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A Study on the Linkage between Age and Education Levels in Adaption of Artificial Intelligence by Banking Customers in Bengaluru

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***Abstract:** In many areas of our lives, including banking services, artificial intelligence (AI) has been rapidly integrated. The present study will explore the factors that influence the adoption of artificial intelligence (AI) by banking customers. Specifically, it will investigate the relationship between age and education and their impact on the acceptance and use of AI in the banking industry. With the help of a literature review and primary data analyses, the Pearson correlation coefficient is used to measure a correlation that measures the strength and direction of the relationship between variables. Further the hypothesis are tested based on the Pearson correlation coefficient analysis.*

***Keywords:** Artificial Intelligence, Banking, Adaption, Age, Education Level.*

1. INTRODUCTION

Artificial intelligence (AI) has taken a predominant in many industries, along with the banking sector.(CHAYA. R, 2023) The adaption of artificial intelligence (AI) by banking customers has become a topic of increasing interest in recent years. As the use of AI continues to grow rapidly, it is very essential to understand the factors that influence its adoption. As a greater number of banks adopt towards AI-based systems to improve their services, it is important to understand the factors that influence the customers adaptation of these systems. The current research aims to study the linkage between age, gender, and education factors and the adoption of AI by banking customers. significantly, the study will examine the effect of these factors on the customers perception towards use of AI in terms of its usefulness, ease of use, and trustworthiness. By this analysis the study seeks to provide insights into how banks can design and implement AI-based systems that meet the diverse needs and preferences of their customers.

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Review of Litrature

Victor Murinde, Efthymios Rizopoulos, Markos Zachariadis, According to the authors FinTech is rapidly altering the global banking environment. the study focused on FinTech and FinTech-enabled services. literature of the study focuses on potential and dangers for banks. While FinTech lenders are not likely to replace banks, legislation, global infrastructure, and geopolitical tensions will define the future of banking. Policymakers and practitioners should evaluate the key consequences. The authors added some intriguing findings from a statistical examination of bank level data from 115 nations over a 16-year period. they propose some prospective research ideas and policy consequences based on this information. Investigating how FinTech firms might engage with traditional financial institutions to produce innovative financial products and solutions to support economic recovery during the COVID-19 pandemic is one feasible study topic. It would also be fascinating to investigate how FinTech might influence global behaviour and inclusive growth results, particularly in developing nations. (Murinde et al., 2022)

Haripriya & Dr. L. C. Manikandan the article discusses artificial intelligence (AI) and its many subfields, as well as its types, including Machine Reactive Machines and Limited Memory Machines, and applications in a variety of industries, including robotics, virtual personal assistants, manufacturing, law, natural language processing, image analytics, visualisation, the internet of things, education, business, manufacturing, and different tools such as tools. The report also makes the point that all scientific disciplines must work together to create something of significant value. For instance, machines can now perform fewer regular activities, and this change is occurring at a time when many workers are already experiencing difficulty. We will continue to rely on AI-enabled technologies for everything, and our lives will become more technologically oriented. (S & Manikandan, 2020)

Neha Khurana, the author claims that changes in conventional financial services are the result of innovation and technology. At this point, technology seems to be the secret to the expansion of the technological sector. To reach clients and improve services, Indian banks and financial service providers have employed technology with caution. India is boldly climbing the Fintech ladder, and there are numerous chances for Fintech firms in payments and loans as long as there is a careful solution-customer fit and a robust go-to-market strategy in place. Fintech has helped India's economy, yet there are still significant issues with security and usage among unbanked people. Regulators should develop appropriate laws to address these issues so that the fintech sector can fully complement the country's banking system. (Khurana, 2018)

