). In the current study each FGD had six to eight participants, the number was chosen to strike a balance between fostering in-depth conversations and at the same time permitting the expression of a range of individual opinions (Morgan, 1996).

After the deliberate selection of participants, the next task involved conducting the discussion. Google Meet, a widely used video conferencing tool, was selectively chosen by researchers to promote smooth conversations and take advantage of the ease and accessibility that online focus group discussions (FGDs) offer. The length of each session was approximately 90-100 minutes, which allowed for a balanced approach that combined conducting comprehensive inquiries and assuring constant engagement of attendees.

The discussion commenced with moderator introducing the topic to participants and highlighting the pressing need to develop innovative methods to boost financial literacy of students. The key research questions that were posed in front of experts were:

- What teaching methods can be employed to make financial education more immersive and appealing for students pursuing their higher education?
- What digital methods can be used to make financial education more captivating and affordable?
- What steps higher education institutes can take to ameliorate financial literacy among students?

In the role of facilitator, the moderator fostered an atmosphere where all participants felt comfortable expressing themselves freely through the promotion of open communication and collaboration. This quality of moderator is required to ensure smooth conduct of FGD(Morgan,1996). The audio and videos of discussions were duly recorded after taking the permission of participants and ensuring them to maintain privacy and confidentiality of the audio – video recordings. Sessions should be recorded to extract transcript for codification and classification of concepts into themes (Buenestado-fernández & Ibarra-vazquez, 2023).To ensure the accuracy of the information collected, the recorded sessions were transcribed verbatim utilising the transcription software Otter.ai. The transcripts generated were meticulously analysed by researchers using reflexive thematic analysis which highlights the role of researcher in extracting meaningful information from the raw data(Braun & Clarke, 2006). This analysis involves iterative process(Byrne, 2022). According to this process researchers familiarized themselves with the data by reading transcripts multiple number of times. Subsequently, researchers coded the main points and ideas of the participants, and then arranged the codes into potential themes that symbolise recurring patterns. The themes underwent a process of coherence refinement and finally, the data was analysed by integrating recurring themes into a narrative that pertains to the subject matter of the study.

The reliability and validity of the data was also assessed. In contrast to quantitative research, which employs statistical analyses to assess reliability, qualitative research aims to establish consistency in its findings by conducting replications utilising the same participants and methodologies. Reliability was assured through proper record keeping. To facilitate subsequent analysis, this generates a more exhaustive audit trail(Creswell & Creswell, 2017). Precise transcripts were derived from these recordings in order to ensure the integrity of the data and facilitate the examination of specific instances for research purposes(Flick, 2022). To confirm validity and credibility of research, methods of respondent validation and audit trail were used. Researchers communicated their interpretations and themes to the participants to find out that they corresponded with the participants experiences. By using this method participants verify interpretation of researchers(Tracy, 2019).

4 Data Analysis and Results

This section firstly, provide the demographic details of the participants followed by analysis of word frequency and finally discussion of themes generated from rigorous thematic analysis.

4.1 Demographic analysis of participants

Table1 reflects that 19 males and 14 females made up the total number of respondents. The participants included a diverse range of professionals in the financial field, consisting of 16 finance academicians, 9 certified chartered accountants, and 8 financial consultants. Perspectives and ideas of different age groups were collected, 3 participants belonged to age group 21-30, 7 from 31-40 age group, 8 participant belonged to 41-50 age group, maximum number of participants, that is 10 belonged to 51-60 age group and 5 were in above 60 age group category. This provided a range of viewpoints on the importance of financial literacy. Experienced members offered perspective on conventional financial tactics and the difficulties encountered by individuals in practically applying their financial knowledge, while younger members placed an emphasis on technology competence and internet resources.

