



A STUDY ON THE AWARENESS AND UTILIZATION OF AI TOOLS IN FINANCIAL EDUCATION AMONG GENERATION Z

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Abstract:

Artificial intelligence (AI) has the potential to transform financial education by providing real-time, personalized, and adaptive learning experiences. This study explores the awareness and perceptions of Generation Z regarding the use of AI tools in financial education. Primary data was collected through a quantitative survey distributed via Google Forms, using a convenience sampling method. The research focuses on three main objectives: assessing Gen Z's understanding of AI tools in financial education, identifying the perceived benefits and challenges of using these tools, and providing recommendations to enhance awareness and promote AI adoption in this field. The findings indicate that while Gen Z demonstrates a moderate level of awareness, there is significant potential for increased engagement. Participants identified personalized learning and real-time feedback as key advantages, aligning well with Gen Z's preference for interactive and flexible learning methods. However, the study also highlights several barriers to adoption, including concerns over data privacy and security, as well as a limited understanding of how AI tools function. To address these challenges, the study recommends targeted awareness campaigns, the integration of AI literacy into financial education curricula, and the implementation of robust data protection measures to build user trust. By addressing these areas, educational institutions can enhance the effectiveness and acceptance of AI tools, ultimately improving financial literacy among Generation Z. This research contributes valuable insights for stakeholders in both the technology and education sectors aiming to leverage AI in financial education.

Keywords: AI, Gen Z, Financial education, Digital learning, Adaptive learning.

Introduction

Financial education is among the latest sectors to benefit from the advancements in artificial intelligence (AI), which is transforming numerous other fields. Financial chatbots, robo-advisors, and personalized learning platforms are just a few instances of AI solutions that offer innovative ways to enhance financial literacy. These technological innovations have the potential to make financial education more accessible, engaging, and tailored to individual needs. Generation Z, comprising individuals born roughly between 1997 and 2012, is the first generation to grow up in a fully digital world. This generation has been surrounded by technology and is accustomed to its presence in daily life. Their extensive engagement with digital platforms and technological skills positions them well to leverage AI technologies in financial education. However, their level of understanding and interaction with these AI tools remains uncertain, despite their technological proficiency. To successfully incorporate AI tools into financial education, it is crucial to have a comprehensive understanding of Gen Z's familiarity with these resources, their perceived advantages, and the obstacles they face in using them. Exploring these factors can provide valuable insights into how AI can be utilized to enhance the financial literacy of this tech-savvy generation. Given the increasing significance of financial literacy in navigating complex financial landscapes, understanding these elements will be beneficial in developing educational strategies and resources that are better aligned with the needs of Gen Z. In the rapidly evolving digital era, artificial intelligence (AI) has emerged as a transformative force across various sectors, including education and finance. One of the most significant developments is the integration of AI tools in financial education, which offers personalized learning experiences, real-time insights, and data-driven decision-making support. These advancements hold great potential in addressing long-standing gaps in financial literacy, particularly among younger generations. As digital natives, they are highly familiar with technology and are often early adopters of new tools and platforms.

Despite this, several studies suggest that Generation Z may still face challenges in achieving adequate financial literacy, often due to a lack of structured financial education and practical application. Given their high engagement with technology, AI tools present an opportunity to bridge this gap by offering engaging, adaptive, and accessible financial education resources tailored to their needs and preferences. This study aims to explore the awareness and utilization of AI tools in financial education among Generation Z, focusing on their knowledge of available tools, frequency and purpose of use, perceived usefulness, and the barriers they may encounter. Understanding these factors is crucial for educators, policymakers, and technology developers to design effective strategies that promote financial literacy through innovative AI-driven solutions. By doing so, we can better equip Generation Z with the knowledge and skills needed to make informed financial decisions in an increasingly complex economic environment.

