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"Study On Awareness Of Ai Tools In Financial Education With Reference To Gen Z"

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ABSTRACT

Artificial intelligence(AI) in financial education has the potential to revolutionize the field by improving learning through real-time, personalized, and adaptive feedback mechanisms.This study investigates Gen Z's awareness and perceptions of Artificial Intelligence(AI) tools in financial education.The study collected primary data using Google Forms for quantitative surveys,utilizing a convenience sample strategy.The three objectives are to analyze Gen Z's understanding of AI tools in financial education, learn about their perceived advantages and obstacles to using these tools, and offer suggestions for raising awareness and promoting AI usage in financial education.The findings show that there is a significant opportunity for more involvement even if Gen Z typically exhibits a moderate level of awareness of AI products.Personalized learning experiences and real-time feedback are two of the perceived benefits of AI tools, and these features match perfectly with Gen Z's propensity for interactive and adaptable teaching approaches.This reveals important adoption challenges, such as worries about data security and privacy and a lack of thorough understanding of how these tools work.The study makes a number of proposals to address these issues, including putting in place focused awareness-raising educational efforts,AI literacy into financial education curriculum, and putting in place strong data protection measures to foster confidence.By focusing on these topics, educational institutions can improve Gen Z's financial literacy by increasing the efficacy and acceptability of AI tools.This study adds to our understanding of how artificial intelligence(AI) can be used to further financial education and provides useful information for those involved in both technology and financial education.

Keywords: Artificial Intelligence, Financial Education , Gen Z, AI Tools Awareness , Financial Literacy

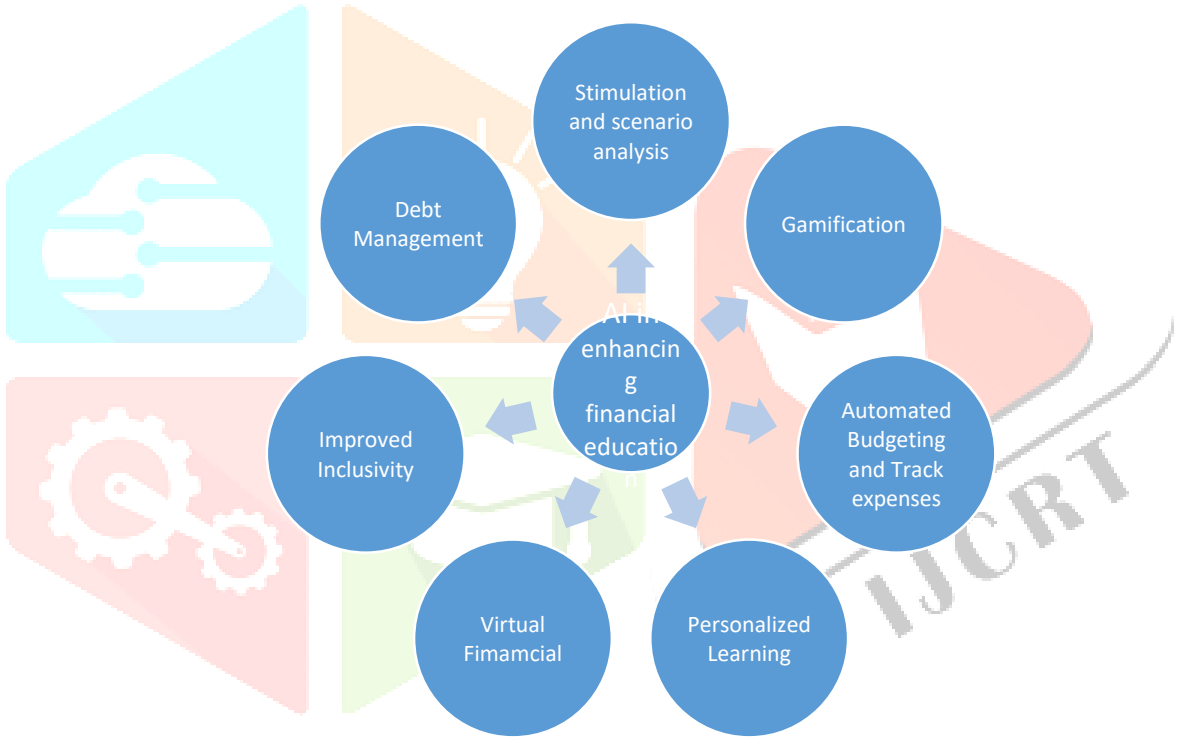
Introduction

Financial education is one of the most recent industries to gain from the breakthroughs of artificial intelligence (AI), which is revolutionizing many other disciplines. Financial chat-bots, robo-advisors, and customized learning environments are just a few examples of AI solutions that provide creative methods to improve financial literacy. These technological advancements could improve the accessibility, interesting, and customization of financial education.