Demographics	Category	N	Percentage(%)
Gender	Male	19	58%
	Female	14	42%
Age	21-30	3	9%
	31-40	7	21%
	41-50	8	25%
	51-60	10	30%
	Above 60	5	15%
Employment	Fianance Academicians	16	48%
	Chartered Accountants	9	27%
	Financial advisors	8	25%

Table1: Demographic description of participants

4.2 Word frequency Analysis

The top ten most often used terms are shown in the frequency table (Table 2), together with their stemmed forms, coupled with their frequency and percentage weightage throughout the document. The table highlights that experts mostly talked about improving students' financial literacy through workshops, simulation methods, and internet resources. Experts emphasized on budgeting and investing as pivotal areas for students to cultivate financial adroitness. These findings are also reflected in the word cloud in (Figure1). Using frequency analysis, word cloud show how words are used in a document or collection of documents. Larger font sizes and bold formatting are used to highlight key phrases, which helps readers understand the recurring terminology used in the text and major topics. Words with highest frequency like financial, students, literacy, investing, simulation and learning are in larger fonts showcasing their repetitive use and relevance in the text.

Word	Length	Count	Weighted Percentage (%)	Similar Words
financial	9	122	7.06	financial, financially, financials
students	8	84	4.86	student, students, students'
learn	5	32	1.85	learn, learning
literacy	8	31	1.79	literacy
investment	10	26	1.50	investing, investment, investments
educational	11	23	1.33	educates, education, educational, educators
online	6	20	1.16	online
workshops	9	20	1.16	workshop, workshops
simulations	11	16	0.93	simulate, simulated, simulation, simulations, simulators
budgeting	9	15	0.87	budget, budgeting, budgets

Table2: Word Frequency Table

Figure 1: Word cloud

Word Tree

Word trees are a useful tool for visually showing relationships between concepts and terms used in textual data(Wattenberg & Viégas, 2008). They are also identified by the names of semantic or vocabulary trees. With their methodical and intuitive approach to lexical network exploration, these tools assists in activities like organizing the textual information, analysing the text, idea production, and vocabulary growth. Word trees resemble their names, with the root word or main idea in the centre. The root is followed by branches that go to related words and ideas, creating a hierarchical structure. Most precise ideas are represented by leaves at the tips of branches. We have focussed on double word tree i.e root words placed in the centre, and on left side prefixes are placed and suffixes on right side.

The word tree depicted in (Figure 2) shows a well-organized framework that aims to seamlessly incorporate finance into university culture. It emphasises both theoretical and practical elements to improve students' understanding of financial concepts. This visual representation explores several tactics and resources that campus counsellors and educational institutions can utilise to instruct students on financial management.