Literatures reviewed

No.	Author(s) & Year	Focus Area	Key Findings	Highlights / Implications
1	Osetskiy V, Vitrenko A, et al. (2020)	AI in general education (global trends)	AI enhances the quality and accessibility of learning, with rapid market growth in Asia-Pacific and North America. Concerns include teacher job losses and reduced student interaction.	Emphasizes need for investment in AI education to balance benefits and socioeconomic concerns.
2	Jaiswal and Arun (2021)	AI in Indian education (individualized learning and adaptive testing)	Identifies current uses and gaps in AI-driven education; highlights differences in perception between experts and ed-tech firms.	Suggests potential for AI to enhance education in developing countries through adaptive and personalized systems.
3	Dr. Joglekar T. Shweta (2022)	AI in financial education and job automation	AI tools automate financial tasks, personalize learning, and improve financial decision-making, leading to higher financial literacy and satisfaction.	AI enhances effectiveness, engagement, and accessibility of financial education.
4	RiyaniDiah (2023)	AI in Society 5.0 and financial literacy	AI, IoT, and big data can transform financial literacy and society by integrating technology with human life in cyberspace.	AI can drive optimal outcomes and create new value through disruptive innovation.
5	Lin and Shuw (2023)	AI in school finance management	AI improves operational efficiency and budgeting through automation and analytics. Challenges include privacy, legal, and cultural resistance.	Calls for a balanced approach blending AI with human oversight.

Source: Researcher's Compilation

Statement of the problem

Although AI tools have the capacity to enhance financial literacy by providing personalized insights and automated functionalities, there is a limited understanding of Gen Z's familiarity with and utilization of these tools in the context of financial education. This deficiency in knowledge hinders the creation of effective financial literacy strategies tailored for this digitally-savvy generation. The aim of this research is to assess Gen Z's awareness, perceived advantages, and obstacles in embracing AI tools for financial education.

Research Questions

1. What is the level of awareness of Generation Z regarding AI tools used in financial education?
2. To what extent do Generation Z individuals utilize AI tools for improving their financial knowledge and decision-making?
3. What are the perceived benefits of using AI tools in financial education among Generation Z?
4. What challenges or barriers do Generation Z face in adopting AI tools for financial learning?
5. Are there any demographic or behavioral factors (e.g., education level, digital literacy, income) that influence the awareness and utilization of AI tools among Generation Z?
6. How can financial education strategies be improved to better incorporate AI tools in ways that resonate with Generation Z?

Objectives of the study

The objectives of the study as follows:

1. To recognize the perceived advantages and obstacles to the adoption of these tools.
2. To assess the degree of awareness regarding AI tools for financial education within Generation Z.
3. To offer recommendations for improving the awareness and uptake of AI in financial education targeted at Generation Z.

Hypothesis of the study

H0: There is no significant difference in the level of awareness among Gen Z regarding the use of AI tools for financial education.

H1: There is a significant difference in the level of awareness among Gen Z regarding the use of AI tools for financial education.

Research Methodology

In order to evaluate Generation Z's understanding of AI tools in financial education, this study employed a sample of 122 participants, representing the target demographic of young professionals and university students aged 12 to 27 residing in Davangere city. Participants were selected using a convenience sampling method, with a focus on individuals who are either pursuing higher education or are early in their professional careers.

a) Data collection:

- i. **Primary Data:** A structured questionnaire was created using a 5-point Likert scale and distributed via Google Forms to collect data on the perceived benefits, challenges, and awareness levels regarding AI tools.
- ii. **Secondary Data:** In addition to primary data collection, this study also utilized secondary data to support and contextualize the findings. Relevant literature, academic journals, government reports, and credible online sources were reviewed to gather existing information on the role of AI in financial education and Generation Z's digital behavior. This secondary data provided a theoretical foundation and helped in identifying research gaps, refining the research questions, and interpreting the results within a broader context.
- iii. **Validity and Reliability:** Experts reviewed the interview guide and conducted a pretest of the questions to confirm their relevance and clarity. Confidentiality was upheld throughout the study, and ethical approval was obtained.

