CAHIERS MAGELLANES-NS
Volume 06 Issue 2
2024

ISSN:1624-1940
DOI 10.6084/m9.figshare.2632599
http://magellanes.com/

"A STUDY ON AWARENESS OF AI TOOLS IN FINANCIAL EDUCATION WITH REFERENCE TO GEN Z"

Dr. Monica S,
Assistant Professor, Christ Academy Institute for Advanced Studies, Bangalore.
Ms. Arpitha R, S
tudent, Christ Academy Institute for Advanced Studies, Bangalore.
Ms. Kousalya V,
Student, Christ Academy Institute for Advanced Studies, Bangalore.

ABSTRACT
As digital natives, Generation Z (Gen Z) stands at the forefront of a technological revolution that includes artificial intelligence (AI) tools poised to reshape financial education. From interactive financial chat-bots to personalized robot-advisors, AI offers immense potential to transform how young individuals approach financial literacy. This study investigates the level of awareness Gen Z has about AI tools in financial education, along with their perceived benefits and the challenges they face in adopting these innovations. Based on a sample of 123 university students and young professionals, the research reveals that, while Gen Z recognizes the value of AI in delivering tailored learning and real-time insights, they encounter obstacles such as limited accessibility, data privacy concerns, and inadequate hands-on experience. The study also highlights a significant age-related difference in AI tool adoption, where older Gen Z members exhibit greater engagement. These findings emphasize the urgent need for educational institutions to integrate AI tools into curricula, foster consistent use through interactive projects, and ensure equitable access to emerging technologies. By addressing these barriers, AI has the potential to elevate financial literacy, equipping Gen Z with the essential skills to navigate an increasingly digital and data-driven financial landscape.

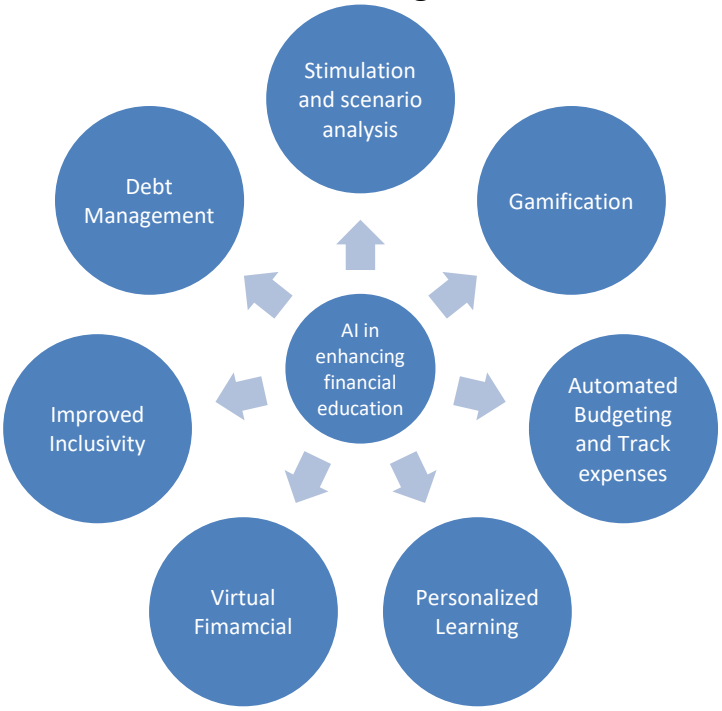
Keywords: Artificial Intelligence, Financial Education, Gen Z, AI Tools Awareness, Financial Literacy

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, robot-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

ISSN:1624-1940
DOI 10.6084/m9.figshare.2632599
http://magellanes.com/

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

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.

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.

ISSN:1624-1940
DOI 10.6084/m9.figshare.2632599
http://magellanes.com/

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.

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.

Dr. Joglekar. 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.

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 hinders 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.

Oobjective 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.

Research Methodology

In order to determine Gen Z's awareness of AI tools in financial education, this study adopted 123 sample size, representing the target population of young professionals and university students. Young professionals were chosen using a convenience sampling technique.