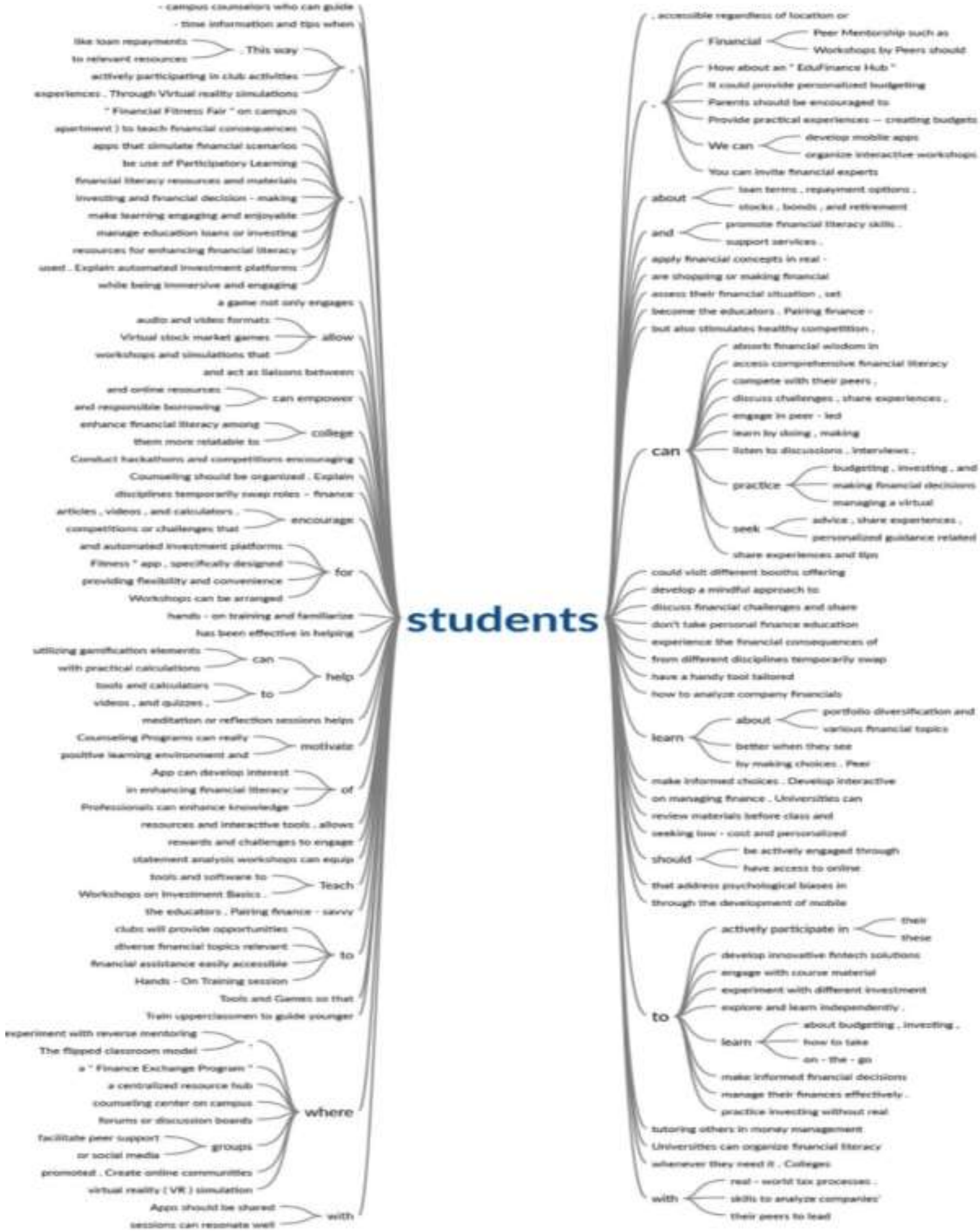

Figure 2: Word Tree

The central node of the map is students. Left Stems deals with tools, resources, and educational strategies. Left stems places emphasis on utilizing campus counsellors, participatory learning, and immersive technologies like virtual reality to teach financial concepts. Some branches focus on using apps that simulate financial scenarios and participatory learning methods. They also suggest innovative educational methods such as "Financial Fitness Fairs," hackathons, and competitions to be organized by universities to make learning engaging and enjoyable. They reflect experts advocacy for the use of audio and video formats, social media, virtual stock market games, digital calculators and workshops to enhance understanding and application of financial literacy. Right Stems relates to the topics involving application, engagement, and practical experiences. Experts focused on enabling students to actively engage with financial literacy through real-world applications, such as managing education loans and investing. Left stems laid stress on promoting peer learning and tutoring in money management to foster a supportive learning environment. Some branches at the right also emphasized on independent exploration and learning about budgeting, investing, and making informed financial decisions. Some highlighted the need for universities to provide access to online resources, organize financial literacy workshops, and support students in managing their finances effectively.

4.3 Results of Thematic Analysis

Experts proposed a variety of innovative and creative strategies to encourage pupils to willingly engage in learning financial concepts. These innovative techniques have the potential to enhance the engagement and depth of learning in the field of finance. Total five themes were generated which are discussed below, with relevant codes in each theme and quotes corresponding to each code.