Analysis and Interpretation

Table 1: Demographic Profile of the respondents

Demographic Variable	Category	Percentage(%)
Age	12-17	28.2
	18-24	41.5
	25-29	30.3
Gender	Male	57.8
	Female	42.2
EducationLevel	Postgraduate	44.7
	Undergraduate	48.5
	Highschool	6.8

Source: Survey Data

Demographic Profile Interpretation

The demographic analysis of the study's 122 participants reveals valuable insights into the composition of Generation Z respondents in Davangere city:

- a) **Age Distribution:** The majority of participants (41.5%) fall within the 18–24 age group, which is considered the core of Generation Z. This is followed by 30.3% in the 25–29 age group and 28.2% in the 12–17 age range. This indicates that the sample predominantly represents young adults who are likely in higher education or the early stages of their careers.
- b) **Gender:** The sample shows a slight male dominance, with 57.8% identifying as male and 42.2% as female. This suggests a relatively balanced gender distribution, ensuring a fair representation of perspectives from both groups.
- c) **Education Level:** A large portion of respondents are highly educated, with 48.5% being undergraduate students and 44.7% at the postgraduate level. Only 6.8% have completed high school education. This suggests that most participants are academically engaged, which may influence their exposure to and understanding of AI tools in financial education.

Overall, the demographic profile supports the relevance of this study's focus on digitally active and educationally engaged youth, aligning well with the characteristics and behaviors typical of Generation Z.

Table 2: Descriptive Statistics of AI Tool Utilization in Financial Education (N = 122)

Statement	N	Min	Max	Mean	Std. Deviation
Using AI tools makes learning about finance more engaging and interactive.	122	1	5	3.55	0.762
AI tools provide a personalized learning experience tailored to my financial education needs.	122	1	5	3.50	0.695
AI tools offer real-time feedback and guidance in financial learning.	122	1	5	3.60	0.688
AI tools can significantly improve my understanding and management of personal finances.	122	1	5	3.52	0.784
AI tools have helped me make better financial decisions.	122	1	5	3.53	0.794
AI tools simplify complex financial concepts for easier understanding.	122	1	5	3.64	0.739

Source: Calculated through SPSS

Interpretation of Descriptive Statistics on AI Tools in Financial Education

The table summarizes responses from 122 participants regarding their perceptions of AI tools in financial education, using a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). The findings suggest a generally **positive perception** of AI tools, with all mean scores falling between **3.50 and 3.64**, indicating moderate to high agreement.

- The highest mean score (3.64) was for the statement *"AI tools simplify complex financial concepts for easier understanding"*, suggesting that respondents find AI particularly effective in breaking down difficult financial topics.
- The next highest mean (3.60) was for *"AI tools offer real-time feedback and guidance in financial learning"*, highlighting that users appreciate the immediate support AI tools provide, which may enhance learning engagement.
- The statement *"Using AI tools makes learning about finance more engaging and interactive"* scored a mean of 3.55, reflecting a generally favorable view of AI's role in enhancing learning experiences.
- Statements related to personal application and decision-making also received moderately positive responses:
"AI tools have helped me make better financial decisions" (Mean = 3.53)
"AI tools can significantly improve my understanding and management of personal finances" (Mean = 3.52)
- The lowest mean score (3.50) was for *"AI tools provide a personalized learning experience tailored to my financial education needs"*. Although still positive, this may suggest a potential area for improvement in AI's ability to adapt content to individual users.

Overall, the low standard deviations (ranging from 0.688 to 0.794) indicate a fair level of consistency in participants' responses. These results imply that Generation Z respondents generally perceive AI tools as helpful in enhancing financial learning, especially in simplifying complex topics and providing real-time assistance. Although AI tools are generally perceived as beneficial for enhancing financial education, the overall data trends suggest that the reported advantages are moderate and vary among users. There is a clear agreement on the effectiveness of AI in boosting engagement, simplifying complex financial concepts, and providing real-time feedback. However, opinions are more divided when it comes to the tools' ability to offer personalized learning experiences and support in financial decision-making. The observed variability in responses—from moderate to high—reflects differences in individual expectations and experiences with AI in financial education. These findings indicate that while AI technologies hold promise, further development is needed to better meet users' needs, particularly in the areas of personalization and decision-making support.

