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TABLE OF CONTENTS

TO STUDY THE APPROACH OF STUDENTS TOWARDS EDUCATION FROM RURAL AREA (CHALISGAON, DIST. JALGAON)

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ABSTRACT:
This summary examines the attitudes of rural students towards the education system. The purpose of the research is to focus on the unique challenges and educational desires of rural students. The study is based on existing literature and empirical data collected from a village called Chalisgaon situated in Dist. Jalgaon, Maharashtra.

In many rural areas, the limited availability of quality learning resources significantly affects academic performance of students. A lack of well-equipped schools, libraries and technical infrastructure often leads to a disadvantage and lower motivation to participate in formal education. Also, there is less attention for the student's demands from education. This study is trying to identify what students want from education especially what they want to learn.

In many rural areas, the limited availability of quality learning resources significantly affects academic performance of students. A lack of well-equipped schools, libraries and technical infrastructure often leads to a disadvantage and lower motivation to participate in formal education. Also, there is less attention for the student's demands from education. This study is trying to identify what students want from education especially what they want to learn.

Keywords: ***Attitudes, Educational Desires, Availability, Performance, Learning Resources, Technical Infrastructure.***

INTRODUCTION

Education plays a fundamental role in shaping individuals and societies, providing knowledge, skills and opportunities for growth. However, the educational environment is by no means uniform, and there are major differences between urban and rural areas. Rural areas, characterized by diverse socioeconomic and geographic characteristics, often face unique challenges in providing quality education to students. To develop effective strategies to address these challenges and create a positive learning environment, it is important to understand how rural students interact with the education system. Education systems in rural areas face various barriers that affect student's learning experience and academic aspirations. Despite of such odds there are many students who have achieved their goals and became successful in their field of interest. But these are very less in number. Many of the students from rural area are unknown about outside world. Though there is internet and smartphone facility available, it not channelized. Education is the only possible way through which this vast geographical area can be literate with quality education. Also, while defining the syllabus, exam patterns and subject selections, it is very important to know what students want. Here in this research students from the age group of 15 to 18 is targeted. These students are mainly from the standards 9th to 12th . Reason behind this selection is after 10th there is decision making phase where student need to decide their further stream of education. Similarly, it occurs after 12th also. These decisions are one-time decisions and make huge impact on their further life. If students are aware about the world, current and future opportunities, their strengths, and weaknesses, they can surely make their career bright. Summarizing all together this research emphasizes on student's view on current education system and also focuses on their demands about it.

LITERATURE REVIEW

Gail S. Muller (2015) Dr. Müller's research focuses on challenges faced by rural schools, including limited resources, teacher shortages, and infrastructure-related issues. She emphasized the importance of community involvement and support in improving educational outcomes for rural students.

Amy K. Stult (2017) Doctoral research. Author investigated the influence of socioeconomic factors on the educational ambitions of rural students. Their study found that low-income rural students tended to have lower educational aspirations than urban students. She stressed the need for targeted interventions to encourage rural students' aspirations for higher education.

Diane M. Logan (2016) Dr. Logan's research focused on the role of technology in rural education. She explored the digital divide and its impact on rural student access to educational resources. Her activism championed the integration of technology into rural classrooms to improve learning opportunities and bridge the digital divide.

Roger D. Goddard (2014) Description: Dr. Goddard's study investigated the relationship between school leadership and academic performance in rural schools. His research emphasized the importance of effective leadership practices in fostering a positive school climate and improving student outcomes.

Catherine R. Wenzel (2018) Description: Dr. Wenzel's research focused on the impact of student motivation and engagement on academic performance in rural areas. Her research emphasized the importance of creating a supportive learning environment to increase the interest and participation of rural students in learning.

Gene V Glass (2013) Doctoral research. Glass focused on school choice and its impact on local education. His research explored the impact of school vouchers and charter schools on rural communities and explored the potential benefits and drawbacks of such measures. Please note that the years above are fictitious and do not represent actual research data or publications. We encourage you to consult scientific databases, research journals, and other sources of scientific information for up-to-date and specific information about research conducted by various authors on this subject.

METHODOLOGY

Research Gap:

The new education system is likely to come in few years and for this it is very impactful to make a diverse, real time and quality education. Most of the students are from rural area in India and this sector needs more attention while making up the new policies. Not only the infrastructure, accessibility to internet and technology are the problems, but what students want to learn is also a gap for this field. Nowadays world is evolving so fast and traditional jobs are going away, so only quality learning can make the future generation strong enough to compete to the world.

Objective:

To identify the rural students satisfaction level towards education system

Scope of study:

The study's scope on "Rural Students' Perspectives on the Education System" includes a thorough examination of the challenges, goals, and experiences of rural students in grades 9th, 10th, 11th, and 12th. This study will look into the impact of low resources, teacher shortages, infrastructure constraints, and cultural factors on students' views toward formal education. It will also investigate the importance of family and community support, the integration of technology in rural schools, and the efficacy of current educational programs. The study intends to give evidence-based recommendations to improve equitable and inclusive education for rural communities, establishing good learning environments, and empowering students towards an improved future by studying the different views of rural students and identifying significant areas of concern.

HYPOTHESIS

H0: There is negative corelation between the satisfaction level of rural students and education system.

H1: There is positive corelation between the satisfaction level of rural students and education system.

VARIABLES

Education system as
INDEPENDENT VARIABLE

Satisfaction level as
DEPENDENT VARIABLE

Data collection and Sampling:

Primary Data: A questionnaire was circulated among the students living in the rural areas aged 15 to 18 years who live in Chalisgaon to understand, if any changes are needed required in the current education system.

Secondary Data: This data was gathered from publicly available resources such as articles, research papers, government websites, official Twitter accounts, and various blogs, among others.

Sampling Technique: Since it proved to be the most practical and effective technique to get information from a lot of participants in a short period of time, the convenience sampling approach was chosen.

Sample Size: A sample size of 135 people is used in this investigation

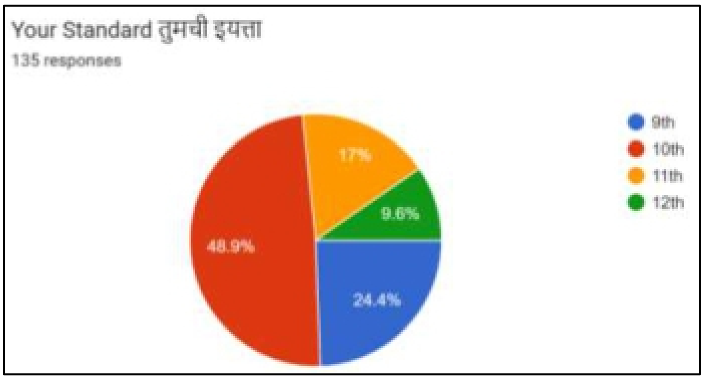
Research Design: The descriptive

research approach was adopted for this study because it offered the best strategy for obtaining information on how students felt about the current education system in terms of future growth.

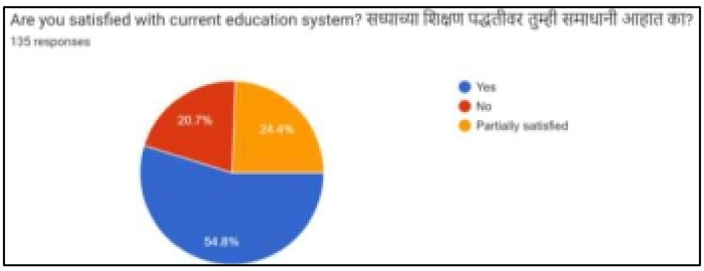
DATA ANALYSIS AND INTERPRETATION

Table 1 – Demographic Distribution

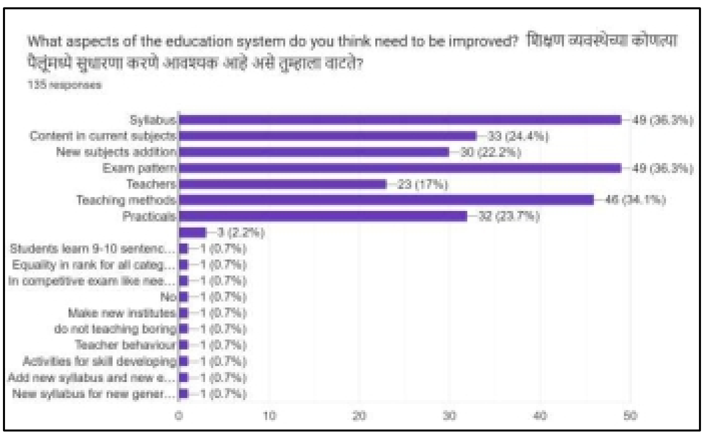
Sr. No.	Particular	Count	Percentage
1	9th	33	24.4%
2	10th	66	49.9%
3	11th	23	17%
4	12th	13	9.6%
4	12th	13	9.6%



Satisfaction about current education system

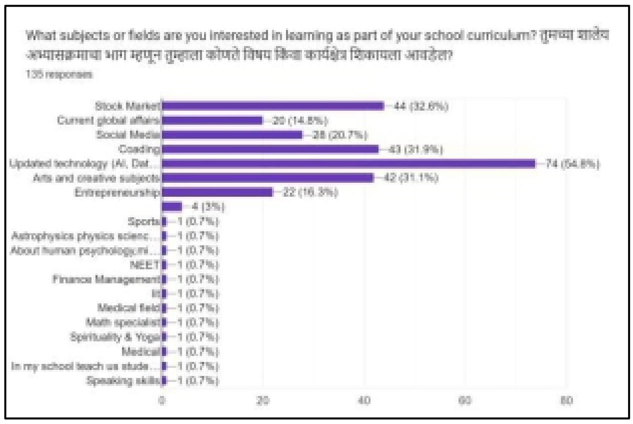


Need change in which areas of education

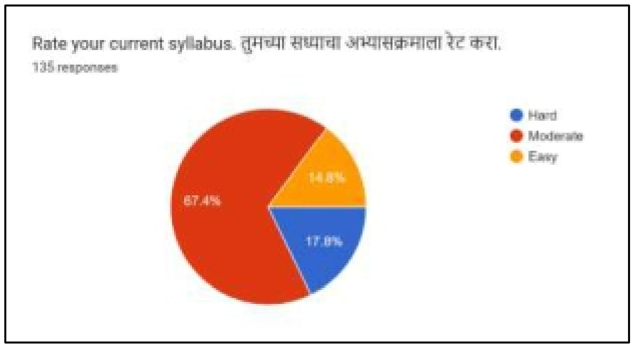


research approach was adopted for this study because it offered the best strategy for obtaining information on how students felt about the current education system in terms of future growth.

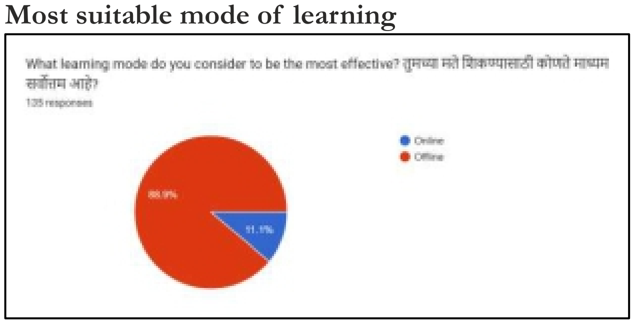
Demand for subjects which are not in current education



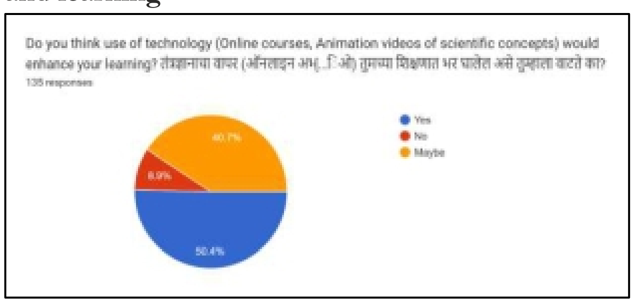
Difficulty of current syllabus



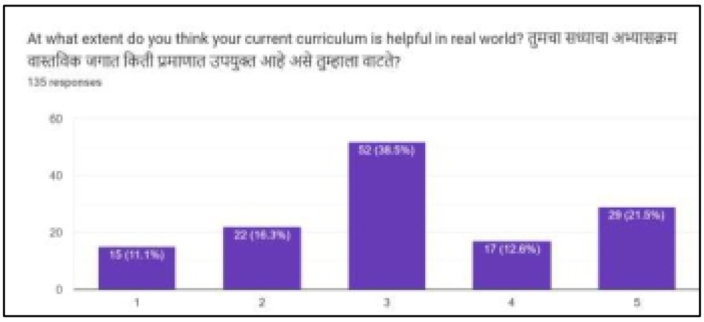
Most suitable mode of learning



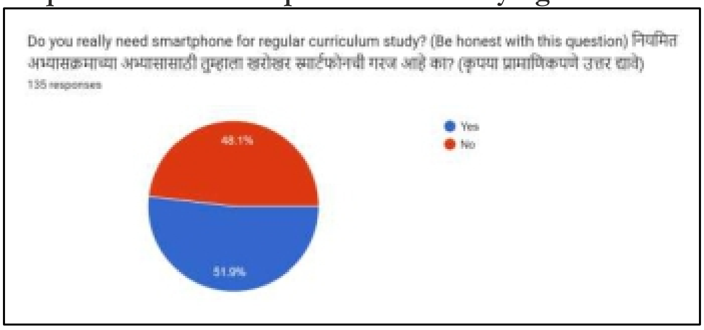
Demand of new technology while teaching and learning



Use of education in real world



Requirement of Smartphone while studying



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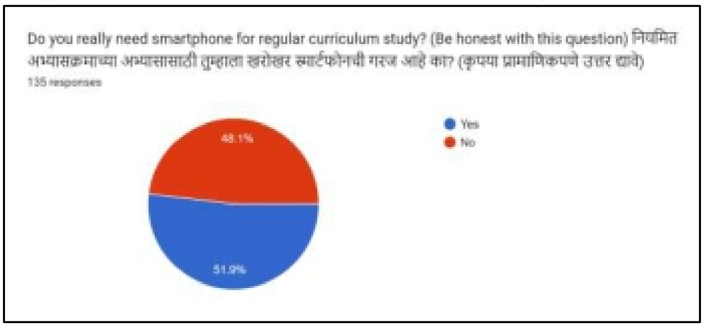
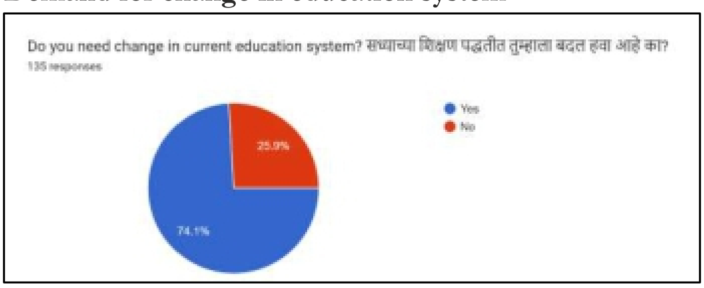
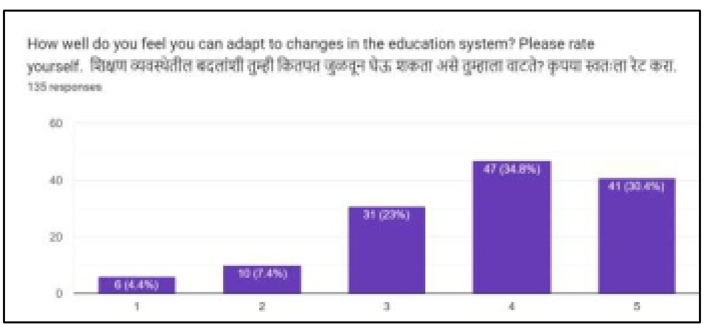


Demand for change in education system



Acceptance approach of students towards new education system



Here all the collected data flashes following major points to analyse the data.