4.3.1 Theme 1: Experiential Learning and Active Engagement

The primary theme that emerged focuses on experiential learning. As one of the major obstacles that individuals confront is their limited capacity to apply financial information in real-life situations. Acquiring theoretical information is futile if individuals are unable to apply it effectively while handling their finances. The solution to this problem lies in offering experiential learning.

Code 1: Learning through simulations and role-playing

Experts suggested experiential learning, characterized by immersive and hands-on learning session, stands as a pivotal strategy in increasing financial literacy among students. The integration of theoretical knowledge with practical applications not only facilitates a deeper comprehension of financial concepts but also fosters a sustained retention thereof. Through the active involvement of students via participatory learning modalities, such as simulations and case studies, the transference of financial knowledge to real-world scenarios is facilitated. The participants who advocated this method shared the following insights.

We should provide Hands-On Training session to students. Provide practical experiences of creating budgets, tracking expenses, and investing in mock portfolios. According to me Learning by doing is very powerful technique.

I have noticed that combining theory with practical application is key to make student learn any concept easily and retain it in long-run. For making financial literacy lectures more interactive and giving them a real life experience, there are various methods which we can use in classrooms like simulations, case studies, budgeting challenges.

There should be use of Participatory Learning. Students should be actively engaged through discussions, case studies, and simulations.

Simulated stock trading can help them to learn about stock market without fear of losing money as virtual games allow students to practice investing without real money.

I insist my children practice investment in stock market through simulated techniques before they enter the real market.

Financial education lessons should deal with Real-Life Scenarios-Preparing monthly or weekly budget, how to apply and manage education loans or investing. Students learn better when they see direct relevance.

Code 2: Flipped classroom model for active learning

Experts also discussed about flipped classroom model which involves reviewing materials before class and engaging in discussions and problem-solving during class to foster active learning.

I believe that flipped classroom can prove useful to promote critical thinking about financial topics.

Code 3: Microlearning through short videos or mobile apps

Participants also discussed about use of micro learning, as this technique is gathering popularity in the face of escalating screen time and dwindling attention spans. It provides a solution to the contemporary learner's inclination towards concise content. It maximises engagement and retention by presenting information in bite-sized portions that are simple to comprehend. The ability of this method to sync with digital platforms enables mobile learning, rendering it a flexible and effective strategy for disseminating knowledge.

We can deliver bite-sized financial lessons through short videos or mobile apps for enhanced retention among our gen Z students who I see are much influenced by YouTube shorts and Instagram reels these days.

Code 4: Blended learning combining traditional lectures with online resources

Expert stressed on combining traditional lectures with online resources for personalized interaction. They shared that

Gone are the days when students were use to rely on text books and teachers, now days students explore online resources for gaining knowledge on any topic. Therefore, blended learning which combines traditional lectures with online resources and interactive tools, will allow students to engage with course material at their own pace while maintaining personal interaction.

Code 5: Incorporating elements of gamification

Participants were in favour of incorporating elements of gamification to engage students and stimulate healthy competition. Games can grab attention of students. Learning by playing can be fun and promote active engagement. They asserted that in a captivating and interactive way, this novel technique not only piques students' attention but also promotes experiential learning, providing them with important financial competencies. They quoted

Gamified Financial Education App can develop interest of students. We can develop mobile apps with gamified learning elements, challenges, and rewards to encourage engagement and practical application of financial literacy concepts.

In my experience, incorporating elements of gamification has proven effective. Turning financial literacy into a game not only engages students but also stimulates healthy competition, making the learning experience both enjoyable and educational.

I agree, developing educational games that teach financial concepts and skills can make learning engaging and enjoyable. Students can compete with their peers, earn points, and unlock achievements.

Element of gamification should be added to finance education so that students don't take personal finance education as a burden of new subject, but enjoy learning it. Use of digital tools, financial apps, and educational games can create a positive learning environment and motivate students to actively participate in their financial education

Moneybhai, Dalal St market challenge, moneypot and many more investing simulator are available online. Students can learn to invest without loss of money.