Born between 1997 and 2012, Gen Z is a distinct group that has experienced a digital upbringing. This generation has grown up with technology and is used to it being a part of everyday life. They are in a good position to take advantage of AI technologies in financial education because of their high level of involvement with digital platforms and technological ability. The level of their knowledge and interaction with these AI tools is yet unknown, despite their proficiency with technology.

To effectively integrate AI tools into financial education, it is important to have a thorough grasp of Gen Z's knowledge of these resources, their perceived benefits, and the challenges they encounter in utilizing them. Investigating these variables can yield insightful information on how AI can be applied to improve this tech-savvy generation's financial literacy. Given the growing importance of financial literacy in managing intricate financial environments, it will be useful to comprehend these aspects in order to create educational strategies and resources that are more suited to the requirements of Gen Z.

The role of AI in enhancing financial education :



Source: Primary data collected

Review of Literature

1. **Osetskyi V, Vitrenko A, et al. (2020**), artificial intelligence (AI) is changing teaching and learning by improving the quality and accessibility of knowledge. According to the report, the market for AI education is expanding quickly, particularly in Asia-Pacific nations like South Korea and China, and it is also developing significantly in North America. Even if AI improves educational achievements and gives businesses a competitive edge, there are drawbacks as well, such the possibility of teacher job losses and a decline in student social contact. The study emphasizes how crucial it is to fund cutting-edge AI educational initiatives in order to weigh the advantages and disadvantages of economic expansion.

2. **Dr. Joglekar.T. Shweta** , she assesses how well AI technologies perform financial job automation and offer tailored learning materials and financial insights. According to the study, when compared to conventional approaches, AI-powered platforms improve user involvement and financial decision-making, resulting in increased financial literacy and satisfaction. It draws attention to how AI could improve the effectiveness, personalization, and accessibility of financial education. The study highlights how AI may significantly improve user results and decision-making processes, which in turn advances financial education.

3. **Riyani Diah (2023),** investigates the potential of AI to transform lives and financial literacy in the context of Society 5.0, namely the transition from Industry 4.0 to the Fifth Industrial Revolution. The research focuses on how AI, coupled with big data and IoT, might dramatically revolutionize both industry and society by merging people, systems, and things into cyberspace. Riyani highlights that AI has the potential to improve financial literacy and lives through modern technology, offering optimal results and creating new value through disruptive developments. The study emphasizes AI's revolutionary effects on the physical environment and societal systems.

4. **Lin and Shuw (2023),** The paper emphasize that using AI into school finance management increases efficiency through work automation and improves budgeting accuracy through sophisticated predictive analytics. Their case studies highlight AI's practical applications in decision-making and financial management. However, they underline that effective AI adoption necessitates addressing issues like as cultural resistance, privacy concerns, and the need for updated legal frameworks, arguing for a balanced strategy that combines AI technology with human skills.

5. **Jaiswal and Arun (2021),** This paper investigates the influence of artificial intelligence on Indian education, with a focus on individualized learning and adaptive evaluations. Their research, which was conducted through interviews with specialists and educational technology companies, focuses on present applications as well as future possibilities. They detect gaps between expert and company viewpoints, indicating potential areas for future AI development in education. The study offers useful insights for improving education systems in developing nations.

Problem Statement:

Despite AI tools' potential to improve financial literacy through individualized insights and automated features, there is little understanding of Gen Z's awareness and use of these tools in financial education. This lack of information impedes the development of effective financial literacy measures for this digital-native generation. The purpose of this study is to evaluate Gen Z's awareness, perceived benefits, and challenges to adopting AI tools for financial education.

Objective of the study

1. To identify the perceived benefits and barriers to adopting these tools.
2. To Analyze the level of awareness of AI tools for financial education among Gen Z.
3. To Provide suggestions for enhancing the awareness and adoption of AI in financial education for Gen Z.