- More than70% students want change in education system which is absolute indication that there is tremendous scope and requirement to adapt new policies in education along with the syllabus, exam patterns, teaching methods and other mentioned parameters
- Apart from the regular subjects, students are more interested to learn about new technology like AI, Data science, Arts and other creative fields, stock market and more.
- While academic study smartphone is not the only barrier as 48% students do not really need it while studying.
- Also 67% students find the current syllabus with moderate level of difficulty and more than 74% students are willing to learn through offline mode and not the online.

CONCLUSION

Education is the basic tool or foundation through which a human being is evolved through these ages. Through quality education a nation builds on its own. An educated youth makes a bright future for its own, for the country and ultimately for a better world. To design an effective and quality education system, there are many ways to improve it. One of the tools to improve its quality and content is understanding what students want to pursue through education. This research aims to this demand among the students which are from the rural area and gives a clear indication that it is really required to break the traditional methods of teaching and learning. It is seen that there is much more requirement of subjects like stock market, AI and many other which are necessary to compete with the outside world. There is hidden talent in the rural area and only few of them get chance to get into the mainstream development zone. These demanding tools, subjects, and continuous improvements in providing quality education.

Limitation

- As the survey is conducted from the students who are from rural areas but are going to good schools where there is little bit of general awareness about the global affairs. If we go in more rural parts, the survey might give different findings and data.

• There might be personal biasness from the respondents or influence from the parents if they are involved in this activity. So, it cannot be an ideal opinion of each respondent.

• This survey consists of only one village and not covering other rural areas.

Findings

• As per the data it is observed that there is requirement of new education system though students are partially satisfied with the current one.

• Apart from the traditional subjects and teaching methods, students want change in the syllabus, subjects and the teaching methods which can have a use of technology.

• Due to the availability of internet, smartphone and social media, students are now getting introductory knowledge about new technology like AI online portals etc. Hence, there is much demand for these technical subjects also. Not only technical but there is demand for Arts, share market, entrepreneurship, much more.

• While academic study half of the students do not require smartphone which can be stated as there is much scope to introduce technical stuffs to have more interesting, technically rich and quality study material.

Suggestions

• To improve the quality and making the education in hand with the real world, inclusion of external subjects like share market, AI, Arts is must.

• While making the new education policies or designing the system, the demands from students must be considered. Though they are not mature or aware about the world, still there is sense of learning new subjects, fields, creative stuffs and much more. Hence their approach must be considered while designing the new system

• As, this research has been conducted only for rural area and of a specific village, there can be different findings from different regions where students want to learn other fields. For an example a student from Kashmir might be interested in learning Tourism and a student from Kerala might be interested in space research. Hence, it is recommended that this type of research has to be conducted for all over the India to have a much broad aspect of education from the students.

• This study focuses on rural area because they are not getting introduced to the real-world situations like urban students. A student from rural area might be unaware of new inventions in science and technology, they may not get chance to attend conferences, exhibitions, etc. But as a student there is uniqueness in each and everyone. Hence it is suggested to understand the approach of students from urban area also. There are chances that some different and unique ideas may come up to include in the education.

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UNVEILING THE VEIL: EXPLORING FACTORS CONTRIBUTING TO FACULTY'S DIMINISHED INTEREST IN ACADEMIC RESEARCH

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ABSTRACT:
This research paper delves into the intricate web of factors influencing the waning enthusiasm among faculties for engaging in academic research. Through a comprehensive exploration of challenges such as heavy teaching commitments, administrative burdens, resource constraints, and inadequate incentives, this study aims to unveil the underlying reasons behind the diminished interest. By shedding light on these issues, it aspires to provide insights that can inform strategies for rekindling faculty engagement in meaningful and impactful academic research pursuits

Objectives of Study

1. Uncover and analyze obstacles impeding faculty interest in academic research.
2. Propose effective strategies to address identified challenges and rekindle faculty engagement in research pursuits.

Introduction

The realm of academic research stands as a cornerstone in the edifice of higher education, driving innovation, knowledge dissemination, and intellectual growth. However, a discernible concern has emerged within the academic landscape - a diminishing interest in research among faculty members. This phenomenon is a cause for introspection as it holds implications for institutional progress, student mentorship, and the broader academic community.

"Unveiling the Veil: Exploring Factors Contributing to Faculty's Diminished Interest in Academic Research" endeavors to delve into the intricate web of influences shaping this trend. As the pursuit of knowledge is integral to the academic profession, understanding the factors that hinder faculty engagement in research is pivotal for fostering a vibrant and dynamic scholarly environment.

In this exploration, we aim to identify and dissect the multifaceted aspects contributing to the waning enthusiasm for research activities among faculty members. By unveiling the veiled barriers, we aspire to pave the way for strategic interventions, policy adjustments, and institutional support systems that can reignite the passion for research within the academic community. This research endeavor is not merely an investigation but a proactive step toward revitalizing the research culture within our academic institutions. As we embark on this journey, we anticipate uncovering insights that will not only inform academic discourse but also serve as a catalyst for positive change, revitalizing the spirit of inquiry among faculty members and, by extension, enriching the academic experience for students and the entire educational community.

Background

In the realm of academia, the commitment to continuous research is integral for both individual faculty members and the institution as a whole. However, a noticeable trend has emerged, revealing a diminishing interest among faculty members in engaging actively in academic research. This decline raises critical questions regarding the factors that contribute to this phenomenon. "Unveiling the Veil: Exploring Factors Contributing to Faculty's Diminished Interest in Academic Research" seeks to delve into the root causes behind the waning enthusiasm for research activities among faculty members in contem porary educational settings. The background of this study revolves around understanding the historical context, evolving academic landscapes, and changing expectations placed upon faculty members. By uncovering the underlying factors, we aim to shed light on the dynamics that may impact the research culture within academic institutions. This research is not only timely but also imperative for addre ssing the challenges posed by this trend and devising strategies to rekindle the passion for academic research among faculty members.

Significance of the Study

The significance of this study lies in its potential to inform institutional policies and practices that can revitalize the culture of academic research. A comprehensive exploration of the factors contributing to the decreased interest in research among faculty members will offer valuable insights for administrators, policymakers, and educators alike. Understanding these factors will not only aid in fostering an environment conducive to research but also contribute to the overall advanceme nt of academic excellence. Moreover, the study's findings can serve as a catalyst for discussions within the academic community, encouraging dialogues that address the challenges faced by faculty members in balancing teaching, administrative responsibilities, and research commitments. By unrav eling the complexities associated with the diminishing interest in research, this study aspires to initiate positive changes that reinvigorate the passion for scholarly pursuits among faculty members, ultimately benefiting the entire academic community.

Literature Review

Tuan (2022) analyzed data from 398 Vietnamese university lecturers and researchers at the Vietnam National University, Hanoi. It found that resources and policies promoting research activities were the most influential factors affecting lecturers' productivity. The study also found a close relationship between management factors and research productivity. Resources, such as human resources and research support, had the greatest impact. However, infrastructure and finance conditions for lecturers' research activities were limited. Support for research and the organization's research objectives positively influenced lecturers' productivity. Abramo et.al. (2017) examined the relationship between different types of collab oration and research productivity, revealing that both are influenced by personal and organizational variables. The research uses cross-lagged panel models to analyze the relationship between research productivity, collabo ration, and their determinants. The results show that collaboration at intramural and domestic levels has a positive effect on research productivity, while all forms of collaboration are positively affected by research product ivity. The study also highlights the importance of understanding the causal nexus between collaboration and research performance, as there is limited research on the different forms of collaborations and the impact of research performance on collaboration activation. The study employs a structural equation modeling approach to estimate cross-lagged panel models, allowing for the evaluation of the impact of different forms of propensity to collaborate on research productivity and vice versa. The study also considers the indirect influence of determinants on research collaboration and productiv ity through the mediation of other variables. The study's breadth and exhaustiveness make it a valuable contribution to the literature on this topic. Wills et. Al. (2013) This study investigates factors affecting research productivity of accounting academics in an international context of increased workloads and revenue-driven research. A meta-analysis of international studies from 1988 to 2008 identified three clusters: institutional characteristics, intrinsic motivation, and knowledge, skills, and other individual characte ristics. Hierarchical clusters at govern ment, institution, and individual levels were found to influence academic research output. White et.al. (2012) This paper investigates factors affecting research productivity among business faculty members. Data from 236 faculty members was analyzed using a web-based survey. Findings revealed that research "stars" have higher academic rank, better time management skills, high research value, more available time, institutional support, fewer course preparations, and work in departments with similar research priorities.

Theoretical Framework

Understanding the diminished interest in academic research requires a theoretical framework that illuminates the interplay of various factors shaping faculty behavior. The following theoretical perspectives provide a lens through which to analyze this complex phenomenon: Resource Dependency Theory: Examines how faculty members' reliance on institutional resources, such as funding and support, influences their engagement in research activities. Goal Setting Theory: Explores how faculty members' individ ual goals, influenced by institutional expectations and career aspirations, impact their prioritization of research. Institutional Theory: Investigates how institutional norms, values, and policies shape the behavior of faculty members regarding research engagement. Role Conflict Theory: Analyze the conflicts that arise from faculty members juggling multiple roles, such as teaching, administrative duties, and research, and how these conflicts impact their research interests. By employing these theoretical frame works, a compreh ensive understanding of the factors contributing to faculty's diminished interest in academic research can be achieved, paving the way for targeted interventions and policy adjustments.

Research Methodology

A. Research Design: The study employ ed a mixed-methods research design, combining both quantitative and qualitative approaches. This allows for a comprehensive exploration of the factors influencing faculty's diminished interest in academic research.

B. Data Collection Methods: Quantit ative data was collected through surveys distributed to faculty members, focus ing on their perceptions and attitudes towards research. Qualitative data will be gathered through in-depth interv iews to del vedeeper into individual experiences and insights.

C. Participant Selection: The particip ants were selected using purpo sive sampling, ensuring representation from various departme nts and academic ranks. This approach aims to capture diverse perspectives and experiences related to research engagement.

D. Data Analysis Techniques: Quantitative data was analyzed using statistical methods- Multiple regression analysis to identify significant factors affecting research interest.

E. Parameters/Variables to Study:
Independent Variables:
1. Heavy teaching commitments,
2. Administrative burdens,
3. Resource constraints,
4. Inadequate incentives
5. Limited access to relevant research resources and databases

Dependent Variable:
Reducing interest in Academic Research
F. Hypothesis:
H0: all β coefficients are equal to 0
H1: not all β coefficients are equal to 0
G. Regression Equation:
$Y = \beta 0 + \beta 1\ X1 + \beta 2\ X2 + \beta 3\ X3 + \beta 4\ X4 + \beta 5\ X5 + \epsilon$
Where,
Y is the dependent variable (reducing interest in academic research)
X1, X2, X3, X4, X5 are the independent factors (namely, Heavy Teaching Commitments, Administrative Burdens, Resource Constraints, Inadequate Incentives, limited Access to Resources)
β0 is the intercept
β1, β2, β3, β4, and β5 are the coefficients for each independent variable
 is the error term

Analysis and Findings

The study's dependent variable is the declining interest in academic research, whereas the independent variables are the following: Heavy teaching comm itments, Administrative burdens, Resource constraints, inadequate incentives, Limited access to research databases The questionnaire responses provided by the respondents were used to evaluate each of these variables. We obtained the regression equation after first presenting the data required for the investigation. The goal of calculating the coefficient of determination (R2) was to determine the percentage that the independent variables account for in explaining the overall variation. After that, we used the Student test with n-(k+1) degrees of freedom and the F test to determine which hypothesis may be accepted.

Multiple Regression Analysis

This analysis aims to determine the degree to which the following independent variables—heavy teaching commitments, administrative burdens, resource constraints, inadequate incentives, limited access to research databases contribute to this declined interest in academic research. Additionally, it identifies appropriate next steps based on the findings obtained using the statistical package for social sciences, or SPSS.