Code 6: Mindfulness practices in financial education

Students were found to exhibit irrational financial behaviour, indulging into wasteful consumption pattern and show compulsive buying behaviour. Many times, they suffer from financial anxiety when they are unable to fulfil all their wants. In many cases, it is witnessed that they pressurize their parents to buy them expensive items which their family can't afford. Introducing meditation or reflection sessions can promote balanced decision-making. Experts suggested that

Cognitive-behavioral therapy interventions can be used. We can arrange workshops or individual sessions for our students to address their financial anxiety and develop healthy financial habits among them.

We can offer individual or group sessions with therapists specializing in financial anxiety, compulsive spending, or other money-related concerns.

Incorporating mindfulness practices into financial education can be fruitful. Introducing meditation or reflection sessions helps students develop a mindful approach to financial decision-making, promoting a balanced and thoughtful perspective.

4.3.2 Theme 2: Integration of Technology and Digital Tools

As digitalization is on full swing in Indian economy. By using technology and digital tools we can provide innovative financial resources to students at affordable prices.

Code 1: Utilizing mobile apps such as budgeting apps, investment simulators, and debt management tools for financial literacy

Experts recommended to teach students use of several mobile apps available these days for budgeting, investing and debt management. Following ideas were highlighted

Now days there are mobile apps that can provide interactive budgeting tools, expense trackers, and financial goal-setting features. They also offer educational content, such as articles, videos, and quizzes, to help students learn about various financial topics conveniently.

Through mobile apps students can practice budgeting, investing, and debt management in an easy way.

Budgeting Apps are available. They visualize spending patterns. Real-time data empower users to take informed decisions.

We must train students to utilize financial wellness apps that offer personalized nudges towards better financial choices.

Behavioural Finance Apps should be shared with students that address psychological biases in financial decision-making.

Code 2: Employing Virtual Reality and Augmented Reality for Engaging Experiences

Participant proposed creating immersive experiences for practicing financial decisions in realistic scenarios by use of AR & VR technologies

Virtual reality (VR) and augmented reality (AR) technologies can be used to create immersive and engaging financial literacy experiences.

Through Virtual reality simulator, students can learn to make financial decisions in realistic scenarios, such as managing a budget or investing in the stock market.

Augmented reality applications can provide real-time information and tips when students are shopping or making financial transactions, which will promote responsible spending habits.

Code 3: Taking advantage of social media platforms

These days students are too much influenced by the stuff on social media. We can therefore leverage social media platform to teach financial literacy to students. Experts believed that

Platforms like YouTube, LinkedIn, or Instagram can be utilized to create short educational videos or infographics that simplify complex financial concepts and make them more relatable to college students.

Creating dedicated accounts or groups that share educational content, tips, and success stories related to personal finance can reach a large audience.

Universities should establish online forums or social media groups where students can share financial experiences and tips.

Code 4: Artificial intelligence and chatbot technologies for personalized guidance

There is considerable hike in usage of artificial intelligence and chatbot technologies by students after the launch of ChatGPT, Bard, PerplexityAI. Therefore, participant proposed use of similar techniques for improving financial literacy among students.

These days use of artificial intelligence (AI) and chatbot technologies are very much prevalent among students. It would be better if we teach our students to use these technologies to get personalized financial guidance.

AI-powered chatbots can answer students' questions, provide tailored recommendations, and offer real-time financial advice.

Chatbots can be integrated into college websites making financial assistance easily accessible to students whenever they need it.

Robo-Advisors can be used. We can explain automated investment platforms to students seeking low-cost and personalized investment management guidance.

Code 5: Podcasts and webinars for knowledge sharing

Hosting discussions and interviews by financial experts will provide additional insights to pupils. Podcasts provide a versatile learning environment that is readily available at anytime, facilitating the incorporation of financial education into the daily lives of students. By means of expert interviews, they furnish insightful information and a wide range of viewpoints concerning personal finance and investing. Furthermore, case studies and real-life financial anecdotes assist students in comprehending intricate ideas by means of relatable narratives.