Data collection

Primary Data: Structured questionnaire was designed on 5 point -Likert 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,

ISSN:1624-1940
DOI 10.6084/m9.figshare.2632599
http://magellanes.com/

and ethical approval was secured.

Reliability Statistics	
Cronbach's Alpha	N of Items
.890	8

The Alpha of 0.890 indicates a high level of reliability, showing that the scale has strong internal consistency and the items are closely related in measuring the same construct.

PERCEIVED BENEFITS WITH REGARD TO GENDER

Testing the hypothesis

H0: There is no significance difference with perceived benefits in use of AI tools in financial education among Gen Z with regards to gender.

H1: There is significance difference with perceived benefits in use of AI tools in financial education among Gen Z with regards to gender.

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
PERCIEVED BENEFIT	Male	36	3.6151	.48873	.08145
	Female	87	3.5402	.61827	.06629

Independent Samples Test							
		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
PERCIEVED BENEFIT	Equal variances assumed	.255	.615	.647	121	.519	.07485
	Equal variances not assumed			.713	82.059	.478	.07485

Significance of Levene's Test: The significance value for Levene's test is 0.615, indicating no significant difference in variances between the two groups. Therefore, equal variances are assumed for the t-test.

T-Test Results: The t-value of 0.647 with 121 degrees of freedom has a significance (2-tailed) value of 0.519. Since the p-value (0.519) is greater than the threshold of 0.05, we fail to reject the null hypothesis

ISSN:1624-1940
DOI 10.6084/m9.figshare.2632599
http://magellanes.com/

Conclusion

The results of the t-test indicate that there is no significant difference in the perceived benefits of using AI tools in financial education among Gen Z with regards to gender. The p-value of 0.519 exceeds the 0.05 significance level, leading to the acceptance of the null hypothesis (H0).

PERCEIVED BENEFITS WITH REGARD TO AGE

Hypothesis

H0: There is no significance difference in perceived benefit of AI Tools in financial education among Gen Z with regard to Age

H1: There is significance difference in perceived benefit of AI Tools in financial education among Gen Z with regard to Age

Descriptive
PERCIEVED BENEFIT

	N	Mean	Std. Deviation	Std. Error
18-21	7	3.1429	1.08170	.40884
22-25	7	3.1633	.26635	.10067
26-29	98	3.5816	.53619	.05416
4	11	3.9091	.48349	.14578
Total	123	3.5621	.58237	.05251

ANOVA
PERCIEVED BENEFIT

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.706	3	1.235	3.902	.011
Within Groups	37.671	119	.317		
Total	41.377	122			

ISSN:1624-1940
DOI 10.6084/m9.figshare.2632599
http://magellanes.com/

Multiple Comparisons
Dependent Variable: PERCIEVED BENEFIT
Tukey HSD

(I) Age:	(J) Age:	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
18-21	22-25	-.02041	.30075	1.000	-.8041	.7632
	26-29	-.43878	.22012	.196	-1.0124	.1348
	4	-.76623*	.27203	.029	-1.4751	-.0574
22-25	18-21	.02041	.30075	1.000	-.7632	.8041
	26-29	-.41837	.22012	.233	-.9919	.1552
	4	-.74583*	.27203	.035	-1.4547	-.0370
26-29	18-21	.43878	.22012	.196	-.1348	1.0124
	22-25	.41837	.22012	.233	-.1552	.9919
	4	-.32746	.17891	.264	-.7936	.1387
4	18-21	.76623*	.27203	.029	.0574	1.4751
	22-25	.74583*	.27203	.035	.0370	1.4547
	26-29	.32746	.17891	.264	-.1387	.7936

*. The mean difference is significant at the 0.05 level.

- **Significance of ANOVA**: The ANOVA results show an F-value of 3.902 with a p-value of 0.011. Since the p-value is less than the threshold of 0.05, we reject the null hypothesis (H0) and accept the alternative hypothesis (H1).
- **Between-Group Variability**: The significant F-value indicates that the perceived benefits of AI tools in financial education vary across different age groups within Gen Z.