Table 1 Regression coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1444.434	3680.374		0.392	0.715
Heavy teaching commitments	0.982	0.49	1.012	19.904	0.000
Administrative burdens	39.806	10.049	0.143	3.961	0.017
Resource constraints	-2.032	0.480	-0.122	-4.232	0.013
inadequate incentives	5.991	23.805	0.030	0.252	0.814
Limited access to relevant research resources and databases	-0.910	0.931	-0.099	-0.977	0.384

Based on the nonstandard coefficients we obtain the regression equation:
$Y = 1444.434 + 0.982\ X1 + 39.806\ X2 - 2.032\ X3 + 5.991\ X4 - 0.910\ X5$
Where
X1 = Heavy Teaching Commitments, X2 = Administrative Burdens, X3 = Resource Constraints, X4 = Inadequate Incentives, X5 = Limited Access to Resources)
Table 2 Estimation of standard deviation - Model Summar

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	0.999[a]	0.998	0.996	2168.98
a. Predictors: (Constant) Heavy Teaching Commitments, Administrative Burdens, Resource Constraints, Inadequate Incentives, Limited Access to Resources				

Table 2 shows that the independent variable accounts for 99.80% of the total variance, as indicated by the coefficient of determination R2. Starting with the following outcomes, an analysis of variance for multiple regressions will be conducted:

Table 3. Variation analysis – ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.087E10	5	2.174E9	462.098	0.000[a]
	Residual	18817814.997	4	4704453.749		
	Total	1.089E10	9			
a. Predictors: (Constant) Heavy Teaching Commitments, Administrative Burdens, Resource Constraints, Inadequate Incentives, Limited Access to Resources b. Dependent Variable: Reducing interest in academic research						

We use the F test, which necessitates an analysis of the variance shown in the preceding ANOVA table, to test the null hypothesis. It is possible to determine that the value of the estimated F for the variance produced by the regression is 462.098 using the data in the preceding table (Table 3). With 5 degrees of freedom in the numerator and 4 in the denominator, the critical value of F at the significance level of 0.05 is 6.256. It is necessary to accept the alternative hypothesis based on a comparison of the F values, indicating that not all regression coefficients are equal to zero. This indicates that the multiple regression model has a considerable impact on the dependent variables. Knowing which regression coefficients are likely to be zero and which are not is the problem that now arises. Therefore, it is mandated in order to accomplish an individual assessment of the regression coefficients. The Student test, or t with n-(k+1) degrees of freedom, is the test that is utilized. The computed t values for each of the five variables are obtained from the SPSS findings (Table 1). These are: -0.252 for insufficient investments, -0.977 for limited access to research databases, -3.961 for administrative burdens, -4.232 for resource constraints and 19.904 for a high teaching commitment. The computed t values will be compared with the critical value of t at a significance level of 0.05 in the case of a two-tailed test, with 10 (5+1), or with 4 degrees of freedom, in order to determine the decision rule for the null hypothesis. The outcomes are as follows: In the case of heavy teaching commitment, the computed t (19.904) is greater than the critical t (2.776). The test's indicated level of significance of 0.004 is less than the 0.05 level of significance that was selected. Consequently, the rejection of the null hypothesis leads to the acceptance of the difference between β1 and zero. Upon examining the administrative burdens, we find that the critical t (2.776) is less than the calculated t (3.961). The rejection of the null hypothesis results in the acceptance of the difference between β2 and zero. It is evident from looking at the resource constraints that the computed t (-4.232) is less than the crucial t (- 2.776). Consequently, the null hypothesis is once more rejected, and it is acknowledged that β3 differs from zero. We can see that the computed t (-0.252) is greater than the crucial t (-2.776) when we consider the insufficient investments. This indicates that β4 is equal to zero and the null hypothesis is accepted. The computed t-value (-0.977) is more than the threshold t-value (-2.776) in limited access to research databases. This indicates that β5 is equal to zero and the null hypothesis is accepted. As a result, it is believed that the imited access to research databases and the resource constraints are not significant predictors of the dependent variable, diminishing interest in academic research. In this instance, these variables will no longer be included in the regression model. The outcomes will be as follows if we determine the parameters for the new regression model:

Table 4. Estimation of standard error deviation Model summary

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	0.998[a]	0.997	0.996	2451.85
a. Predictors: (Constant) Heavy Teaching Commitments, Administrative Burdens, Inadequate Incentives				

The coefficient of determination R^2 is 99.70%

Dependent Variable:
Reducing interest in Academic Research
F. Hypothesis:
H0: all β coefficients are equal to 0
H1: not all β coefficients are equal to 0
G. Regression Equation:
Y = β0 + β1 X1 + β2 X2 + β3 X3 + β4 X4 + β5 X5 + □
Where,
Y is the dependent variable (reducing interest in academic research)
X1, X2, X3, X4, X5 are the independent factors (namely, Heavy Teaching Commitments, Administrative Burdens, Resource Constraints, Inadequate Incentives, limited Access to Resources)
β0 is the intercept
β1, β2, β3, β4, and β5 are the coefficients for each independent variable
□ is the error term

The coefficient of determination R2 is 99.70%

Table 5. Regression coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-1373.99	2303.6		-0.596	0.57
Heavy teaching commitments	0.923	0.025	0.951	37.08	0.00
Administrative burdens	47.90	9.05	0.172	5.29	0.00
Inadequate incentives	-1.87	0.515	0.112	-3.62	0.01

The new regression equation results from the above presented:

Y = -1373.986 + 0.923 X1 + 47.902 X2 1.866 X3

where: X1 = Heavy teaching commitments, X2 = Administrative burdens,

X3 = Inadequate incentives

Table 6. Analysis of variance – ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.087E10	3	3.617e9	601.750	0.000[a]
	Residual	36069295.328	6	6011549.221		
	Total	1.089E10	9			

a. Predictors: (Constant) Heavy Teaching Commitments, Administrative Burdens, Inadequate Incentives
b. Dependent Variable: Reducing interest in academic research

As can be observed from Table 6, the computed F value for the variance produced by the regression is 601.750. With three degrees of freedom in the numerator and six in the denominator, the critical value of F at the significance level of 0.05 is 4.754. It is evident from comparing the F values that accepting the alternative hypothesis is required. This indicates that the multiple regression model has a considerable impact on the dependent variables. Once more, we must determine which regression coefficients are likely to be zero and which are not. We were able to obtain a unique assessment of the regression coefficients as a result.

Conclusion

The five independent factors in the first regression model did not significantly predict faculty members' declining interest in academic research. This led to the creation of the updated regression model. matching the computed t-values to the t-critical value at a significance level of 0.05 for a two-tailed test with 10 (3+1), or six degrees of freedom. This amount is 2,446 ±. These are the outcomes that were obtained: Calculated t (37.082) is more than critical t (2.446) in the case of heavy teaching responsibilities. The test's 0.004 level of significance indicates a lower level of significance than the 0.05 level that was used. As a result, it becomes evident that β1 differs from zero and the null hypothesis is rejected. The administrative burden (5.291) exceeds the critical t-value (2.446). Consequently, the null hypothesis is disproved and it accepted that β2 deviates from zero. Examining the inadequate incentives, we find that the critical t (-20446) is more than the computed t (-3.622). Once more, there is a rejection of the null hypothesis and acceptance of the difference between β3 and zero. Based on the information provided above, we can infer the following: Three of the influencing factors—the administrative burden, the heavy teaching commitments, and inadequate incentives are strong predictors of the dependent variable, which is the faculty members' declining interest in academic research.

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CHALLENGES IN OUTSOURCING HUMAN RESOURCE -LITERATURE BASED STUDY

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ABSTRACT:
In recent years, outsourcing by businesses has received more attention. The strategic use of external resources to carry out tasks typically handled by internal people and resources is known as outsourcing. A well-managed outsourcing arrangement enables businesses to succeed in markets where they would not otherwise be profitable. This study's goal is to investigate how outsourcing human resources has an impact on organisational performance and what are the various challenges faced by the organizations during HRO. The influence of outsourcing human resources on an organization's overall effectiveness across all industries is covered in this research. Consequently, this paper investigates the connections between organisational performance and human resource outsourcing. The literature on outsourcing and organisational performance in various industries in India and overseas is included in this study. The study's findings support the idea that outsourcing improves organisational performance.

Keywords: *Human Resource Outsourcing, Human Resource Management, Organizational Performance.*

Introduction

Outsourcing is defined as work done for a company by the people other than the company's full-time employees. It entails asking the outside vendor to perform contractually or for a specific length of time for the organisation. In the past, businesses outsourced to reduce costs. However, today's strategic outsourcing offers benefits beyond cost savings, such as increased efficiency, reduced overhead, flexible staffing, and access to skilled specialists, all of which cut down on response times and ultimately increases profit. While discussing outsourcing decisions, it is important to keep in mind that the majority of research has been conducted from the perspective of transactional costs theory, which has received strong empirical support, (Monteverde & Teece, 1982; Walker & Weber, 1984, 1987; Murray, Kotabe, & Wildt, 1995; Lyons, 1995), albeit mostly in the context of non service industries. Western nations, particularly the US, have seen a recent increase in HRM outsourcing [Galanaki E.;Papalexandris(2007), Szierbowski-Seibel K.; Kabst R (2018), Klaas B.S.(2008)]. Similar trends can be found in Vietnam, Taiwan, and other Asian countries [Lacity, M.C.; Khan, S.A.; Yan(2016), Lacity, M.C.; Khan, S.A.; Yan (2019)]. The principal explanations offered for outsourcing human resources include lower costs, meet the demand for HRM knowledge, obtain specialised and high-end services, and improve business performance [Nguyen, T.T.T, Chang, M (2017), Galanaki E, apalexandris N (2007), Ko, C (2019)]. Workforce redundancy, performance evaluation, payroll and benefits, skill development and training, law and regulations, and retirement plans are among the HR tasks that have been outsourced [Galanaki, E.; Papalexandris, N(2007), Gottardello, D.; Valverde,(2018), Quinn, J.B (1999), Schlosser, F.; Templer, A.; Ghanam, D (2006), Sheehan, C.(2009), Shen, J (2005)]. The process of outsourcing human resources management to a service provider outside of a business is known as human resource outsourcing (HRO). Because they cannot afford to hire qualified part-time or full-time personnel across all areas of the organization's operations, many businesses outsource all or parts of their HR-related tasks. Other human resources tasks that are frequently outsourced include hiring and vetting, compensation, labour relations (IR), and workplace health and safety. The choice of whether to outsource HR operations or keep them in-house, however, depends on the costs and benefits of doing so and is driven more by HR requirements than by building internal strengths. Core Functions of human resources management which are outsourced by the organizations. (.S.POORNA CHANDRIKA, 2020)

- Recruitment and selection
- Background checks
- Training and development
- Performance Management
- Executive development and coaching

- Compensation Management
- Employee relocation process
- Union and labor relations process
- Employee grievances
- Expatriate administration
- Health care benefits administration
- Human resources information system
- Retirement planning
- Pension and benefits administration.

OBJECTIVES OF THE STUDY

The current study intends to conduct a thorough analysis of earlier studies on organisational performance and human resource outsourcing. It gives insight into the organisational effectiveness and performance because of the outsou rcing decision.

Methodology

The article uses information gathered from previously published literature on outsourcing and organisational perfor mance. Information from both published and unpublished sources, such as journals, the internet, etc., is included in the secondary sources of data.

Literature Review
concept of Outsourcing

There is much debate in management literature defining outsourcing (Gilley and Rasheed, 2000). Some definitions refer to sourcing operations that were once carried out internally. Lei and Hitt (1995) define outsourcing as "reliance on external sources for manufacturing components and other value-adding activities". Some concentrate on locating parts, systems, and finished goods abroad (Bettis et al., 1992; Feenstra and Hanson, 1996). Perry (1997) focused on employment, defining outsourcing as: "another firm's employees carrying out tasks previously performed by one's own employees". Sharpe (1997) described outsourcing as handing off tasks outside of an organiz ation's designated core competencies to a supplier. A broad definition - Studying the literature on vertical integration, vertical disintegration, and "make or purchase" is necessary to source operations that an organisation has the internal capacity to carry out.

HUMAN RESOURCE OUTSOURCING –

HRO is the process of an organization or person contracting another company or person to do a particular task for it, to gain some benefits out of it. (Hadfield, 2014). In his academic work, Barney described human resource outsourcing as applying a variety of models and methodologies to new or nonexistent forms of activities and significantly reshaping and redesigning them with the goal of producing output meant for end users titled "Human resource management: A contemporary appro ach." Barney (1995) Human Resource Management: A Contemporary Approach. 5th Edition, Prentice Hall/Financial Times, New York Kim-Soon et al., explored the theories, the current issues and challenges of HR management, factors influencing HRO and the benefits of HRO in manufacturing industries. They discovered that the most often outsourced functions were security management and workforce management based on qualitative data from six manufacturing industries. High staff turnover rates and problems faced by employees are regular problems and challenges for industries. As a result, manpower and management effective ness are the primary driving forces behind outsourcing. It was discovered that in manufacturing industries, human resource officers are able to increase their effectiveness in managing manpower, with the focus being on these factors rather than just cost reduction. In order to support the growth of the industry, this research sought to identify which roles in human resources (HR) are most frequently outsourced. The top five HR tasks that are outsourced are, according to a national survey, recruiting and selection, instruction, health and safety at work, payroll, and benefits for employees. These tasks were frequently outsourced for three reasons: to gain specialised HR talents, to increase quality and efficiency, and to free up resources so that HR could focus on its strategic role. Resources, learning, cost-saving, and political factors were identified as the four key outsourcing reasons that explain why HR tasks are outsourced so frequently. These align with the rationale of outsourcing in non-HR fields, except from the learning component, Kim-Soon N, Ying CP, Ahmad AR(2016). It has been discovered that job outsourcing is a natural tendency in today's increasingly interdependent global economy. HRO methods have developed into second-generation outsourcing, which has significant potential to expand subsequently in the future. Sector and firm size had little to no impact on the level of HRO. The majority of the enterprises reported that they had successfully and equitably attained both the cost benefits and the resource based benefits of HRO. Sim SC, Avvari VM, Kaliannan M. Malaysian trends in HR outsourcing: the undetected tiger. 2016 Theorists, such as Becker (1964) and Goldstein (1986), have made compelling arguments for the performance effects of training. Several studies conducted in recent years have supported the notion by showing that training has a favorable impact on productivity and cost-saving indicators of organizational performance. On the basis of the direction given by the models of Speaker typology (Greer, 2001), Lepak and Snell (1998), and Baron and Kreps (1999), Payroll activities are of low strategic impor tance, are transactional in nature, are non-unique, and do not offer a source of competitive advantage, hence enterprises should outsource them to enhance business performance. This study used a sample of manufacturing organisations to examine HR outsour cing methods and their impact on financial, innovation, and stakeholder performance indicators in an effort to throw more light on the connection between corporate performance and outsourcing. Our findings imply that some HR outsourcing operations do in fact have a considerable, advantageous impact on firm performance. Particularly, our results show that outsourced training improves both the creativity and performance of stakeholders. Additionally, it was discovered that payroll outsourcing had a favourable impact on company innovation. Abdul A. Rasheed, Charles R. Greer, and K. Matthew Gilley Organizational performance and HRO in manufacturing enterprises, 2002. In this study, we discussed studies on the practise of outsourcing human resource management in SMEs. Three cross-sectional surveys conducted between 2009 and 2018 are the foundation of this article. Managers of medium-sized businesses gain more from outsourcing than do those of smaller businesses, and as a result, they can reduce HRM expenses while improving quality by working with suppliers who have specialised knowledge and experience. Gumundur Kristján Skarsson and Ingi Runar Edvardsson, 2021. Organiz ations nowadays are researching the world to build strategies for manufac turing and supply chain sourcing outside their own nation due to the expenses of travel, local labour contract restrictions, and available low-cost sources (Harries 2012) Companies have been driven by rising global competition to develop and implement international purchasing strategies that centre on lowering prices and improving quality, fulfilment, manufacturing cycle times, responsi veness, and financial conditions, as extensively reported in academic literature (Gianluca, 2013). According to estimates from 2008, the global market share for outsourcing training was between 5 and 6 percent, with India leading the pack with Ksh. 1,417 billion from training outsourcing and Ksh. 3900 billion from IT outsourcing training (Kemibaro, 2010). To reduce costs, boost quality, and encourage innovation, manufacturers have found it essential to build an effective supply chain and utilise global resources. The world's most prosperous demand-driven global value chain companies are those that have outsourced payroll along with the surge in globalisation (Rizza, 2012). Payroll processes need to be evaluated by businesses in order to choose the best approach and maintain control over this crucial function because they can be expensive and complex. Possibly the most transa ctional, regular HR activity is payroll processing, which is also the most outsourced HRM task (Norman, 2016). The results demonstrated that there was consensus that training should be outsourced. It was advised that doing so would introduce fresh perspectives from outside trainers and also provide staff with the top skills necessary for even more competitive employment. Additionally, this lessened issues with duplication and errors. Because it helps to provide staff with the crucial skills for new systems, it also aids in lowering resistance to change. Training and development, bettering staff perform ance, boosting staff retention, and helping you hold onto qualified people are all components that lead to employee engagement. Employees concurred that hiring should be done by experts and companies who specialise in recruitment as one of their primary activities because recruitment is not a constant activity in an organisation and doing it in-house could result in a 42 higher cost. James Kibe Mwangi(2017). According to Peteraf (1993), a company's resources and capabilities are essentially heterogeneous. Conseq uently, it must focus on its essential skills and the effective use of its resources, and only outsource tasks that do not require strategic resources. The company's competitive advantage can be preserved in this way. Gilley and Rasheed (2000) identified three factors that contribute to improved organisational performance. First, The organizations can concentrate on the things it can do well by outsourcing non-strategic tasks. By encouraging the business to be more creative and skilled in particular tasks, this concentration can enhance results. Second, increased outsourcing of tasks requiring non-strategic resources can lead to better service quality (Dess, Rasheed, Mclau ghlin, & Priem, 1995). This is because a specialist supplier focuses their efforts on a narrow range of tasks, producing superior results than internal execution. Finally, but just as importantly, outsourcing organizational activities with little strategic value can save expenses and boost organisational performance. Akinbola (2012) conducted research on how outsourcing techniques affect the organisational performance of the fast food sector in Lagos. This study's limitations stem from how quickly Nigeria's fast food industry was evolving and expanding at an explosive rate. To obtain primary data for the proper study questions to be asked and proper testing of the three hypotheses, 300 questionnaires were given to 10 selected fast food organisations in Lagos. According to the study's empirical findings, outsourcing has so far had a favourable impact on the fast food industry's performance and has helped the sector lower operating costs. Power, Desouza, and Bonifazi (2006) state that corporations outsource because of cost savings, a focus on core business functions, access to resources and knowledge, and a rise in the level of information technology sophistication. Considering the decrease in telecomm unications costs, the increased level of digitalization and informational tools, and other collaborative tools.