Podcasts and webinars hosted by financial experts or industry professionals can be valuable resources for enhancing financial literacy. Students can listen to discussions, interviews, and panel sessions on various financial topics. These audio and video formats allow students to gain insights from experienced individuals, providing a different perspective on financial matters

Financial Literacy Podcasts are a good source. Student can listen audio content while commuting or during study breaks.

Code 6: Promoting Use of digital calculator for simplifying financial calculations

Participant in the focus group discussions, especially chartered accountants focussed on teaching students the use of digital calculators which can help student in tax planning, investment planning as well as retirement planning. They asserted

Digital Calculators are now available in market. There are tools for calculating compound interest, loan repayment, SIP Calculators, tax calculators and pension calculators for retirement planning. We should teach students their use as they can significantly simplify arduous financial calculations.

Online Resources and Tools such as Financial Calculators should be Embedded on the college website for easy access.

We must promote online financial planning tools and calculators to help students assess their financial situation, set goals, and explore investment options.

4.3.3 Theme 3: Assistance and Counselling Services for Financial Matters by Educational Institutions.

Higher education institutions can provide requisite financial skills and competencies to students so they can successfully handle their individual finances, not only throughout their academic tenure but also in the future. Several novel methods were highlighted which included:

Code 1: Financial literacy clubs and organizations

Like several other clubs established by colleges which include eco club, placement club. Each higher education institute should also establish finance clubs where students could freely discuss financial issues they encounter and get personalized assistance. They stated

Universities should promote setting of financial literacy clubs. Students can actively participate in these clubs and learn from each other's knowledge and expertise. Finance clubs can encourage peer-led discussions and skill-building sessions

Yes, we must set up financial literacy Clubs. Each university should promote creation of student-led finance clubs where members discuss financial news and strategies

Code 2: Financial fitness fairs for interactive learning

These days higher education institutes provide several events for engaging and interactive learning. Academicians suggested to organize financial literacy fairs.

Universities can arrange "Financial Fitness Fair" on campus. Students could visit different booths offering interactive sessions on budgeting, investment basics, and even short plays illustrating financial scenarios. It's a fun and interactive way to learn about money matters.

I suggest that financial fairs should be organized where there could be stalls for financial material and different stalls offering different financial games.

Code 3: Regular Financial literacy workshops and expert talks

Although the methods of organizing financial workshop is common among universities these days. But experts had a collective viewpoint that there should be regularity in such workshops. Arranging one or two workshops in a year won't help students to learn abstruse financial concepts. Students will be able to retain and grasp financial concepts when these workshops are delivered in continuity. They highlighted the key reasons which are discussed underneath

Workshops providing student loan counselling should be organized. We must explain students about loan terms, repayment options, and debt management. Workshops on basics of investment should be arranged.

Besides this Financial Wellness Workshops can be arranged for students. We can organize interactive workshops on diverse topics like investing, managing credit cards, student loan repayment options.

As these days financial scams are increasing, we should make students aware about such financial frauds and scams by organizing regular workshops on such topics

Organizing one or two workshop in a year won't help. There should be regular workshops or expert talks.

Code 4: Financial literacy resource centres for access to materials

During the focus group discussion, experts emphasised that numerous international institutions have specialised financial resource centres on their official websites to assist students in enhancing their financial literacy. These centres provide resources and information regarding budgeting, investing, and the management of personal finances. The experts recommended that Indian institutions should implement a similar approach to strengthen financial literacy among their students. They articulated following viewpoints

We should establish a dedicated physical or online space with easy access to financial literacy resources, information brochures, workshops schedules, and contact information for support services.

I have also seen several foreign universities following this practice. They have a separate section of financial resource centre on their university official websites to provide financial resources and information to their students. Indian Universities should also follow the same.

Code 5: Financial literacy competitions and challenges

Finance academicians suggested that just as we have music, dance, sports , startup pitches competitions . Why can't we arrange finance competition to promote financial knowledge of participants and attendees. They advised and shared following insights

Conduct hackathons and competitions encouraging students to develop innovative fintech solutions for financial wellness or education.