Hypothesis

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

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

Research Methodology

In order to determine Gen Z's awareness of AI tools in financial education, this study adopted 122 sample size, representing the target population of young professionals and university students between the ages of 12-27,and young professionals were chosen using a convenience sampling technique.

Data collection:

Primary Data: Structured questionnaire was designed on 5 point -linkert scale, distributed using Google forms to gather information on the perceived advantages, obstacles, and awareness levels of AI tools.

Validity and Reliability: Experts examined the interview guide and pretested the questions to ensure it was relevant and clear. Confidentiality was maintained throughout the investigation, and ethical approval was secured.

Data Analysis and Interpretation

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Using AI tools makes learning about finance more engaging and interactive.	122	1	5	3.55	.762
AI tools provide a personalized learning experience tailored to my financial education needs.	122	1	5	3.50	.695
AI tools offer real-time feedback and guidance in financial learning.	122	1	5	3.60	.688
AI tools can significantly improve my understanding and management of personal finances.	122	1	5	3.52	.784
AI tools have helped me make better financial decisions.	122	1	5	3.53	.794
AI tools simplify complex financial concepts for easier understanding.	122	1	5	3.64	.739
Valid N (listwise)	122				

The data-set includes descriptive statistics, measured across six different Observations, on how users view the advantages of AI tools in financial education. A scale of 1 to 5 was used to score each statement, with higher numbers denoting greater agreement with the beneficial effects of AI tools. The study encompasses 122 participants, and the findings provide valuable perspectives on diverse aspects of artificial intelligence's capacity to augment financial education.

1. **Participation and Interaction:** With a standard deviation of 0.762, the statement "Using AI tools makes learning about finance more engaging and interactive" has a mean score of 3.55. This quite modest mean

indicates that respondents believe AI tools to be moderately engaging and interactive when it comes to financial learning on average.While many people find AI tools interesting, others might not interact with them to the same extent, as indicated by the standard deviation, which shows some variety in responses.

2.Personalization of Learning: With a standard deviation of 0.695, the mean score for "AI tools provide a personalized learning experience tailored to my financial education needs" is marginally lower at 3.50. This implies that users do, on the whole, believe that AI tools offer personalization, but not much. The comparatively low standard deviation suggests a general consensus among consumers regarding the limited degree of customization that AI solutions provide.

3.Real-Time Feedback and advice: With a mean score of 3.60 and a standard deviation of 0.688, the statement "AI tools offer real-time feedback and guidance in financial learning" has the highest mean score. According to this score, respondents believe AI systems can provide timely feedback and direction with a reasonable degree of effectiveness. The low standard deviation points to a generally consistent user opinion regarding the usefulness of AI technologies in this field.

4. Enhancing Financial Understanding and Management: With a mean score of 3.52 and a standard deviation of 0.784, the statement "AI tools can significantly improve my understanding and management of personal finances" is scored well. This suggests that although respondents perceive this benefit as moderate, they believe AI tools to be somewhat successful in improving their financial understanding and management. The higher standard deviation indicates a higher degree of variety in the responses, which reflects varying perspectives on the impact that AI technologies will have on managing personal finances.

5. Better Financial Decisions: The statement "AI tools have helped me make better financial decisions" has a mean score of 3.53 and a standard deviation of 0.794, indicating that while respondents believe AI tools can help, their perception is not very high. The greater standard deviation in this case also suggests that users' experiences with the AI tools' ability to enhance decision-making are not uniform.

6.Simplification of Complex Concepts: The highest mean score of 3.64 for the category "AI tools simplify complex financial concepts for easier understanding" suggests that users believe AI tools to be reasonably competent in simplifying complicated financial concepts. Despite being relatively high, the standard deviation of 0.739 indicates that there is general agreement that AI tools may make concepts simpler.

While AI tools are generally thought to be helpful in improving financial education, the overall trends in the data indicate that the reported benefits are moderate and differ among users. While there is consensus regarding the usefulness of AI tools for enhancing engagement, streamlining complicated ideas, and giving real-time feedback, views on personalization and decision support are more divided. Response variability ranging from modest to high indicates that people's expectations and personal experiences with AI technologies in financial education are different. These findings imply that although AI technologies are beneficial, more may be done to fully satisfy user expectations in terms of personalization and decision-making help.