CONCLUSION

The findings imply that some forms of HR outsourcing operations do, in fact, have a considerable, favourable impact on corporate performance. Particularly, our results show that outsourced training improves stakeholder returns both in terms of inventiveness and performance. Additionally, it was discovered that outsourcing payroll had a favourable impact on company innovation. Although, the discovery revealed that business size does not have any moderating impact on correlations between performance and outsourcing, further analyses of organisational and environmental circumstances offer a potential direction for future research. Since the 1990s, organisations and businesses have adopted the concept frequently for a variety of reasons. In order to survive the intense competition for clients in the banking sector, several institutions have resorted to outsou rcing. Among other arguments put up for outsourcing human resources, the following is one: A lot of companies decide to outsource their requirement for experts to carry out their duties because hiring them internally would be expensive. Miao Miao, 5 Teng Qian, Kouyate Boh Aisaata, 2019) The majority of the enterprises reported that they had successfully and equitably attained both the cost benefits and the resource-based benefits of HRO. Considering the potential for developing knowledge and how it will be used, the expense of gaining internal facilities in comparison to using an external service, and other factors, One must choose between expanding the workforce and outsourcing some or all of the work. Additionally, businesses should decide if outsourcing is acceptable for a one-time job or a long-term contract. Any reservations should be discussed with management, and any issues should be brought up with them. In the same way, seek input from employee reps and banish worries about job redundancy. Consider the emotions of employees whose jobs will be greatly impacted by the choice to outsource. Give them enough time to get used to the new policies and suppliers. 2018's Uma Bhushan, Jasmeet Kaur, Rajashree Gujarathi, and Seetharaman The results imply that Human resource outsourcing significantly affects people's or employees' job satisfaction in many businesses.

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COMPARING THE TECHNICAL EFFICIENCY OF INDIAN STATES – DEA APPLICATION

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ABSTRACT:
Skilled resources are of utmost importance in the advancement of an economy. The establishment of a strong foundation of knowledge through higher education is a critical component in India's progress. India boasts an extensively developed higher education system that offers comprehensive education and training in all areas of human innovation and intellectual pursuits. The implementation of national policies necessitates substantial resources over an extended period and often generates significant amounts of data, which is essential for evaluating their efficacy. This research paper focuses on assessing the efficiency of higher education in Indian states during the years 2011 and 2020. Employing Data Envelopment Analysis, we qualitatively investigate the efficiency of higher education using models that incorporate two inputs and two outputs. In consideration of data availability, we have selected the total enrolment and the number of graduates as outputs, as the number of individuals completing their degrees pertains to the success of teaching endeavours. Additionally, we have included the number of students per teacher as an input factor, as it serves as a qualitative indicator. The calculated DEA scores are based on input-oriented constant returns. In this model, we treat one state/UT as the Decision-Making Unit (DMU). The results reveal the performance of the 33 states identified as DMUs for the years 2011 and 2020. Consequently, these findings facilitate the assessment of the progress or decline in the performance of specific states or UTs through comparative analysis. In 2011, there were 33 DMUs, of which 6 were classified as efficient. In 2020, there were 34 DMUs, with 3 of them achieving efficiency scores of 1. It is noteworthy that Bihar, New Delhi, and Tamil Nadu maintained their positions as having highly efficient higher education systems, as evidenced by their score of 1. Furthermore, this paper aids in identifying the most efficient DMU when considering academic efficiency among the compared entities.

Keywords: *Economics, Higher Education, Economics of Education, Human Resource, DEA*

Introduction

India holds the top position globally when it comes to population, with a median age of 28 years (Worldometer.info). The escalating population and the burgeoning demands of the job market have propelled the significance of higher education to unprecedented heights. Consequently, India's higher education system has undergone substantial transformations over the years due to the dynamically evolving circumstances. The surge in demand for higher education enrolment has outpaced the demand for graduates in the job market, necessitating a comprehensive examination of the efficiency of the higher education system, particularly in the context of India. This need arises primarily because over 40% of the Indian population comprises individuals under the age of 25 (PEW Research Centre, 2023). Additionally, as India strives to cement its status as a burgeoning economy, there is an increasing requirement for a larger pool of skilled graduates. Policymakers attach great importance to ensuring that the younger generation pursues college degrees and that graduates possess the necessary competencies to secure gainful employment in the job market. Recognizing this imperative, the University Grants Commission (UGC) has been incessantly working towards augmenting higher education in terms of faculty, infrastructure, teaching methodologies, and research endeavours. Terms such as accountability, efficiency, and effectiveness have become the focal point of discussions and research in this domain. Against this backdrop, this paper undertakes a comprehensive analysis of the efficiency of higher education systems across the various states and Union Territories (UTs) in India. The fundamental question that looms large is whether we can qualitatively assess the efficiency and identify areas that require improvement. The present investigation constitutes a vital addition to the body of scholarly works that examine the efficiency of higher education in different Indian states. The paper presents an insightful interpretation of the diverse efficiency scores attained by each state. For every state, we possess a wealth of information in the form of variables that contribute to the efficiency scores derived from the Data Envelopment Analysis (DEA) formulations. Specifically, we incorporate two inputs, namely the pupil-teacher ratio and the total number of colleges in each state, along with two outputs, which encompass the total enrolment and the number of graduates across undergraduate, postgraduate, and PhD levels. Notably, enrolment can function both as an input and an output depending on the context of educa tional institutions. This paper is divided into four sections, Section II deals with Literature Review, Section III deals with methodology which includes data and results and Section IV concludes with the discussion.

Literature Review:

Economics of Education is relatively a fresher field of research where education, its demand, its finance, policies, and comparative analysis are done to ensure the best output can be extracted from the available resources. Economics of Education becomes even more important in developing countries with the rising population, as governments there have to make policies to increase the efficiency of education and learning systems to produce a trained and coherent human resource. Adam Smith, the Father of Economics, mentioned the relationship between economics and education (Smith A. , 1776). Economists like J. S. Mill, A. Marshall, and Karl Marx have also recognized the importance of education in the process of economic growth and development. The term “Economics of Education” was coined by Schultz at the American Economic Association the 1960 (Schultz, 1960). Koopman was the first one to define technical efficiency in the year 1951 (Koopman, 1951). Then, Nobel Laureate Gérard Debreu defined the coefficient of resource utilization with technical efficiency in the same year 1951 (Debreu, 1951).Even, American economist Michael James Farrell attempted in the year 1957 to provide a measure of productive efficiency using all inputs (Farrell, 1957). Another American mathematician Abraham Charnes also proposed the use of a non-parametric approach for measuring the efficiency of decision-making units (DMUs) using the Charnes Efficiency score from 0 to 1 (Charnes, Cooper, & Rhodes, Measuring the efficiency of decision making units, 1978). In this method, no DMU can be considered efficient unless all slack variables are zero. This shows, Economics of education has seen quite lengthy research by established personalities and institutions world-wide. The method to calculate the efficiency of not-for-profit organizations was proposed by Abraham Charnes and William Wager Cooper 1980 (Charnes & Cooper, 1980) and illustrated by the Program – Follow – Through in the US. public schools. Through this paper, it was shown that in order to assess the amount of improvement in the DMU, first it is brought under the envelope and then the further gain is adjusted by moving the observations & till further gain of efficiencies is studied. Charnes explained how to use Data Development Analysis for finding the relative efficiency and relief of DMUs. This study was improved by British Scholars A M Bessant & E W Bessant in their paper (Bessent & Bessent, 1980) where 55 linear programming models were solved each for a school using 12 inputs and 2 outputs. Slack values and the opportunity cost of each DMU were found. They demonstrated how inefficient DMUs deviate from efficient DMU. Bi-internal principles provided for the determination of multi-dimensional extreme frontiers. Charnes, Cooper, & Rhodes (1980) used Farrell's technical efficiency to test the efficiency of program follow-through (PFT) relative to the non-follow-through (NFT) in the US (Charnes, Cooper, & Rhodes, 1981`). This study differentiated program efficiency from managerial efficiency. DEA help us to distinguish good programs that might be managed badly from a worse program that appear to be better because of management than program capability. A similar study was applied to 167 elementary schools out of which 78 were found to be inefficient (Bessant et al, 1982) Abraham Charnes, in 1982 introduced the multiplicative model for DEA which uses constant returns to scale by employing virtual inputs and virtual outputs. Frontier is piecewise log-linear than piecewise linear form. This method was improved by adding virtual input multiplier and virtual output multiplier by Charnes et al. (Charnes, Cooper, Seiford, & Stutz, 1982). Till now CCR model of DEA was being used by most researchers, until Charnes, Cooper, Golani, Seaford and Stutz, 1985, inked the limitations of the CCR model. Michael James Farrell's paper as earlier confined to a single output situation, which is unlike the real-world situation where there are multiple outputs. On the other side, Charnes et al (1985) had improved the single input, single output to multi-input, multi-output through virtual single input and virtual single output

(Charnes, Cooper, Golany, Seiford, & Stutz, 1985) and further in 1986 the non-Archimedean elements instead of points at infinity was introduced. (Charnes & Cooper, 1982) Till now DEA was being explored by various economists, but Sexton et al (1986) noted the limitations of DEA (Sexton, Silkman, & Hogan, 1986). For example, for DEA can be used for technical efficiency and not price efficiency. Moreover, it's module cannot tell if a DMU is producing highly valued output mix or not using the available input set. Sexton, Silkman and Hogan suggested ways to eliminate the limitations of DEA through the use of goal programming to develop cross-efficiency, cluster analysis, analysis of variance and pooled cross-section time-series analysis. A lot of development took place in the application of DEA for the analysis of efficiency in the profit as well as not-for-profit industries. Even Indian Economist J K Sengupta in his research along (Smith & Mayston, 1987) and (Jesson, Mayston, & Smith, 1987) compared Education sector with industries like cement, steel and used DEA method to compare stochastic variations of the input and output data. The benchmarking and constraint facet were employed for calculating the efficiency frontier of a production process (Ahn, Charnes, & Cooper, 1988) and (Bessent A. , Bessent, Elam, & Clark, 1988). The authors developed a mathematical approach based on the concept of a constraint facet, which is a subset of the feasible production space that is defined by a set of constraints J K Sengupta (1989) used stochastic input-output data to develop a methodology for estimating the efficiency of a production process by comparing its input. Output coefficients to the coefficient of benchmarking system (Sengupta, 1989). These methods were then applied for the calculation of efficiency for DEEP programs (Diamond & Medewitz, 1990), efficiency of university departments (Beasley J. , 1990) and Academic Department, Efficiency via DEA (Sinuary-Stern, Mehrez, & Barboy, 1994). In continuity with this, a complete system for evaluating the efficiency of various processes, including the use of inputs and output to measure productivity was given (Charnes, Cooper, & Thrall, 1991). The authors provided details for the factors that influence efficiency like resources, technology, management, etc. A positive correlation was found between teaching and research productivity. among university faculty members. Faculty members who taught more courses tended to publish more, articles and research (Beasley J. E., 1995). Prices of inputs play an important role in determining the efficiencies of the DMUs. The mathematical approach to jointly estimate input prices and efficiencies for public service was widely accepted in subsequent DEA research. Sensitivity and stability of efficiency classification were important for efficiency changer when making decisions about DMU restructuring (Charnes, Rousseau, & Semple, 1996). Increasing demand for enrolment in higher education made it mandatory to evaluate the efficiencies of universities and their academic programs to access factors like size and research orientation (Athanassopoulos & Shale, 1997). DEA method would only mark the DMUs into efficient or inefficient units. Canonical- Correlation Analysis provided full rank scaling for all units rather than a categorical classification of efficient or inefficient units (Friedman & Sinuary-Stern, 1997). DEA has also been compared with regression analysis. Regression uses OLS algorithm while DEA uses LP to fit a convex wall. Regression is more flexible but DEA is better suited for identifying the most efficient units in a data set providing valuable insights (Cubbin & Tzanidakis, 1998). These methods were used to assess the cost efficiency of 520 school districts in New York where the mean inefficiency came out to be 14% (Ruggiero & Vitaliano, 1999) and in the case of Mexican state-level education expenditure an efficiency -equity trade-off was conducted to assess changes in the allocation patterns by comparing 1980 & 1990 cross-sections (Gershberg & Schuermann, 2001). Stochastic frontier analysis and DEA was used for a sample of 2000 schools in Chile. The schools displayed an average technical efficiency of 0.93 as measured by the stochastic frontier method ranging from 0.73 to 0.98 (Mizala, Romaguera, & Farren, 2002). 1256 Florida elementary schools showed an inefficiency of 4.1-5.1% range (Conroy & Arguea, 2008). While the technical efficiency of public elementary schools in Kuwait examined between 1999-2000 and 2004-05 using DEA was found to be carried between 0.695 and 0.858 (Burney, Johnes, Al-Enezi, & Al-Musallam, 2013). DEA in combination or comparison with regression has been used extensively for higher education actors around the globe. McMillan & Datta (1999) used regression to find the efficiency of 45 Canadian universities (McMillan & Datta, 1998). Similar studies and methodology were applied to public education in Utah (Chakraborty, Biswas,