As H1 is accepted we have performed post hoc test to find where the difference is in the group considering P value of all groups to interpret.

Significant Differences

- **18-21 vs. 30+**: There is a significant difference in perceived benefits between the 18-21 age group and the 30+ age group (mean difference = -0.76623, p = 0.029).
- **22-25 vs. 30+**: There is a significant difference in perceived benefits between the 22-25 age group and the 30+ age group (mean difference = -0.74583, p = 0.035).

Non-Significant Differences

- **18-21 vs. 22-25**: No significant difference (mean difference = -0.02041, p = 1.000).
- **18-21 vs. 26-29**: No significant difference (mean difference = -0.43878, p = 0.196).
- **22-25 vs. 26-29**: No significant difference (mean difference = -0.41837, p = 0.233).
- **26-29 vs. 30+**: No significant difference (mean difference = -0.32746, p = 0.264).

ISSN:1624-1940
DOI 10.6084/m9.figshare.2632599
http://magellanes.com/

AWARENESS OF AI TOOLS IN FINANCIAL EDUCATION AMONG 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

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Awareness	123	3.2288	.51075	.04605

One-Sample Test				
	Test Value = 3			
	t	df	Sig. (2-tailed)	Mean Difference
Awareness	4.968	122	.000	.22880

The t-value indicates the ratio of the difference between the sample mean and the test value to the standard error of the mean. The degrees of freedom (df) reflect the number of independent values in the data set that can vary, which in this case is the sample size minus one (123 - 1 = 122).

The p-value (0.000) is significantly less than the threshold of 0.05, leading to the rejection of the null hypothesis (H0) in favor of the alternative hypothesis (H1)

- **Significance of the t-value**: The t-value of 4.968 is significantly higher than the critical value for a two-tailed test at the 0.05 significance level. This high t-value suggests that the sample mean is significantly different from the test value.
- **P-value Analysis**: A p-value of less than 0.05 indicates that the probability of observing the data, assuming the null hypothesis is true, is very low. In this case, the p-value of 0.000 strongly supports the rejection of the null hypothesis.
- **Mean Difference**: The mean difference of 0.2288 indicates that the average awareness level among Gen Z is higher than the test value of 3, suggesting a positive inclination towards awareness of AI tools for financial education.

Conclusion

The analysis concludes that there is a significant difference in the awareness level among Gen Z in using AI tools for financial education. The mean awareness level of 3.23, coupled with a statistically significant t-value and p-value, supports the alternative hypothesis (H1). This finding implies that Gen

ISSN:1624-1940
DOI 10.6084/m9.figshare.2632599
http://magellanes.com/

Z individuals are more aware of AI tools for financial education than what would be expected under a neutral baseline.

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:** these 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.

ISSN:1624-1940
DOI 10.6084/m9.figshare.2632599
http://magellanes.com/

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

ISSN:1624-1940
DOI 10.6084/m9.figshare.2632599
http://magellanes.com/

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.

Reference

1. Osetskyi, V., & Vitrenko, A. (2020). Artificial intelligence (AI) is changing teaching and learning by improving the quality and accessibility of knowledge. In *Report on AI Education Market*.
2. Joglekar, T. S. (n.d.). Assessment of AI technologies in financial job automation and their impact on financial literacy. In *Journal of Financial Technology*.
3. Riyani, D. (2023). The potential of AI to transform lives and financial literacy in Society 5.0. In *Proceedings of the Fifth Industrial Revolution Conference*.
4. Lin, & Shuw. (2023). The impact of AI on school finance management. In *Journal of Educational Finance Management*.
5. Jaiswal, R., & Arun, K. (2021). The influence of artificial intelligence on Indian education: Focus on individualized learning and adaptive evaluations. In *Journal of Educational Technology and Development*.
6. National Endowment for Financial Education. (2023). Artificial intelligence in financial education: Opportunities and challenges. Retrieved from https://www.nefe.org/reports/ai-financial-education
7. Davis, P. E., & Wong, A. (2022). Implementing AI in school administration: Challenges and benefits. In *Educational Administration Quarterly*, 58(1), 85-105.