ANOVA TEST

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
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	.445		
	Total	60.885	121			
I have encountered information about AI tools for financial education through various media (e.g., social media, articles, advertisements).	Between Groups	5.028	3	1.676	4.025	.009
	Within Groups	49.135	118	.416		
	Total	54.164	121			
I am familiar with specific AI tools designed for financial education (e.g., robo-advisors, chatbots).	Between Groups	.556	3	.185	.380	.768
	Within Groups	57.518	118	.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	.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	.573		
	Total	71.475	121			
My educational institution has introduced AI tools for financial learning. (Like Pocket Guard, Quicken, oportum,Acorns,Qapital, Copilot. Money etc)	Between Groups	9.715	3	3.238	4.914	.003
	Within Groups	77.760	118	.659		
	Total	87.475	121			
I can easily access AI tools for financial education	Between Groups	1.199	3	.400	.863	.463
	Within Groups	54.646	118	.463		
	Total	55.844	121			

Rejection of Null Hypothesis (H1)

Awareness of the existence of AI tools: The p-value is less than 0.05, indicating that Gen Z is very aware of AI tools for financial education.Encountering information about AI tools: The p-value is less than 0.05, showing that Gen Z frequently encounters information about AI tools, indicating substantial knowledge in this area. Knowledge of how AI tools can improve financial literacy: The p-value is less than 0.05, suggesting that Gen Z has significant awareness of the potential benefits of AI tools in enhancing financial literacy. Introduction of AI tools by educational institutions: The p-value is less than 0.05, implying that educational institutions are actively incorporating AI tools and Gen Z is aware of these efforts.

Acceptance of Null Hypothesis (H0)

Ease of access to AI tools: The p-value is 0.463, showing no significant difference in ease of access to AI tools among Gen Z. Prior usage of AI tools for financial education: The p-value is 0.088, indicating no significant difference in the prior usage of AI tools for financial education among Gen Z. Familiarity with particular AI tools: The p-value is 0.768, showing no significant difference in familiarity with specific AI tools among Gen Z.

Although Gen Z demonstrates a high level of awareness and recognizes the benefits of AI tools for financial education, there are areas requiring further education and improved accessibility, specifically in terms of familiarity with specific AI tools, past usage, and ease of access.

Challenges

1. **Restricted availability of cutting-edge AI resources at educational institutions:** Many colleges and universities still haven't included cutting-edge AI technology into their curricula, despite the fact that AI is becoming more and more important in a variety of sectors. The tools that students are conceptually aware of and those they have actually used may differ as a result of this limited experience. The research data may contain errors as a result of students' familiarity and comprehension of these techniques not accurately reflecting their genuine awareness. The lack of practical experience with cutting-edge AI technologies can distort the findings since students may overestimate or underestimate their level of expertise based only on their theoretical comprehension.
2. **The swift advancement of AI technology:** AI tools and technologies are developing at a never-before-seen rate, with new breakthroughs appearing frequently. Because of their rapid development, it may be challenging to provide an up-to-date and precise picture of the usefulness and efficacy of AI technologies in financial education. In a short amount of time, tools that are regarded as state-of-the-art now may become antiquated or replaced by more sophisticated models. In order to keep their findings current and indicative of the most recent developments in technology, researchers must therefore regularly upgrade their methods and strategies for gathering data.
3. **Socioeconomic factors: T**hese are important in determining who may access and uses financial education and artificial intelligence. Different amounts of exposure to technology resources and educational opportunities might result from variations in socioeconomic class. While students from lower socioeconomic origins may encounter obstacles like scarce resources and opportunities, those from higher socioeconomic backgrounds may have better access to sophisticated AI technologies and financial knowledge. It can be difficult to extrapolate study findings to the whole Gen Z cohort due to these discrepancies. When evaluating data and making inferences, researchers need to take these socioeconomic aspects into account to make sure the findings are thorough and representative.

4. **Concerns about security and privacy:** Gen Z is more likely to be extremely cautious with their personal information as they were raised in an era of high-profile data breaches and growing awareness of online privacy issues. There's often a tangible worry about how sensitive or personal data will be handled while taking part in research that require this kind of information to be collected. This increased sensitivity may cause people to be reluctant to provide truthful and thorough answers, which could jeopardize the accuracy of the data. If participants feel that there is a risk to their privacy, they may withhold important information or decide not to participate at all, which could compromise the thoroughness and accuracy of the study.