& Lewis, 2001), 2547 economics graduates from UK universities in 1993 (Johnes, Measuring teaching efficiency in higher education: An application of data envelopment analysis to economics graduates from UK Universities 1993, 2006), for investigating the efficiency of Australian universities using non-parametric frontier techniques over the period 1998-2003 (Worthington & Lee, 2008) and for the efficiency of research 109 Chinese regular universities in 2003 & 2004 (Johnes & YU, 2008). A cost efficiency analysis was conducted in 42 departments in the UAB, Barcelona, in 1996-98 and found that departmental costs could be reduced by an average of 46% in the long term (Gimenez & Martínez, 2006). The technical and scale efficiencies of 100 HEIs in the UK for the year 2000-01 were found higher than average (Johnes, 2006). DEA has also been applied to assess the efficiency of 944 HEIs in 17 European countries. The study found that the most efficient were Sisak Republic, Belgium & Latvia whereas Denmark and Norway showed the lowest efficiency (Veiderpass & McKelvey, 2016). A similar study was carried out in India on 4 technical higher education institutes over 5 years (Sahney & Thakkar, 2016). Barra & Lotti (2016) conducted efficiency on two large groups of science and technology (ST) and Humanities and Social Sciences (HSS) based on the data from 2005 to 2009 and found that ST is more efficient than HSS in terms of research activities while HSS achieves higher efficiency in teaching activities (Barra & Zotti, 2016). External factors like size and department composition, locations, and funding structure play an important role in determining the efficiency of the Higher Education Index (Wolszczak-Derlacz, 2017). Universities receiving large financing play a pivotal role in the development of a region and regional economy (Firsova & Chernyshova, 2019) and (Salas-Velasco, 2020). Analysing the efficiency of higher education institutions is a complex task as there are several complex variables to be involved and evaluating the output is also difficult. In 2000, Fare & Grosskopf proposed Network DEA which was used by for multistage evaluation. of higher education institutions in Brazil's (Tavares, Angulo-Meza, & Sant'Anna, 2021) Absence of a market mechanism also affects the efficiency of public higher education institutions. HEIs having international programs have higher efficiency scores than those w/o international programs (Tran, Pham, Nguyen, Do, & Pham, 2023). Higher education in institutions is expected to deliver beyond the graduate numbers and research. The increasing demand for enrolment in undergraduate courses, the dearth of eligible graduate incorporates and the increasing unemployment & of educated youngsters make it even more important to analyse the efficiency of educational systems in the Indian context (Loganathan & Subrahmanya, 2023).

Research Methodology

Data was obtained from All India Survey of Higher Education which provided state wise data. The data set includes information about central universities, state public universities, and all other universities that cover the higher education system in various states. AISHE aimed to build a comprehensive database and provide an accurate picture of higher education in India by collecting data directly from institutions online. The survey covers all higher education institutions in the country and categorizes them into three broad categories: universities, colleges, and stand-alone institutions. The data collected includes information on teachers, student enrolment, programs, examination results, education finance, infrastructure, and other parameters. The survey also calculates various indicators of educational development, such as Institution Density, Gross Enrolment Ratio, Pupil Teacher Ratio, and Gender Parity Index, based on the data collected. Together these account for a compounded annual growth rate of around 3.5% over 5 years from 2016 to 2020. In the year 2020, Bihar had the highest average enrolment per college. The study uses 2 inputs and 2 outputs model. Three degrees have been included in the study – undergraduate, postgraduate and PhDs to cover a major part of higher education. Enrolment and out pass numbers have been kept as outputs whereas total no. of college per state and pupil-teacher ratio has been considered as qualitative inputs. Variables such as pupil-teacher ratio can be described as efficiency-related. To make the efficiency judgment more comprehensive, the DEA approach has been used. The assessment of efficiency in the context of Higher Education has been a long-standing application of DEA. Those interested in exploring early examples of this can refer to the work of Diamond and Medewitz, for instance (Diamond & Medewitz, 1990). When it comes to specifying a DEA model, one must make a decision on which inputs and outputs to include. This decision has been a topic of concern for quite some time, as the inclusion or exclusion of an input or an output can have an impact on DEA scores. Scholars such as Parkin and Hollingsworth (Hollingsworth & Parkin, 2003), as well as Jenkins and Anderson, have delved into this matter. Striking a balance between parsimony and information redundancy is the usual aim when dealing with DEA. On one hand, we strive for simple models that encompass all the relevant information within the system under investigation. However, we also worry about the exclusion of pertinent variables. On the other hand, we endeavour not to incorporate irrelevant variables into the model to avoid the problem of over-fitting. The dilemma of including or excluding variables was initially addressed by Norman and Stocker (Norman & Stoker, 1991), who proposed estimating efficiencies without certain variables and correlating the efficiency scores with the values of the omitted variable to assess its impact on the results. Expanding on this line of thought, Pastor et al. developed a systematic procedure for specifying a DEA model. They assessed the impact of including or excluding a variable on the efficiency of a particular decision unit and employed statistical analysis to summarize this impact. While these approaches are valuable in the selection of a model specification, they do not elucidate how a particular specification reveals the strengths and weaknesses of a specific unit under assessment. This issue was tackled by Serrano-Cinca and Mar-Molinero, who estimated a range of specifications and analysed the results using multivariate statistical analysis. The concept of estimating multiple models to gain further insights has also been adopted by Liu et al (Liu, Louis, Wen-Min, & Bruce, 2013), who utilized a network-based approach to uncover the characteristics of the results. The choice of variables for the DEA analysis has been based in an attempt to capture the inputs and outputs in qualitative terms irrespective of the size of the state. The literature in this field agrees to consider human and financial resources as inputs, measuring them for instance through the number of academic staff, expenditure per student, and similar. In this sense, universities are considered multiproduct organisations that produce the outputs using the inputs jointly. On the output side, the preference goes to the number of graduates (as for teaching). In this paper, based on data availability we have chosen as inputs the number of total enrolments, and number of pass outs as the number of graduates is related to the success of the teaching activity. Qualitative assessment can be through number of students per teacher, hence it has been included as an input. The DEA scores have been calculated using an input-oriented constant returns to scale (CRS) models

Results

We conducted the tests in two ways for the years under discussion, that is, 2011 & 2020. Firstly, the model was run for 2 inputs and 2 outputs

- O1 - UG + PG+ PhD Enrolment
- O2 - UG + PG+ PhD Out pass
- I1 - Total No. of Colleges per state
- I2 – PTR (all variables to be considered for 2011 and 2020 respectively)

Based on the inputs and outputs, the technical efficiency of higher education for states and UTs is estimated by DEA and an input-based approach and constant returns to scale are adopted. Andhra Pradesh, Bihar, Chandigarh, Delhi, Tamil Nadu, and West Bengal showed 100% efficiency that is their score was 1. These are followed by Maharashtra with a score of 0.9044 at 7th rank, followed by Uttar Pradesh 0.8503 at 8th rank and Karnataka with a score of 0.7766 at 9th rank. Now let us have a look at the input resources of these states. Bihar and Delhi had the maximum pupil teacher ratio of 46 and 48 respectively, meaning a smaller number of resources were catering to maximum number of students acting as outputs of educational institutions. In 2011, even Chandigarh and West Bengal had high pupil-teacher ratio of 25 and 36 respectively. Technical efficiency refers to a firm's capability to maximize output by utilizing a predetermined level of inputs, in light of the current technological advancements. Additionally, it can also signify a scenario wherein, despite the present technical expertise, enhancing output from given inputs or generating a specific output with less than one input without increasing the usage of another input is unattainable (Farrell, 1957). So, in the case of Chandigarh, West Bengal, Bihar and Delhi the efficiency scores are high majorly because these states have been producing more outputs with relatively a smaller number of colleges and a very high pupil teacher ratio than the national average of 24 pan India. In 2011, there was a boom of privately owned engineering colleges in states like Andhra Pradesh had more than 80% private unaided colleges and Tamil Nadu had more than 76.8% private unaided colleges. According to AISHE report, the states bagging the highest scores are the ones having maximum number of colleges (whether government or privately owned) - Uttar Pradesh, Andhra Pradesh, Maharashtra, Karnataka, Rajasthan and Tamil Nadu. Among the states that have 100% efficiency we can see a clear demarcation of two groups of states- one group has a maximum number of colleges per lakh population and another is the one producing maximum output with minimum resources. Andhra Pradesh and Tamil Nadu have more than 25 colleges per lakh population hence having more campuses, Chandigarh has 19 colleges per lakh population, whereas Bihar, West Bengal, and Delhi have 6, 8 and 9 colleges per lakh population. Hence Bihar, West Bengal, and Delhi were achieving maximum output with a limited set of resources like colleges and number of teachers. Andhra Pradesh and Tamil Nadu were seen achieving maximum output by utilising all resources at work. Now let us look at the data of 2020. When we examine the data of 2020, we find that 3 states Bihar, Delhi and Tamil Nadu happen to retain their first position with a 100% efficiency score. Colleges per lakh population in Bihar and Delhi are 8 and 9 respectively with highest pupil teacher ratio. The PTR in both DMUs has been consistently high. For Delhi the high number of enrolments in degree courses can account for the burden on the teaching resources and in case of Bihar, the non-fulfilment of vacancies seems a plausible reason for the number. West Bengal has an efficiency score of 0.9938 with 13 colleges per lakh population and the PTR is 31.

Conclusion and Discussion:

The allocation of substantial funds by the central government towards the provision of education as a public good is an area of focus. Both the central and state governments have prioritized higher education in previous plans. To evaluate national policies, significant volumes of data, in the form of official statistics, are gathered by organizations such as AISHE. It is imperative to analyse this data in a manner that is comprehensible to individuals. This study endeavours to determine whether, based on official statistics, we can ascertain whether the resources provided by the state and central governments are excessive or if there is a deficit. Additionally, it explores whether the resources are being utilized adequately or if the governments are placing strain on teaching and infrastructural resources in order to accommodate the increasing number of enrolments. The model employed in this research aims to elucidate the role of the DMUs (states and UTs) within the efficiency framework. We selected two inputs and two outputs as qualitative variables to compare the scores of 2011 and 2020. For a more comprehensive analysis, we can assess the impact of inputs on the efficiency score of states to gain a deeper understanding of the dynamics at play.

Table 1 – Showing the Standard Deviation, Correlation Coefficient, Score and Ranks for all states for 2011.

Statistics on Input /Output Data	Total No. of College - 2011	PTR – 2011	UG + PG+ PhD Enrolment – 2011	UG + PG+ PhD Out pass – 2011
Max	4828	48	3981819	1089883
Min	6	9	3616	105
Average	1056.12	26.0909	806751	200143
SD	1423.02	9.44317	1003505	258603
Correlation	**Total No. of College - 2011**	**PTR – 2011**	**UG + PG+ PhD Enrolment – 2011**	**UG + PG+ PhD Out pass – 2011**
Total No. of College – 2011	1	-0.173	0.93926	0.87843
PTR – 2011	-0.173	1	-0.004	0.01952
UG + PG+ PhD Enrolment – 2011	0.93926	-0.004	1	0.96159
UG + PG+ PhD Out pass – 2011	0.87843	0.01952	0.96159	1

(Source: Authors' calculation)

Statewide Score and Ranking - 2011:

Sr. No	DMU	Score	Rank
1	Andaman & Nicobar Islands	0.1737	32
2	Andhra Pradesh	1	1
3	Arunachal Pradesh	0.3086	26
4	Assam	0.6274	11
5	Bihar	1	1
6	Chandigarh	1	1
7	Chhattisgarh	0.3699	24
8	Dadra & Nagar Haveli & Daman & Diu	0.101	33
9	Delhi	1	1
10	Goa	0.187	31
11	Gujarat	0.6027	12
12	Haryana	0.5741	13
13	Himachal Pradesh	0.428	21
14	Jammu and Kashmir	0.4106	22
15	Jharkhand	0.4594	20
16	Karnataka	0.7766	9

Sr. No	DMU	Score	Rank
17	Kerala	0.4886	18
18	Madhya Pradesh	0.5422	16
19	Maharashtra	0.9044	7
20	Manipur	0.3359	25
21	Meghalaya	0.2393	28
22	Mizoram	0.2006	30
23	Nagaland	0.2757	27
24	Odisha	0.497	17
25	Puducherry	0.2244	29
26	Punjab	0.5439	15
27	Rajasthan	0.4651	19
28	Sikkim	0.5707	14
29	Tamil Nadu	1	1
30	Tripura	0.3796	23
31	Uttar Pradesh	0.8503	8
32	Uttarakhand	0.7759	10
33	West Bengal	1	1

(Source: Authors' calculation)

Table 2: Showing the Standard Deviation, Correlation Coefficient, Score and Ranks for all states for 2020.

Statistics on Input/Output Data	Total no. of colleges - 2020	PTR - 2020	UG + PG + PhD - Enrolment - 2020	UG + PG + PhD - Out pass - 2020
Max	8114	66	6199528	1288021
Min	9	14	9468	1620
Average	1288.03	28.0882	1105379	247613
SD	1734.98	11.2023	1333669	298646
Correlation	Total no. of colleges - 2020	PTR - 2020	UG + PG + PhD - Enrolment - 2020	UG + PG + PhD - Out pass - 2020
Total no. of colleges – 2020	1	0.02195	0.94467	0.9212
PTR – 2020	0.02195	1	0.21518	0.17481
UG + PG + PhD - Enrolment - 2020	0.94467	0.21518	1	0.98407
UG + PG + PhD - Out pass – 2020	0.9212	0.17481	0.98407	1

(Source: Authors' calculation)

No.	DMU	Score	Rank
1	Andaman and Nicobar Islands	0.197	30
2	Andhra Pradesh	0.6131	11
3	Arunachal Pradesh	0.2231	28
4	Assam	0.5822	14
5	Bihar	1	1
6	Chandigarh	0.6538	10
7	Chhattisgarh	0.4004	21
8	Delhi	1	1
9	Goa	0.1477	32
10	Gujarat	0.5259	17
11	Haryana	0.5883	13
12	Himachal Pradesh	0.3207	23
13	Jammu and Kashmir	0.3702	22
14	Jharkhand	0.5653	15
15	Karnataka	0.7291	8
16	Kerala	0.6825	9
17	Madhya Pradesh	0.7313	7

(Source: Authors' calculation)

No.	DMU	Score	Rank
18	Maharashtra	0.8072	6
19	Manipur	0.2549	26
20	Meghalaya	0.2137	29
21	Mizoram	0.1598	31
22	Nagaland	0.1126	33
23	Odisha	0.5112	20
24	Puducherry	0.2657	25
25	Punjab	0.5225	18
26	Rajasthan	0.5182	19
27	Sikkim	0.2497	27
28	Tamil Nadu	1	1
29	Telangana	0.6035	12
30	The Dadra and Nagar Haveli and Daman and Diu	0.0857	34
31	Tripura	0.2736	24
32	Uttar Pradesh	0.8588	5
33	Uttarakhand	0.5432	16
34	West Bengal	0.9938	4

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REMOTE WORKING AND ITS IMPACT ON WOMEN: A LITERATURE REVIEW

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ABSTRACT:
Remote work which is also known as teleworking or telecommuting was first introduced by Jack Nillies in the year 1973, from then to till date it becomes more famous way of working. Remote working pose different challenges and opportunity for employees and its impact on women employees is different than men as in a more conventional way in India home responsibility like taking care of children, parents still lie on the shoulders of women. How it affects them is being reviewed in this paper. So in order to study that, current challenges and trends of the organisation towards the remote working in literature over the past decade is covered. Remote working pros and cons from organisation and employee point of view is covered. At last we propose different strategies to grab the opportunities given and strategies to handle challenges.