Cirillo Davide, Catuara-Solarz, Silvina Morey, Czuee Guney, Emre Subirats, Laia Mellino, Simona Gigante, Annalisa Valencia, Alfonso Rementeria, María José Chadha, Antonella Santuccione Mavridis, Nikolaos, according to authors AI and machine learning advancements can enhance healthcare and boost well-being by accounting for sex and gender disparities. However, there is a risk that prejudices and inequities may be reinforced, thus it is critical to differentiate between desirable and unwanted biases, raise awareness, create explainable algorithms, and prioritise ethical issues in technology development. Governments and regulatory bodies are developing policies to safeguard AI privacy, security, and ethical use. Overall, AI has the potential to greatly contribute to precision medicine and enhance patient outcomes. Precision Medicine emphasises on AI tools to investigate individual health differences caused by genetics and environment. Many current biological AI algorithms,

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however, lack bias detection and disregard sex and gender variations, resulting in suboptimal outcomes and biases. This review discusses these concerns and offers suggestions for increasing the use of biomedical technology in Precision Medicine to reduce inequities. (Cirillo et al., 2020)

Zhang, Baobao, and Allan Dafoe, according to the authors study, Americans have divided feelings about the advancement of artificial intelligence, with 41% in favour and 22% opposed. Demographic characteristics such as education level, income, and computer science experience are key drivers of viewpoint on the subject. Men appear to be more supportive of AI growth than women, while the clear majority agree that robots and AI should be carefully supervised. All governance concerns identified in the survey are considered important and should be managed properly. The article examines Americans' attitudes regarding AI governance issues and the emergence of high-level machine intelligence. Most AI governance concerns, according to Americans, are more likely to affect people all over the world than Americans within the next ten years. They also have varying degrees of confidence in various organisations to create and handle AI. Although the median respondent expects that high-level artificial intelligence will be established by 2028, there is little support for its development among Americans. Demographic factors explain a significant disparity in support for its development, and more Americans believe that high-level machine intelligence will be harmful than beneficial. (Zhang & Dafoe, 2019)

Statement of Problem

As the use of AI expands at an accelerated pace, it is vital to comprehend the factors that contribute to its acceptability. As more banks use AI-based systems to improve their services, it's vital to understand what factors influence customers' acceptance of these technologies. The current study will look into the relationship between age, gender, and education in adaption of Artificial Intelligence (AI) by bank customers.

Objectives of the Study

To assess the impact of age on the adoption of artificial intelligence in the banking industry.
To determine whether educational factors affect banking customers' in adoption of artificial intelligence.

Hypothesis

H0: The association between education level and gender is significantly weak.
H1: The association between education level and gender is significantly Strong.

H0: There a positive association between education level and gender.
H2: There no positive association between education level and gender.

H0: The association between education level and gender is significant.
H3: The association between education level and gender is not significant.

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2. METHODOLOGY

The current study is based on the analysis of primary and secondary data. In the adaptation of Artificial Intelligence (AI), to be able to determine the relationship between banking customers and their association between characteristics such as age and education. Articles, journals, and websites are among the several data collection sources. A questionnaire survey was used with a random sample method to acquire primary data from banking customers using Google forms. The results are based on 100 responds from banking customers in Bengaluru. The Pearson correlation coefficient is used to determine the association between distinct variables in the adaptation of Artificial Intelligence (AI).

Data Analysis and Interpritation
Gender of Respondents

Your Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	62	62.0	62.0	62.0
	Female	38	38.0	38.0	100.0
	Total	100	100.0	100.0	

Gender of the respondents: from the above given fig. The total numbers of male respondents in this study are 62% and 38% of the respondents are female. compare to female respondents' male respondents are belonging to highest majority.

Age of Respondents (Between 10-20, 20-30, 30-40 and 40+)

Your Age Criteria					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20.00	35	35.0	35.0	35.0
	30.00	51	51.0	51.0	86.0
	40.00	14	14.0	14.0	100.0
	40+	0	0	0	100.0
	Total	100	100.0	100.0	

Age group of the respondents: from the above given fig. It is found that 51% majority of the respondents belong to the age group between 21 – 30 years. Similarly, 35% of the respondents belong to the age group between 10 – 20 years, 14% of the respondents belong to the age group between 31 – 40 years and 0% of the respondents were above 40 years old.