5. Survey fatigue and engagement problems: Because Gen Z is used to a lot of digital contacts, they may get tired of answering surveys, which can result in lower response rates and worse quality results. To collect high-quality data, it is imperative to maintain participants' motivation and engagement throughout the study.

Suggestions

1. **Including AI Resources in the Curriculum :** In order to improve Gen Z's familiarity with and ability to use AI tools in practice, it is imperative that these tools be fully incorporated into the curriculum. It is recommended to create comprehensive training programs that concentrate on particular AI tools, such chat-bots and robo-advisors. The functions and advantages of these technologies can be better understood by students through workshops, real-world examples, and hands-on activities. It is more probable that students will accept and make successful use of these tools in their financial education if they can close the gap between theoretical knowledge and real-world application.

2. **Encouraging Consistent Use through Assignments and Projects:** Students can be motivated to consistently use AI technologies by integrating them into their courses through assignments, projects, and hands-on activities. Integrating these tools into their coursework allows students to see the practical implications of artificial intelligence in financial education, acquire confidence, and get hands-on experience. This method promotes long-term engagement and proficiency by improving their knowledge and incorporating these tools into their learning habits.

3. **Enhancing AI Tool Accessibility:** Resolving accessibility concerns is crucial to the general acceptance of AI technologies. Legislators and educational institutions should endeavor to make these resources available for free or at a reduced cost. By eliminating technological and budgetary hurdles, centralized platforms that compile diverse AI resources might make them easier for students to access and use. Educational institutions may foster a more fair and inclusive learning environment by guaranteeing that all students have easy access to AI tools.

4. **Addressing Privacy and Security Issues:**The use of AI tools is severely hampered by privacy and security issues. AI tool suppliers and educational institutions should put strong data protection policies in place to allay these worries. Building trust and promoting the use of AI tools can be achieved by open policies about data usage, frequent security assessments, and training students on safe behaviors. For these tools to be widely accepted and used, it is imperative that students feel confident utilizing them.

5. **Establishing Authenticity and Trust:**The adoption of AI tools depends on establishing trust in them. It is recommended that creators of AI tools clarify the processes by which their tools produce recommendations in order to improve the technologies' transparency and dependability. Building authenticity and trust among students can also be facilitated by the endorsements of reliable financial educators or institutions. Developers can urge students to rely on AI tools for their financial education by showcasing the technologies' legitimacy and dependability.

6. **Establishing Uniform Institutional Support:** Standardizing the integration of AI tools across educational institutions should be the focus of a concentrated effort. Teachers who participate in regular training sessions on the use of AI tools will be more equipped to assist students. Students from various institutions will have equal opportunity to learn from and profit from these technologies if all schools make sure to include AI tools regularly in their curricula. Uniformity in educational quality and a reduction in learning opportunity inequities can be achieved through standardized support.

7. **Increasing Media Involvement**

Deepening engagement with AI technologies can be achieved by utilizing social media and other popular channels among Gen Z. Learning can be more appealing and effective if high-quality, interesting content about AI tools for financial education is made available through these channels. Students' comprehension and attention can be increased by using interactive materials like seminars, success stories, tutorials, and testimonies. Institutions may greatly enhance awareness and uptake of AI solutions by addressing students where they are and utilizing compelling forms.

By putting above suggestions into practice, policymakers and educational institutions can greatly raise Gen Z's understanding of and perception of the advantages of AI technologies for financial education. In the end, this strategy can provide students with the tools they need for successful money management in a world that is becoming more and more digital. It can also increase their financial literacy and prepare them for future financial difficulties.

Conclusion

This study focuses on Gen Z's moderate understanding of and perception of the advantages of AI tools in financial education. Even if benefits like real-time feedback and individualized learning are acknowledged, obstacles like limited accessibility, data privacy concerns, and a lack of real-world experience prevent wider use. Greater involvement and efficacy of AI tools can be fostered through addressing these barriers through curriculum integration, improved accessibility, strong privacy protections, and institutional support. Policymakers and educators can greatly improve Gen Z's financial literacy and provide them with the necessary tools to navigate the complicated financial world by putting certain educational initiatives into practice.

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