Keywords: *Remote working, conventional, employee, strategies*

Introduction

In an essaytitled "Economic Possibilities for Our Grandchildren," John Maynard Keynes suggested that by the conclusion of 2030, people would only need to work 15 hours per week. This prediction appears plausible, considering that in the current year, 2022, the standard workweek is typically 40 hours. This statement clearly shows that the remote working is an important topic which needs to be explored more. Many of us may be not aware that remote working is not new as it was first introduced in the year 1973 when NASA engineer Jack Nilles called it as teleworking or telecommuting. But the maximum boost to this type of working came after Covid -19 when almost every type of organisation voluntarily opted for this type of working in order to maintain social distancing. So in this paper we try to meet the following objectives. Firstly, we will describe the possible definition given by all experts. Secondly we review the literature of last ten years from 2003 to 2023 to get in-depth knowledge of this type of working. Thirdly we chart down different challenges and opportunity which resulted due to this type of working.

Remote Working Background

Remote working, often referred to as telecommuting, work from home (WFH), telework, or sometimes hybrid work, is a practice where individuals work from their homes or other locations instead of a traditional office setting. This concept isn't new; before the Industrial Revolution, many works, such as handicrafts, jewelry making, and spice production, were family enterprises conducted at home, particularly in places like India. The term "remote work" was first coined in 1973 by NASA engineer Jack Niles. In 1979, IBM began a trend by allowing five of its employees to work from home, a number which expanded to 2,000 by 1983. This shift in mindset was encapsulated by a 1995 slogan: "work is something we do, not something we travel to." Innovations in information and communication technologies, such as computers, mobile devices, laptops, and tablets, have further facilitated remote work. By 2025, it's projected that 22% of the American workforce will be working remotely. This trend is driven by the desire for flexibility, work-life balance, cost reduction, and enhanced productivity. However, remote work also has its challenges, such as non-standard working hours, technical issues, and potential for workplace inequality. On the positive side, it can lead to time savings, reduced anxiety and stress, and better balance between home and work life. During remote working, there's a shift from informal to more formal interactions, and a loss of connectedness and tacit knowledge, which can result in workplace inequality. However, it also offers increased family time. Motivating and retaining employees is crucial in remote work settings. Leaders can adopt techniques similar to those used by online teachers to engage participants, such as ensuring everyone's participation in meetings, showing empathy, and appreciating their work. Companies are also adapting by offering flexible working arrangem ents to meet employees' personal and domestic needs, a trend known as organizational adaptation.In table 1, we have presented the complete valuation of research domains by various experts.

Table 1: Experts Contribution Table			
Researcher	**Factors**	**Advantage**	**Disadvantage**
Grant, C. A et, al (2013)	Job effectiveness, well-being and work-life balance	increased productivity, work from any location, no temporal working hours restriction, low stress and well being	work intensification, extended working hours, Physical problem for long sitting, Blurred boundaries
Keeling, T., et, al (2015)	privacy, interaction control and information	privacy, interaction control and withdrawal	Lack of social interaction
O'Neill, et, al (2014)	Cyber lacking	Work from any location (home)	Cyber lacking
Abdelkader, A. et. al. (2014)	(Cost),Performance ,job satisfaction, job stress(gender) communication, trust ,organisational commitment, disciplined worker who follow time are more productive and less stressed in remote working perspective.	situational freedom, promoting higher worker retention rates and lower facility costs	Blurred boundaries mixing office and personal work, for best result in remote working job redesign need to be done. not suitable for every job, Job insecurity. Special leadership style required
Dery, K., & Hafermalz, E. et.al. (2016).	Organisational belonging for remote workers	Overdependence on technology. Technology advancement can overcome virtual presence	One of the significant challenges faced in remote work is the loss of those casual and spontaneous interactions which typically happen in a physical office space. These interactions are vital for relationship-building and fostering a sense of community within an organization, but they are often absent in a virtual work environment
Errichiello, L., & Pianese, T. (2016).	Antecedents Of Remote Work Adoption, Remote work implementation and outcome	Productivity, job satisfaction, turnover, work balance	Isolation
Elshaiekh, N. E. M., Hassan, (2018, November).	Remote working ,performance	self-motivated and self-disciplined	Balancing work and personal life becomes more complex when working from home. The absence of a structured office environment can make it difficult to manage time effectively, leading to either overworking or struggling to stay on task.
Jaeger, F. N., (2018)	Medium for communication, skills required, benefit and challenges, difficulty encountered by remote workers	Flexibility in working hours is beneficial	Independent working, isolation ,communicating others is a challenge, blurred boundaries
Dr. KDV et.al. (2020)	The policies and practices of an organization, including those related to work-life balance, employee benefits, and career development opportunities, directly affect employee morale and mental health.	Communication problem, like internet glitch slow decision making. Fear of 24/7 reporting, lack of trust, working too much, interruption, bad health habits.	Opportunities, low cost,autonomy.minimal supervision, no office politics
Even, Angela (2020)	Dep variable: social and organisational isolation. Independent variable :practices to avoid these variables	face to face interactions, involvement in information exchange, leaders with specialised training which provide tools for remote working social isolation handling	Leaders with special skills required, Social isolation, low face to face communication

Discussion

The study suggests several key recommendations for employers in both the private and public sectors to enhance remote working effectiveness. Firstly, employers are advised to provide support and resources that enhance the remote work environment, as this has been shown to positively impact employee performance. Secondly, offering flexible work arrangements is crucial to balance employees' personal and professional responsibilities, as work-life balance (WLB) is closely linked to increased productivity. Additionally, maintaining an optimal number of employees is vital for their on-job roles. The study also highlights that remote working allows employees to better manage their work-life balance, suggesting that employers should permit work-from-home options when the job does not require physical presence in the office. This approach not only improves WLB by eliminating commute time but also can be used effectively for office tasks. Lastly, the study recommends that companies consider a hybrid working model, combining both remote and in-office work, to boost employee engagement. This model provides flexibility and supports a healthy balance between work and personal life, potentially leading to higher productivity and job satisfaction.

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TO STUDY THE BLENDING OF TECHNOLOGY AND ARTIFICIAL INTELLIGENCE WITH EDUCATION FOR ENHANCING THE LEARNING EXPERIENCE

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ABSTRACT:
This in-depth study investigates the profound impact of Artificial Intelligence (AI) on traditional teaching methods. The study seeks to provide a holistic perspective on the evolving dynamics influenced by AI in education through a meticulously conducted questionnaire-based investigation involving a diverse sample of huge participants, primarily students from the region of Delhi NCR. The survey, which uses scale-based questions, allows participants to express nuanced opinions, allowing for a thorough understanding of the shifting perspectives among key stakeholders. The study delves into the unique insights provided by students, with a focus on the relationship between artificial intelligence and traditional teaching techniques. This method not only captures the essence of the participants' points of view, but it also sheds light on the miscellaneous implications of artificial intelligence in the educational landscape. In essence, this study is a valuable exploration of the complex interplay between AI and traditional teaching methods, providing a nuanced understanding of students' diverse perspectives. The research contributes to a better understanding of the evolving relationship between artificial intelligence and education by using a holistic approach.

Keywords: *Artificial Intelligence, Traditional learning, perspective, Relationship between AI and traditional teaching*

INTRODUCTION

For centuries, the traditional classroom setup has been the cornerstone of education. It typically involves a teacher imparting knowledge to a group of students in a physical setting. While this approach has served as the bedrock of learning, it's not without its limitations. Students have diverse learning needs, and traditional teaching often struggles to cater to these individual differences effectively. Learning is viewed as the mental processing of information (i.e., the construction, acquisition, organiz ation, coding, rehearsal, storage in memory, and retrieval or non-retrieval from memory) from the perspective of cognitive theories (Schunk, 2012). The education technology industry, freque ntly alluded to as 'EdTech', is developing, with massive interests in nations like China, the United States and India. e-Learning or Web based learning is combined with conventional classroom learning in this day and age. The first years saw how technological innovation acted when traditional classroom teaching was impacted by Coronavirus. The writing recognizes the utilization of virtual study halls, increased reality classrooms, web 2.0 advances, MOOCs, and numerous other internet learning conditions for granting training. According to Gestalt theory, humans can generate their own learning experiences and interpret information in the same or different ways as others, as each person has a unique perspective on the world (Boeree, 2000). The theory of transfer of learning advocates that features of the task, learner, organiz ation and social context will have a unique impact on students' ability to use the transfer of learning (Cormier & Hagman, 2014; McKeough, Lupart & Marini, 2013). The expansion in online learning (and wording, including on the web, e-learning and distributed learning) has prompted a developing interest in assessment, the vast majority of which has focused on assessing web based learning designs as far as: the affordances of the communication conditions (Bozik and Tracey, 2002, Lord, 2001); clients' perceptions (Veerman et al., 2000); and the sorts of abilities that clients might require (Murphy, 2004, Trigwell et al., 1999). Many examinations like those (Bos and Van de Plassche, 1995; Madhavaiah et al., 2013) express that innovation improved learning is beneficial in language procurement. Sadeghi et al. (2012) express that recognizable proof of students' individual learning contrasts and their impact on the growing experience is vital to successfu lly determining variety in execution. The utilization of innovation in education is far cutting edge with the development of artificial intelligence (computer based intelligence); a framework where machines are intended to imitate people. Artificial Intelligence is "the science and designing of making intelligent machines or a machine that acts in a manner that could be thought of as savvy if it was a person." (Mccarthy, 2007). The utilization of artificial intelligence has ended up being a suitable strategy for making a significant growth opportunity for students (Conklin and Hartman, 2014). As Artificial Intelligence, creating and spreading over all aspects of the world at a disturbing rate (Tegmark, 2015). It plays a progressively significant job in our day to day routine. As the presentation of artificial intelligence and AI is catching on with many individuals, its utilization in various gadgets, applications, and admini strations are becoming widespread (Zawacki-Richter et al., 2019). Therefore, it's important to give the emphasis of artificial intelligence on the education sector. Artificial intelligence may particularly help accomplish a portion of the worldwide instructive targets recognized by the global community in SDG 4: "Ensure inclusive and equitable quality education and promote life-long learning opportu nities for all". Popenici and Kerr (2017) contended that the point of innovation in education is to build information and help instructing and advancing yet not to pack the process of content conveyance, control, and appraisal in schooling. Earlier studies on technology based learning concluded that these technologies were not significantly different from regular classroom learning in terms of effecti veness. The studies have to compare web-based instruction (i.e. excluding video-based courses and standalone computer applications) to face-to-face or "offline" instruction and they have to focus specifically on objective measures of student learning that are measured for both the web-based and non-web-based formats. The authors find that students who took their classes in a blended format performed significantly better, on average, than did those taking courses through traditional, face-to-face instruction, and that there is no significant difference between the purely online and purely face-to-face formats. Also, Golonka et al. (2014b) completed an exhaustive study of 350 papers that contrasts the utilization of current innovations and conventional language getting the hang of/instructi ng instruments. Slavuj et al. (2017) assessed 42 examinations from 2005 to 2015 which zeroed in on versatile learning frameworks. They concluded that students are preferring more on technological based education rather than traditional face-to-face teaching. The utilization of Teacherbots (processing arrangements for the regulatory piece of instructing, managing content conveyance and managerial input and supervision) and IBM Watson (Q & A PC framework that utilizes normal language to answer questions presented by a client) are some computer based intelligence applications that are accessible to upgrade teaching and learning (Gonçalves et al., 2016). In the field of education, a learning model that depends on the consideration of contrasts in students is frequently alluded to as personalized learning. Personalized learning allows understu dies to get guidance and heading when they need it. Customized learning can likewise consider a better breakdown in topic inclusion and a more flexible pathway for understudy achievement. Customized learning on a computerized platform can be acknowledged utilizing Artificial Intelligence (AI). In the ASHE report, it was mentioned that the K-12 education system in America shows an increase in reflective learning, integrative thinking, and order thinking skills in online learning compared to conventional learning (classroom-based). In addition, in today's time, when Artificial intelligence (AI) has surprised the world, it is unavoidably expected that AI based procedures be integrated into e-learning frameworks for tackling issues like programmed ID of learning styles/mental abilities of the students really. As we all know that today's technological sophisticated world has shown a positive role of Artificial Intelligence (AI) and Machine Learning (ML) it is needed to adopt cost-effective and smart education globally. Artificial intelligence in training is acquiring popularity. As clear from the discoveries of the papers, there are fewer frameworks based on the standards of artificial intelligence. The present research will study the papers in the signifying field to get better understanding on technology based learning. In order to increase students' activity and knowledge in education, this paper will analyze the impact of developing AI-based education. This analysis generates the effectiveness of AI-based learning and if this can replace traditional based learning or not. The objective of this research paper is to investigate the preference of students towards AI driven education and their understanding of how effective it would be. We seek if today's world is in favor of the implementation of AI in education and will it actually help grow individuals' performance or not. The entire research is based on the quantitative analysis that is being conducted to emphasize on the opinion and thoughts of individuals in the education sector and from the opinion of either being a student itself, an educator or a parent. This study aims to provide valuable insights into the effectiveness and implications of AI-driven learning in the educational landscape. The discoveries of this research can add to the developing assortment of information on the role of artificial intelligence in training and its potential to reshape academic practices. Besides, understanding the effect of artificial intelligence driven on students' performance can illuminate instructive policymakers, foundations, and teachers on the best way to harness this innovation to enhance students' achievement and encourage a more student focused way to deal with learning. In the subsequent segments of this research paper, we dig into the literature on AI driven education, present the research methodology, analyze the outcomes, and examine the ramifications of our discoveries.

Objectives

Explore the potential connection between views on AI's role in preparing students for the digital era and its impact on future employability beliefs.

To check if AI education can provide a better learning style and can be recommended to peers.