Moreover, financial literacy competitions and challenges should be organized. Education Institutes can organize campus-wide competitions or challenges that encourage students to learn about budgeting, investing, or responsible borrowing with prizes and recognition.

4.3.4 Theme 4: Cooperative Peer learning and Community Involvement

In educational settings students interact with their peers and teachers. Such interaction not only leads to their social development but also assists them in acquiring and learning financial concepts (Alvarez, 2019; Chu &

Sung, 2015). Sohn et al.(2012) also observed that companions serve as significant role models for adolescents. According to experts students can learn from their peers. Finance background students can help students of non-finance background. Senior students can mentor their juniors.

Code 1: Peer support groups and financial literacy ambassadors

Online communities on LinkedIn, Twitter and Facebook can help students to discuss financial challenges faced by them. They can also share their financial experiences either good or bad to guide others.

Create online communities where students discuss financial challenges and share strategies.

Teachers can facilitate peer support groups where students can discuss challenges, share experiences, and hold each other accountable in a supportive environment.

Financial Literacy Ambassadors Program can be organized. We can select student representatives to promote financial literacy initiatives, organize peer workshops. These selected students acting as ambassadors will be like intermediary between students and support services.

Financial Peer Mentorship should be promoted such as train upperclassmen to guide younger students. Financial workshops by peers should be conducted as Peer-led sessions which can resonate well with students.

Code 2: Finance exchange programs for collaborative learning

Discussion led to evolution of a very innovative idea of swapping the roles. Finance background students from commerce, management and economics stream can help students of other departments. Teachers can promote collaborative learning among students of different academic disciplines.

Colleges could initiate a "Finance Exchange Program" where students from different disciplines temporarily swap roles – finance students tutoring others in money management and vice versa. It fosters a collaborative learning environment and broadens everyone's financial perspectives.

Code 3: Reverse mentoring for inclusive learning

It was also advised by financial advisors to the academicians, that they should practice reverse mentoring where students should be promoted to discuss financial concepts.

Pairing finance-savvy students with peers to lead discussions and workshops for collaboration.

We can experiment with reverse mentoring, where students become the educators.

Code 4: Collaboration with financial counselling organizations

Chartered Accountants in the group recommended academicians to collaborate with financial institutions and various government institution presently working to improve financial literacy among college students like FACT- “Financial awareness and consumer training” programme specifically launched for college students by National Centre for Financial Education.

Education Institutes can collaborate with financial counselling organizations to provide dedicated, on-campus counsellors who can guide students on managing finance.

Universities can collaborate with local banks or financial institutions to offer workshops, educational materials, or student-friendly financial products like low-fee checking accounts or credit cards.

We can offer open consultations with finance professors or financial literacy specialists for personalized guidance on budgeting, financial goals, and navigating unexpected expenses.

4.3.5 Theme 5: Laying Foundation of Financial Education at Early Age and Persistent Learning

Code1: Incorporating financial literacy courses into curriculum

Since decade researchers are emphasizing the crucial need of incorporating financial literacy in the academic curriculum, experts of our FGDs also supported this idea.

The best way to teach financial courses to students is to incorporate financial literacy courses in their curriculum as a mandatory subject for all academic disciplines.

Integrate financial literacy courses into the academic curriculum. These courses can cover basic financial concepts, investment strategies, and financial planning

Workshop and seminars have short duration effect on students. Learning financial literacy in the curriculum will lead to continuous learning and leave a mark on the minds of young learners.

Code2: Starting early by embedding financial literacy modules into elementary education

To lay the strong foundation of financially literate young generation, it is necessary to start from early stages of elementary education. Young minds are malleable and impressionable. The financial practices individuals learn in childhood often shape their behaviour in later stages of life.

We should Start early by beginning financial education early. Teach basic concepts even in elementary school.