Table 3.1: One-Way ANOVA Results on Awareness and Utilization of AI Tools for Financial Education (N = 122)

Statement	Source	Sum of Squares	df	Mean Square	F	Sig. (p-value)
I am aware of the existence of AI tools that can assist with financial education.	Between Groups	8.416	3	2.805	6.309	.001
	Within Groups	52.469	118	0.445		
	Total	60.885	121			
I have encountered information about AI tools for financial education through various media.	Between Groups	5.028	3	1.676	4.025	.009
	Within Groups	49.135	118	0.416		
	Total	54.164	121			
I am familiar with specific AI tools designed for financial education (e.g., robo-advisors, chatbots).	Between Groups	0.556	3	0.185	0.380	.768
	Within Groups	57.518	118	0.487		
	Total	58.074	121			
I know how AI tools can be used to improve financial literacy.	Between Groups	6.738	3	2.246	5.599	.001
	Within Groups	47.336	118	0.401		
	Total	54.074	121			
I have used AI tools for financial education in the past.	Between Groups	3.845	3	1.282	2.236	.088
	Within Groups	67.630	118	0.573		
	Total	71.475	121			
My educational institution has introduced AI tools for financial learning (e.g., PocketGuard, Quicken, Oportun, Acorns, Qapital, Copilot, Money, etc.)	Between Groups	9.715	3	3.238	4.914	.003
	Within Groups	77.760	118	0.659		
	Total	87.475	121			
I can easily access AI tools for financial education.	Between Groups	1.199	3	0.400	0.863	.463
	Within Groups	54.646	118	0.463		
	Total	55.844	121			

Source: Calculated through SPSS

Analysis of Variance (ANOVA) is a statistical method used to determine whether there are any statistically significant differences between the means of three or more independent (unrelated) groups. In the context of this study, a One-Way ANOVA was employed to assess whether variations in awareness and utilization of AI tools for financial

education exist among different subgroups within Generation Z. The One-Way ANOVA analyzes variance within groups and between groups to test the following hypotheses:

Null Hypothesis (H₀): There is no significant difference between group means.

Alternative Hypothesis (H₁): At least one group mean is significantly different from the others.

The significant differences ($p < .05$) were found in the following statements:

- Awareness of AI tools ($p = .001$)
- Understanding how AI tools can improve financial literacy ($p = .001$)
- Institutional introduction of AI tools ($p = .003$)

These results suggest variability in awareness and institutional exposure across different groups. In this study, ANOVA helped determine how factors such as exposure to media, institutional support, and personal usage relate to differing levels of awareness and engagement with AI tools in financial education among Gen Z participants.

Table 3.2: Key Findings from the ANOVA Table:

Statement	F-value	p-value	Significance
I am aware of the existence of AI tools that can assist with financial education.	6.309	0.001	Significant
I have encountered information about AI tools through various media.	1.282	0.185	Not significant
I am familiar with specific AI tools designed for financial education (e.g., robo-advisors, chatbots).	0.487	0.768	Not significant
I know how AI tools can be used to improve financial literacy.	5.599	0.001	Significant
I have used AI tools for financial education in the past.	2.236	0.088	Not significant
My educational institution has introduced AI tools for financial learning.	4.914	0.003	Significant
I can easily access AI tools for financial education.	0.863	0.463	Not significant

Source: Researcher's compilation

Interpretation:

Based on the ANOVA analysis, the significant differences ($p < 0.05$) were found in three key areas:

- Awareness of the existence of AI tools for financial education.
- Understanding how AI tools can improve financial literacy.
- Whether the educational institution has introduced such tools.

These findings support the alternative hypothesis (H₁) for these specific items, indicating that awareness and exposure to AI tools differ significantly among Gen Z subgroups (likely based on factors like education level, age, or access).

On the other hand, there is no significant differences were observed in areas such as:

- Exposure through media,
- Familiarity with specific AI tools,
- Past usage of AI tools, and
- Ease of access.