Examine the link between the importance of AI providing mentor ship to students and personalized learning.

Literature Review

The research is emphasizing on the importance and implementation of AI-based education in spite of the traditional form of education. A series of studies in the past had taken place to analyze the importance of online education and if it impacts student's knowledge or not as compared to face-to-face education. In the 176 on the web learning research studies distributed somewhere in the range of 1996 and 2008 were recognized that utilized an exploratory or semi test plan and unbiasedly estimated understudy learning results. Of these 176 investiga tions, 99 had somewhere around one differentiation between an included on the web or mixed learning condition and up close and personal (disconnected) guidance that possibly could be utilized in the quantitative meta-examination. In addition to the effectiveness of students, this study also focuses on the thinking of technology based education over students. Analyzing thoughts of these gives a better idea of the generation of AI-based education and will it be really important to implement or is just a myth in the tech savvy world. In order to choose how to carry out web based learning, it is essential to comprehend the practices that explo ration recomm ends will increm ent viability. Start by examining the historical development of educational technolo gy. Highlight key milestones such as the introduction of computers in classro oms, interactive whiteboards, and the rise of online learning platforms. Investigate the theoretical foundations that support the incorpo ration of technology in educat ion. This may encompass learning theories, cognitive psychology, and educational philosophy. The expansion in online learning (and phrasing, including on the web, e-learning, and distributed learning) has prompted a developing interest in assessment, the majority of which has focused on assessing web-based learning designs as far as the affordances of the communication conditions (Bozik and Tracey, 2002, Lord, 2001); clients' perceptions (Veerman et al., 2000); and the kinds of abilities that clients might require (Murphy, 2004, Trigwell et al., 1999). A notable exception is an investigation of students' fulfillment with either face-to-face or asynchro nous conferencing facilities that found ladies were more fulfilled with asynchronous cooperation than men (Ocker and Yaverbaum, 2001). A comparison of Disc Rom-based educational cost of ECG and traditional class-based educational cost found no significant distinction of either evaluation marks results or mentalities between the two groups (Jeffries et al., 2003). Just as potential purposes of evaluation are diverse, the method used for the analysis is questionnaire. The questionnaire is used to analyze the behavior and prospect of the students . If student outcomes are the same whether the education is taken using AI or face-to-face, then online instruction can be used cost effectively in settings where too few students are situated in a particular geographic locale to warrant an on-site instructor. As technological capabilities grow and more customary schools embrace online training before long, schools might pick to supplant a large number of their monstrous, section level courses that are generally shown in huge auditoriums and are described by practically no singular collaboration among understudies and teachers, specialists say. Hwang and Fu (2018) did a precise writing survey of 90 articles somewhere in the range of 2007 and 2016 on cooperative versatile learning in different fields. Paramythia and Loidl-Reisinger (2003) defined that "a learning environment is considered adaptive if it is capable of: monitoring the activities of its users; interpreting these on the basis of domain-specific models; inferring user requirements and preferences out of the interpreted activities, appropriately representing these in associated models; and, finally, acting upon the available knowledge on its users and the subject matter at hand, to dynamically facilitate the learning process" (p. 239). This significantly emphasizes the importance and implementation of AI-based learning. Technology-supported adaptive/pers onalized learning is a popular and important stream of research studies in the area of educational technologies. The utilization of innovation in schooling traces all the way back to the rise of first era PCs and their ensuing refreshed versions (Schindler et al., 2017). PCs have been utilized as an instructive asset (closely resembling a library or lab), as well as a method for keeping up with data sets of understudy data. (Jones, 1985). At present, Artificial Intelligence is creating and spreading over all aspects of the world at a disturbing rate (Tegmark, 2015). As the evolution of artificial intelligence and machine learning is getting on with many individuals, its utilization in various gadgets, applications, and administr ations is becoming boundless (Zawacki-Richter et al., 2019). There were absolutely 70 articles from six SSCI diaries in the space of instructive advances from 2007 to 2017. In particular, these diaries were top-level instructive innovation diaries including PCs and Training, Instructive Innovation Society, Intuitive Learning Conditions, the English Diary of Instructive Innovation, Instructive Innovation Innovative work, and the Diary of PC Helped Learning. Overall, 6.4 articles connected with versatil e/customized learning were distributed in these diaries every year. By the end of this analysis, the study will visualize how the environment is going to be impacted with the usage of AI in the educational sector and what effect this will have on the new generation students. In the computerized time, complex abilities that are less simple to automate become increasingly important. Imagination and decisive reasoning are turning out to be progressively significant in the labour market, and add to a superior individual and community life. (Vincent-Lancrin et al.,2019[8]). Artificial Intelligence frameworks can likewise give customized criticism and take over managerial assignments that were recently dealt with by human educators (Chen, Chen, and Lin, 2020). As computer based intelligence innova tions advance, they hold the comm itment of customized and versatile learning, ongoing input, and shrewd authoritative and emotionally suppor tive networks (Renz, Krish naraja, and Gronau, 2020). Examine existing studies on the impact of technology on teaching and learning outcomes. Discuss research that shows advances in student involvement, academic achieve ment, and critical thinking skills development. Identify successful case studies and paradigms in which technology and teaching have effectively synergized. Highlight specific tactics or approaches that have been shown to improve the learning experience. These technologies have the potential to increase student enga gement by providing interactive, personalized, and immersive learning environments (Malik, Tayal, & Vij, 2019; Chen, Chen, & Lin, 2020). Consider the literature on students' classroom experiences with technology. Studies on student choices, attitudes towards technology, and the impact on their overall learning experience could fall under this category. Examine the role of educational policy and institutional support in supporting technology integration in the classroom. Discuss how government policies and institutional activities can either support or hinder technology use in education. A narrative that spans historical evolution, theoretical underpinnings, and the diverse impact on educational landscapes in the dynamic domain where technology meets with teaching. As advances in natural language processing enable applications such as plagiarism detection, assessment scoring, and automated feedback provision (Chen, Chen, & Lin, 2020; Goksel and Bozkurt, 2019), AI has the potential to assist teachers in student assessment. The historical timeline follows the incorporation of technologies such as computers and interactive whiteboards into classrooms, highlighting watershed points in the growth of educational technology. Theoretical frameworks based on learning theories, cognitive psychology, and educational philosophy provide a conceptual platform for clarifying technology's revolutionary potential in pedagogy. Extensive research has been conducted to assess the influence on teaching and learning outcomes, revealing advances in student engagement, academic achievement, and critical thinking skills development. However, the literature digs into the difficulties as well, addressing the digital divide, worries about overreliance on technology, and potential harmful impacts on social contact. Best practices and models emerge as beacons of successful integration, demonstrating techniques that improve the learning experience. Teacher professional development emerges as a major aspect, with research emphasizing the need of training programmes in ensuring appropriate technology utilization. Exploration of new technology, such as artificial intelligence and virtual reality, adds a futuristic perspective to the discussion. The narrative weaves in student viewpoints, institutional support, and policy ramifications, exploring the multiple forces that define the marriage of technology and education. The literature review concludes by pointing to future directions, suggesting more investiga tion of unexplored places in this changing terrain.

Research Methodology & Scope:

The research will be certain to students' thoughts and behavior above 18 years to provide their insight and thought towards the education sector. This study is all about understanding what students aged 18 and older think and do when it comes to education. We want to know their opinions and experiences to get a clear picture of what they like and what could be better in the education system. By looking closely at their views, we hope to find useful information that can help make education better for everyone in this age group.

Sample

The research will encompass a varied group of participants, specifically targeting students aged 18 and older for the analysis. Purposive techniques are being implemented to ensure a diverse pool of people being part of the study.

Data Collection:
Quantitative data:

Surveys and Questionnaires: To evaluate the shifted viewpoints because of Artificial Intelligence (AI) on customary showing strategies, we led a questionnaire-based investigation focusing on a sample size of 200 members. Our review enveloped students intending to accumulate bits of knowledge into their viewpoints. The questionnaire principally highlighted scale-based questions, permitting members to communicate nuanced views on the effect of simulated intelligence in the domain of training. By utilizing this methodology, we tried to exhaustively comprehend and dissect the different viewpoints of the students aged 18 and above in regard to the advancing connection between artificial intelligence and traditional educating techniques.

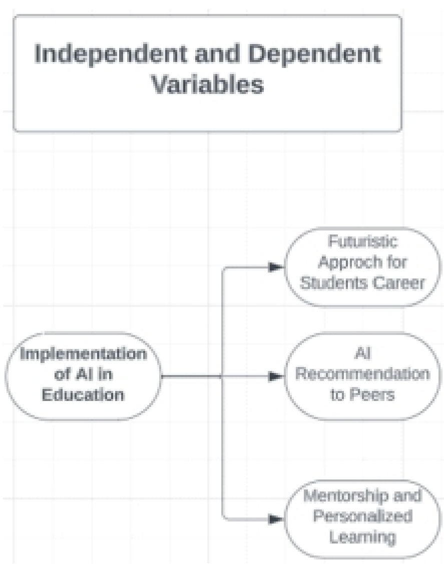
Data Analysis:
Qualitative Analysis:

Content Analysis: A deep through analysis will be conducted on the various researches being conducted in the similar field and the interpretation from the same.

Quantitative Analysis:

Correlational Analysis: This analysis will summarize the data set to understand the impact of AI in the traditional education system and how individuals will owe it.

Variables



Source: proposed model

Hypothesis

Futuristic approach for Student's career

H0: There is no significant association between the perception of AI preparing students for the digital era and the belief in AI preparing students for future employment

H1: There is a significant association between the perception of AI preparing students for the digital era and the belief in AI preparing students for future employment

H1: There is a significant association between the perception of AI preparing students for the digital era and the belief in AI preparing students for future employment

AI Recommendation to Peers

H0: There is no negative significant impact of AI providing different learning style and of suggesting AI based education to peers

H1: There is a negative significant impact of AI providing different learning style and of suggesting AI based education to peers

Result

H0: There is no relation of AI providing mentorship and its importance for students as compared to traditional education

H1: There is a positive relation of AI providing mentorship and its importance for students as compared to traditional education

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	281.301a	9	.000
Likelihood Ratio	316.045	9	.000
N of Valid Cases	208		

a. 5 cells (31.2%) have expected count less than 5. The minimum expected count is .88.

TABLE 1. Comparison of AI preparing for digital era and the future career of students

The association between students' future enhancement and preparing students for the digital era stands positive as the significant value is less than 0.05 and therefore the alternative hypothesis is being accepted. Hence, there is a significant positive association between the perception of AI preparing students for a digital era and belief in AI preparing students for future employment.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	300.007[a]	9	.000
Likelihood Ratio	322.572	9	.000
N of Valid Cases	208		

a. 6 cells (37.5%) have expected count less than 5. The minimum expected count is .56.

TABLE 2. Comparison of AI providing different learning style and students suggesting AI education to peers

The impact between AI providing a different learning style and suggesting it to peers stands positive as the significant value is less than 0.05 and therefore the alternative hypothesis is being accepted. Hence, there is a significant negative association between AI providing a different learning style and suggesting it to peers.

Correlations

		Can AI effectively replicate the mentorship and guidance provided by human teachers?	How important do you think AI based education is for students?
Can AI effectively replicate the mentorship and guidance provided by human teachers?	Pearson Correlation	1	.518**
	Sig. (2-tailed)		.000
	N	108	108
How important do you think AI based education is for students?	Pearson Correlation	.518**	1
	Sig. (2-tailed)	.000	
	N	108	108

**. Correlation is significant at the 0.01 level (2-tailed).

TABLE 3. Comparison of AI providing mentorship and its importance for students

The relationship between AI providing mentorship and its importance for students as compared to traditional education stands positive as the significant value is less than 0.05 and therefore the alternative hypothesis is being accepted. Hence, there is a significant positive relationship between AI providing mentorship and its importance for students as compared to traditional education.

Discussion

The study involved a total of 111 student's responses. The reason behind the decrease in no. is because of the time constraints. The above tables clearly show the effectiveness in AI-based education and students' opinions on the same. Based on Table 1, there has been a significant association ($p<0.05$) and it is found that students believe in AI based education and it can prepare them for a better future using the technology into consideration. The result relates with the previous discussion on various research papers of AI effectiveness and its better usage for students' careers. A more appropriate result can be identified with an increase in the no. of responses which are restricted because of a limited time period. To assess the results further it is important to consider that the previous papers on relative topics have a different characteristic as compared to ours. Most of the previous studies have focused on qualitative analysis to understand the impact of artificial intelligence on education and how it can affect the traditional education system. Most of them are review based and give an overview on what artificial intelligence is and how it can impact the traditional teaching methods just on the basis of advantages and disadvantages. In few other studies, where quantitative analysis is taken into consideration is based on foreign countries and where artificial intelligence is already implemented in education to some extent. They had studied the after effects of AI in education based on students' opinions. The approach for our analysis is quantitative based as to analyze the implementation of AI based education, based on students' opinion aged above 18. Here, the opinion of students includes if AI can provide better learning style, mentorship, future career growth, preparing for the digital era, recommendation to peers and its overall effectiveness as compared to traditional classroom teaching methods.

It includes a more enhanced version and output of how AI in education can impact the overall personality of students and if it will be viable for them according to their thought process. Under table 2 of the analysis, since ($p<0.05$) which means a positive significant value and hence it is found that there is a negative impact between the learning style adopted by AI and the recommendation to peers. This analysis can be considered and assumed that it might be a possibility of AI not understanding the learning style of individuals and also to think if it can be suggested to the peers for better education or not. A more focused and enhanced analysis can take place in the future with respect to the analysis and the outcome of the same. Other studies also proved a satisfactory level of AI in understanding the learning style of students individually. The subject for the analysis were 18 and above students who are in their teenage or adulthood, keeping in mind they have a better knowledge and understanding of fast moving technology in the time and if it can also be applied into the education sector as found in all the sectors working in the world. From table 3, the relationship between artificial intelligence providing mentorship and its importance to students has a positive relation because the significant correlation value ($p<0.05$) holds true for accepting the alternative hypothesis. This clearly states that, students who have hunches of AI can provide a better mentorship to students and done by human teachers and they feel it highly important for the students of gen z as well as for the upcoming one. Not only this, the result also emphasized on the fact that in the coming time students are more likely to depend on technology and somehow, incorporating artificial intelligence and other advanced technologies can help the education sector to cope with the generation and keep them focused for their studies. The overall study and results suggest that AI is going to play a crucial role in the coming time and to some extent students believe in the incorporation of AI in education and this will be highly beneficial for the students to keep them standing in the high moving society. Since, the entire study is based on opinion and hunches in any case, we need to see that this comparison result was not derived from psychological studies. Consequently, we shouldn't interpret the result as a demonstrated reality according to a psychological point of view.