Education Level					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	+2 and Higher Secondary	5	5.0	5.0	5.0
	Doctorate	4	4.0	4.0	9.0

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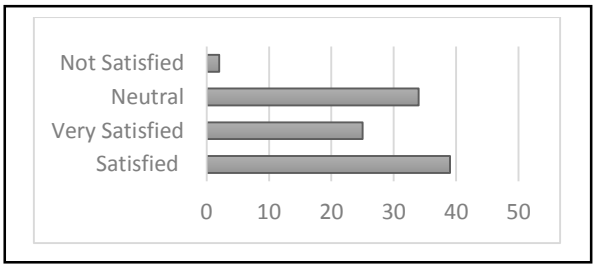
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	Under Graduate	70	70.0	70.0	79.0
	Post Graduate	21	21.0	21.0	100.0
	Total	100	100.0	100.0	

Educational Qualification of the respondents: It is assumed that the respondents are well educated and may possess sound knowledge of the concept that can result in increased quality of data being collected. from the above given fig. It can be analysed that a majority of 70% of the overall respondents are under graduates following to 21% of the respondents who are post graduates, 5% of the respondents are plus two or higher secondary qualified and 4% of the respondents possess the honourable doctorate degree.

Overall Satisfaction with Ai Embedded Services

Are you aware that AI is used in banks		
Satisfied	39	39%
Very Satisfied	25	25%
Neutral	34	34%
Not Satisfied	2	2%
Total	**100**	**100%**



With reference to the above analysis and table. an overall majority of 64% (39% + 25%) of the respondents are satisfied with artificial intelligence embedded services provided by the banks and overall 34% of the respondent prefers to be neutral in terms of describing their satisfaction with this emerging artificial intelligence embedded technology.

Correlation Analysis (Linkage Between Age and Education)

Pearson Correlation			
		Education Level	Your Gender
Education Level	Pearson Correlation	1	.134
	Sig. (2-tailed)		.184
	N	100	100
Your Gender	Pearson Correlation	.134	1
	Sig. (2-tailed)	.184	
	N	100	100

Strength of Association/Linkage

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Strength of the association between education level and gender of the respondents in adaption of AI is relatively weak as the Pearson value is less than 0.3 that is 0.134. similarly, the nature of relationship between education level and gender is positive as the Pearson's correlation is in positive terms. Subsequently at the level of significance followed 0.05 (5%). The P-value (Sig. value) is 0.184 that is lesser than the significance level of 0.05 making the association between education level and gender as Significant.

3. RESULTS OF HYPOTHESIS

Hypothesis	Result	
H0: The association between education level and gender is significantly weak. H1: The association between education level and gender is significantly Strong.	Accept H0	Strength of the association between education level and gender of the respondents in adaption of AI is relatively weak as the Pearson value is less than 0.3 that is 0.134.
H0: There no positive association between education level and gender. H2: There a positive association between education level and gender.	Reject H0	The nature of relationship between education level and gender is positive as the Pearson's correlation is positive (+ 0.134).
H0: The association between education level and gender is not significant. H3: The association between education level and gender is significant.	Reject H0	The P-value (Sig. value) is 0.184 that is lesser than the significance level of 0.05 making the association between education level and gender as Significant.

4. FINDINGS AND CONCLUSION

Regardless of gender, male and female responders aged 10 to 20 years (35%), and 21 to 30 years (51%), account for the majority of the population (86%). People with higher educational qualifications who live in Bengaluru's urban and rural areas have a solid understanding of artificial intelligence. overall, 64% of respondents are extremely satisfied with the artificial intelligence-enhanced banking services. there can also be certain that more general customer understanding of artificial intelligence is desperately needed. the association between education level and gender is significantly weak but there a positive association and relationship between education level and gender, resulting the level association to significant. Furthermore, customers who are familiar with the usage of artificial intelligence in banking operations have a more positive view of the technology and its applications. Apart from the

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different services and benefits that artificial intelligence may offer in the present, there are many more to be discovered in the future.

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