It’s never too soon to learn about money.

Code3: Encouraging parental involvement in financial discussions at home

From the roots of social learning theory, it is suggested that parents are the primary source of socialization for students (Jorgensen, 2007). Even before education institutes or peers, it is parents that teach financial concepts to students. But still in many Indian families' parents don't involve children in taking financial decision. Although it is very important to give them financial exposure because financial experience is a major determinant of financial literacy(Polisetty et al., 2021; Justyn & Marheni, 2020; Ameliawati & Setiyani; 2018). *Parental Involvement plays an active role in enhancing financial literacy of students.*

Education institutes should not only encourage students to learn money management but also motivate parents to discuss finances at home. Family conversations about money build a strong foundation.

All the themes are summed up in figure 3

Figure 3: Results of Thematic analysis

5 Findings & Discussion

In order to adequately prepare pupils of various academic backgrounds with financial literacy, it is imperative to employ a comprehensive strategy. To begin with we must eschew dry conventional lecture formats and use effective learning environments, gamified learning, simulations, micro learning and blended learning to make financial concepts memorable and engaging to comprehend. Simulation techniques are also suggested by Thomas and Subhashree(2020). The use gamification for acquiring knowledge was also experimentally tested by international studies of (Bayuk & Altobello, 2019;Nadolny et al., 2019).

Technology can facilitate a more individualised experience. Students can get personalised guidance powered by AI, or immerse themselves in a secure and interactive environment to investigate financial scenarios through the use of VR tools, digital calculators, social media platforms and mobile applications. Apps on smart devices can be useful source for fetching financial information(Van Nguyen et al., 2022;Yin Yin et al., 2022). Utilizing augmented reality can greatly enhance financial literacy. (Candra Sari et al., 2022). Podcasts provide versatile learning environment that is readily available at anytime. Compen et al.(2021) backed the idea that interactive webinars might boost financial literacy by enhancing collaborative learning.

Financial empowerment can be effectively promoted through the establishment of specialised resources in educational institutes, such as counselling centres, finance clubs, and seminars. Activities such as financial fitness festivals can offer students an entertaining and enlightening environment in which to gain knowledge. Collaboration is another key to unlocking financial literacy. Ambassador programmes and peer support groups cultivate a sense of community by providing an environment where students can discuss challenges, exchange experiences, and gain knowledge from one another. Exchange programmes with students from diverse academic fields broaden individuals' understanding of effective money management, whereas collaborations with financial counselling organisations provide privileged access to specialised advice and resources. In conclusion, financial literacy should not be a one-time event but rather a continuous process. Early incorporation of financial education into the curriculum provides students with fundamental skills. Several researches have also proposed this idea of infusing financial literacy as a mandatory subject in the curriculum of all academic disciplines(Siraj et al., 2020; Thomas & Subhashree, 2020; Herawati et al., 2020). The financial lessons can be further reinforced through parental involvement, which fosters a supportive environment wherein families can collectively construct a robust financial foundation. Fostering a culture of lifelong learning that extends beyond the academic sphere can enable students to develop the knowledge and skills necessary to make prudent financial choices and attain sustained financial security.

6 Conclusion

This study highlights the innovative learning practices combined with effective use of technology and educational institutions support, contribution of peer led learning and parents involvement in enriching students with heightened levels of financial literacy. For this the study encapsulates the viewpoints of financial experts like academicians, financial counsellors and CAs , who closely watch financial hurdles their student and clients face while taking financial decisions. Their expertise and rich experiences unfolded several novel strategies but this study fails to examine the viewpoint of students. Future studies should therefore focus on interviewing or holding focus groups with a broad spectrum of students from Indian higher education institutions, representing a variety of academic fields and socioeconomic backgrounds. This would offer a deeper comprehension of the difficulties and experiences that students have with financial literacy. Through the gathering and examination of real-world encounters, challenges, and requirements of students, scholars can acquire important knowledge for creating more focused and efficient financial literacy initiatives.

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