These results support the null hypothesis (H₀) for those variables, suggesting a more uniform experience among Gen Z in these aspects. The results partially reject the null hypothesis (H₀) and confirm the alternative hypothesis (H₁) for certain aspects of AI awareness in financial education. While Gen Z generally exhibits some level of exposure and usage, there are notable variations in their awareness and understanding, particularly in relation to institutional support and knowledge of AI's educational applications. While Generation Z shows a strong overall awareness and acknowledges the advantages of AI tools in financial education, certain areas still require attention. In particular, there is a need for greater education and improved accessibility regarding specific AI tools, their practical usage, and ease of access.

Challenges faced by Gen Z

Despite the growing recognition of AI tools in financial education, this study highlights several key challenges faced by Generation Z:

1. **Limited Familiarity with Specific Tools:** Many respondents were aware of the concept of AI in education but were unfamiliar with actual tools such as robo-advisors, budgeting apps, or AI-powered learning platforms. This gap suggests a lack of targeted exposure and practical training.
2. **Low Utilization Despite Awareness:** Although students acknowledge the benefits of AI tools in improving financial literacy, actual usage remains low. Factors such as uncertainty about how to use the tools, fear of data security, or lack of guidance may contribute to this disconnect.
3. **Accessibility and Digital Divide:** Not all students have equal access to digital infrastructure or AI-based platforms. This disparity is more noticeable among students from rural or economically weaker backgrounds, affecting their ability to benefit from AI-based learning solutions.

4. Institutional Adoption is Limited: While a few educational institutions have begun introducing AI tools, widespread institutional integration is still lacking. As a result, students rely heavily on self-discovery or informal learning channels like social media.
5. Trust and Privacy Concerns: Some respondents expressed hesitancy about using AI tools due to concerns over data privacy and trust in algorithmic decision-making, especially in personal finance.

Suggestions for Policymakers

To address these challenges and unlock the full potential of AI in financial education, policymakers should consider the following recommendations:

1. Incorporate AI Literacy in Educational Curriculum: Develop structured modules on AI and financial technology (FinTech) within school and university syllabi to ensure students not only understand but can actively use AI tools.
2. Promote Public Awareness Campaigns: Launch awareness drives through media, workshops, and seminars to educate students about the availability and benefits of AI tools for financial planning and education.
3. Support Digital Infrastructure and Access: Ensure equitable access to digital devices and internet connectivity, particularly in underserved areas, so that all students can benefit from AI-driven education tools.
4. Encourage Institutional Adoption of AI Tools: Provide incentives and training support for schools and colleges to integrate AI platforms into their learning environments, including partnerships with Edutech companies.
5. Establish Regulatory Frameworks for Data Privacy: Develop and enforce data protection policies that specifically address AI in education, ensuring students' data is safeguarded and ethical standards are maintained.
6. Foster Innovation through Grants and Research: Fund academic research and startups that aim to build innovative AI-based financial literacy platforms tailored to the needs of Generation Z.

Conclusion

This study highlights that Generation Z exhibits a promising level of awareness regarding AI tools in financial education and recognizes their potential benefits. However, the transition from awareness to active utilization remains uneven. Key gaps exist in familiarity with specific tools, actual usage, and accessibility—indicating that current educational and technological frameworks are not fully aligned with the evolving needs of this digitally-native generation. To bridge these gaps, a collaborative approach is necessary—combining educational reform, policy support, digital infrastructure development, and awareness initiatives. By doing so, stakeholders can ensure that Generation Z is not only informed but also empowered to make smarter financial decisions through the effective use of AI tools. Ultimately, this will contribute to building a more financially literate, technologically skilled, and economically resilient youth population. Generally positive perception of the benefits offered by AI tools in financial education. While features such as real-time feedback and personalized learning are recognized, broader adoption is hindered by key challenges including limited access, concerns over data privacy, and insufficient hands-on experience with these tools. To enhance engagement and effectiveness, these barriers must be addressed through strategic measures such as curriculum integration, improved digital accessibility, robust data protection policies, and active institutional involvement. By implementing targeted educational initiatives, policymakers and educators can significantly strengthen Gen Z's financial literacy and equip them with the tools needed to navigate today's increasingly complex financial landscape.

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