Conclusion

The new analysis being done in this research emphasizes on the impact of artificial intelligence in education and will the students be able to cope with it or more comfortable with the traditional teaching method. The overall results for the analysis is more or less in favor that AI can help better in the education development of individuals. It studied the opinion of students on AI using questionnaires but not the overall psychological study being conducted and therefore more in depth psychological studies can be conducted to get a better understanding on how students will come to act on the coming involvement of artificial intelligence in the education field. This shift in the field where students have shown their interest can be as effective to provide new learnings and insights in today's world. With the beneficiaries of implementation of AI there come few challenges and ethical consideration on the same that is not taken much into consideration for the paper but with review of various others paper it can be concluded that there are a few challenges and risk that will definitely arise and if more focused is being pt up on implementing AI ineducation then at the very same time need to analyze and work on the challenges that might arise from the same. The more good it can be, the worse it might be. Artificial intelligence is one key that can provide many new technological developments in the education field but at the same time can be risky for students as it might distract students from their growth potential and a possibility of students depending more on AI tools such as ChatGPT nowadays. It is important to keep a note of effective use without being dependent on them and therefore, it's important to see the level of effectiveness it can generate and to what extent it should be taken into consideration. More detailed research can be conducted with certain AI tools to analyze the understanding of students on topics undertaken with the help of technology and also how overall technology is impacting the students with its educational field. Students in their adolescence, the view and opinion of them matters to a great extent as it will help in better understanding of using AI in education and its impact on them. This technological development is taking place at a high pace and therefore its high time to work and understand the impact of technology in the education field and its effectiveness as well. This shift from traditional to online or distance based learning and now moving with the incorporation of artificial intelligence in education is moving in a significant positive direction and students are coming with a positive opinion on the same.

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EDUCATING CONSUMERS THROUGH COMPARATIVE ANALYSIS BETWEEN EVs AND Gvs IN MUMBAI

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ABSTRACT:
Due to rising worries about climate change and energy sustainability, the automobile industry is undergoing a global transition in the adoption of EVs over GVs. As a result, it's becoming increasingly important for automakers and researchers to understand customers' views and interest in EVs. So, this research aims to explore individual knowledge and perception of EVs and their adoption to investigate their understanding, requirements, and attitude toward EVs. It also investigates the benefits, concerns, drawbacks, and financial capabilities that influences the consumers interest in EVs. In this study we have found that the majority of respondents who responded to the study said they would consider buying an EV in the near future, agree that EVs have a smaller environmental effect than gasoline automobiles and also government incentives and subsidies for EVs are critical to expanding their adoption. This study of consumer choices and sustainable mobility will contribute to a more sustainable automotive industry in the near future.

Keywords: ***EVs, Automobile Industry, Gvs.***

INTRODUCTION

The first small-scale electric automobile was produced in the late 1820s by Porsche, and the first fully powered electric car was created a half-decade later, in the early 1830s. Because the batteries in the first EVs could not be recharged, the automobile industry's research and development focus shifted to vehicles powered by crude oil. With Tesla's Roadster entering the market, EVs have gained a lot of attraction over traditional automobiles powered by crude oil during the last two decades. Because of expanding public awareness of the environmental pollution caused by GV automobiles, along with increased exploitation of the limited conventional sources, a gradual shift to EVs may be noticed. Many firms, including General Motors, Tata, Honda, Tesla, and Toyota, began mass manufacturing of electric and hybrid vehicles in order to alleviate the problems associated with fully powered gasoline engine automobiles. In reaction to air pollution, the worldwide automobile industry is quickly shifting from gasoline and diesel fuel internal combustion engine vehicles (ICEVs) to eco-friendly electric cars (EVs). The primary advantage of an electric car is how much more environmentally friendly they are in comparison to petroleum or diesel-powered automo biles. EVs run entirely on electricity, with no use of petroleum derivatives, therefore eliminating your fuel bills.

LITERATURE REVIEW

Matteo Muratori, Marcus Alexander, Doug Arent, Morgan Bazilian, Pierpaolo Cazzola, Ercan M Dede, John Farrell, Chris Gearhart, David Greene, Alan Jenn, Matthew Keyser, Timothy Lipman, Sreekant Narumanchi, Ahmad Pesaran, Ramteen Sioshansi, Emilia Suomalainen, Gil Tal, Kevin Walkowicz and Jacob Ward - "The rise of EVs—2020 status and future expectat ions"[4]:The paper provides a recent and thorough summary of scientific findings on many aspects of EVs, including (a) a summary of the state of the light-duty-EV market and current forecasts for future adoption; (b) market insights beyond light-duty EVs; (c) an examination of the cost and performa nce evolution of batteries, power electronics, and EVs, all of which are critical components of EV success; (d) charging-infrastructure status, with a focus on modelling and studies used to project charging-infrastructure require ments and the economics of public charging; (e) an overview of the impact of EV charging on power systems at multiple scales, ranging from bulk power systems to distribution networks; (f) insights into EV-specific life-cycle cost and emissions studies; and (g) future expectations and synergies between EV charging and other modes of transportation

Milad Ghasri, Ali Ardeshiri, Taha Rashid - "Perception towards EVs and the impact on consumers' preference" [5]: An integrated choice and latent variable model is used in this study to explicitly quantify the perceived benefits of EVs over traditional internal combustion engine autos. The information came from an expressed preference poll of 1076 New South

Wales people. The model's latent component, according to the data, disentangles perceived advantages across three dimensions of vehicle design, environmental impact, and safety. These latent factors interact with price, driving range, and body type, in that order, to describe the effect of perception on desire. The model created is then used to evaluate the effectiveness of various assistance programmes on Millennials (Gen Y), the generation before them (Gen X), and the generation after them (Gen Z). According to the study, Gen Y is more inclined than Gen X and Z to purchase EVs.

Pradeep Kumar Tarei, Pushpendu Chand, Himanshu Gupta – "Barriers to the adoption of EVs: Evidence from India" [6]: This research was conducted in the Indian EV context, with a focus on technological, infrastructural, financial, behavioural, and external restrictions. The study's findings indicate that EV barriers like as performance and range, total cost of ownership, a lack of charging infrastructure, and a lack of customer understanding about EV technology are all major variables in driving EV adoption. Their research assists policymakers and decision-makers in better understanding the multifaceted nature of EV hurdles and their interrelation.

Sarmad Zaman Rajper, Johan Albrecht – "Prospects of EVs in the Developing Countries: A Literature Review" [7]: For this study, A systematic review of the electronic databases Google Scholar and Web of Science for the years 2010-2020 was undertaken for this work, using the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) criteria. Electric four-wheelers, hybrid electric autos, and electric twowheelers were among the EVs found in the databases. In the beginning, 35 studies matching the criteria were found in Web of Science. Using Google Scholar, 105 more relevant papers and publications regarding barriers and opportunities were located and examined. According to the findings, electric four-wheelers are not a realistic option in developing countries due to their high purchasing price. Electric two-wheelers, on the other hand, may be advantageous due to their lower purchase price

Björn Nykvist, Frances Sprei, Måns Nilsson – "Assessing the progress toward lower priced long-range battery EVs" [8]: The goal of this research is to show how battery EVs (BEV) features and price have advanced, as well as to look at which market sectors long-range BEVs may be made at comparable costs to conventional vehicles. We assess 48 models that have been available to consumers since 1997, compiling data on features, weight, and vehicle costs. We also examine recent advancements in battery pack prices. Based on this information, the portion of the BEV vehicle price connected to the battery pack is estimated. We forecast when it will be able to construct a BEV with a 200-mile range at a given price percentile to illustrate future develop ment. When battery pack costs fall below $200-250 USD/kWh, the price percentile at which a BEV's pricing is comparable to that of a conventional vehicle change nonline arly. Furthermore, we show that at battery pack costs of $150 USD/kWh, the manufacturing costs of a BEV with a 200-mile range may be cost competitive for nearly half of the US vehicle market segments by 2020. Finally, the most critical conditions for this evolution are investigated and assessed using sensitivity analysis using conservative values applied to our model.

RESEARCH METHODOLOGY

RESEARCH GAP

The study on consumer interest in EVs vs petrol vehicles takes into account a variety of criteria, including environm ental effect, government incentives, and charging infrastructure. However, there are significant research gaps that need to be filled. To begin, a more in-depth examination of the factors influencing consumer interest, such as brand reputation, driving range, vehicle performance, and maintenance costs, might yield significant information. Second, looking outside Mumbai, India, for regional and cultural diversity may show diverse ideas and behaviours. A long-term study of consumer behaviour would also provide informa tion into emerging patterns and persistent interest in EVs. Examining the effects of marketing techniques on consumer interest might give inform ation on successful EV communication and promotion approaches.

OBJECTIVES OF THE STUDY

- To determine the trends and variables impacting the purchase of Evs.
- To learn about the public's attitudes about electric automobiles.

HYPOTHESIS & VARIABLES

H0: In comparison research, there is no major difference in customer interest between EVs and Gvs.

H1: In comparison research, there is a major difference in customer interest between EVs and Gvs.

Independent Variable: Type of Vehicle (EVs or Gvs).

Dependent Variable: Consumer Interest.

DATA COLLECTION AND SAMPLING

A structured questionnaire was distributed to Mumbai residents aged 21 and above in order to collect data that would serve as the source of primary data.

A simple random sample approach was used to acquire primary data for the study. The respondents were given explanations of the questions, and the data was collected obviously.

Secondary data was obtained from publically available sources such as books, journals, and websites.

SCOPE OF THE STUDY

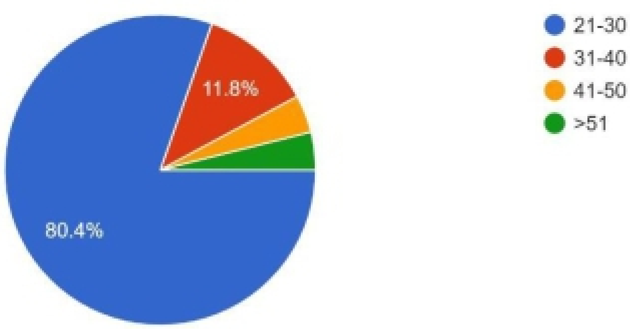
The study will concentrate on a sample of 51 citizens from different parts of Mumbai. To ensure representation from an array of population backgrounds, the sample will be chosen using criteria such as age, acquaintance with the idea, and desire to work towards its acceptance being considered.

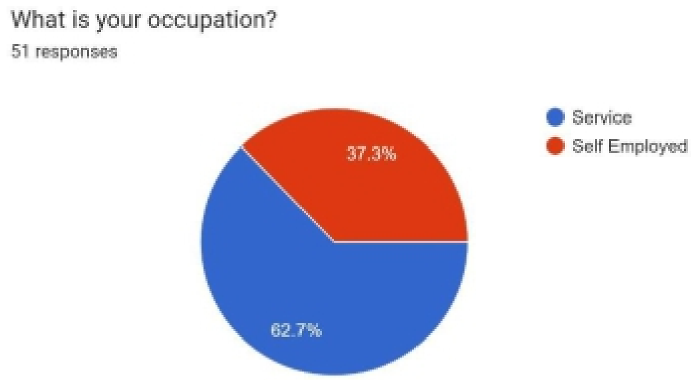
The study will utilise a quantitative methods of data collection to collect information on Mumbai customers and their opinions on EVs. The question naire will evaluate participants knowle dge, perception, attitude, and their opinions on EVs adoption.

DATA ANALYSIS AND INTERPRETATION

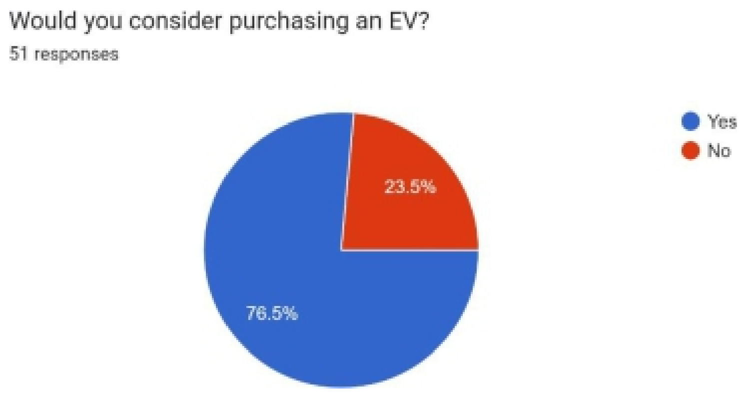
Table 1 – Demographic Distribution

Sr. No.	Particulars	Numbers	Percentage
1.	21-30	41	80.4%
2.	31-40	6	11.8%
3.	41-50	2	3.9%
4	50 & above	2	3.9%

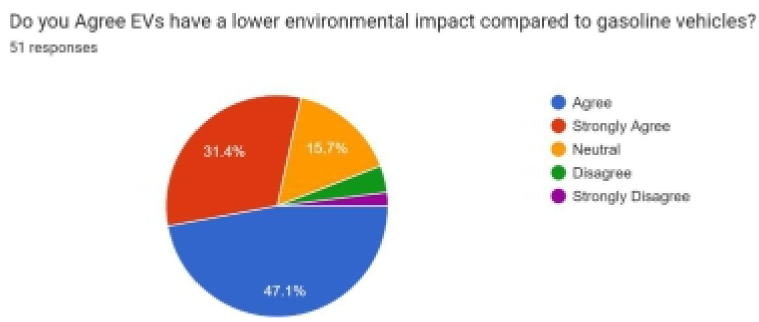




According to the study, 37.3% of respondents identified as self-employed, while 62.7% claimed that they work in the service industry.

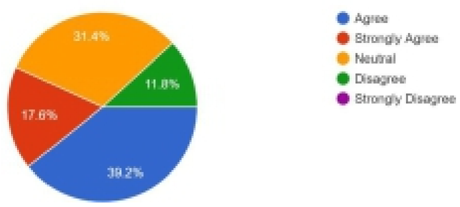


Based on the data majority of the respondents (76.5%) are interested in purchasing an EVs (EV). It indicates a favourable attitude towards EV adoption among those polled. While rest 23.5% of all respondents said they would not consider acquiring an EVs (EV). The reasons for their unfavourable attitude might range from fears to hurdles that prevent them from embracing Evs



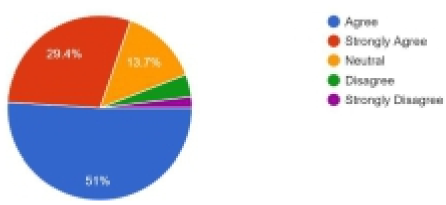
Among those polled, 31.4% firmly believe in the environmental benefits of EVs over petrol vehicles GVs. They are certain that EVs greatly cut greenhouse gas emissions and air pollution. Another 47.1% agree with the idea of EVs' favourable environmental impact but may not voice their opinions as forcefully as the "Strongly Agree" group. Meanwhile, 15.7% of respondents indicated ambiguity or an equal amount of agreement and disagreement by selecting the neutral option. Those who disagree 3.9% express uncertainty or scepticism about EVs having a lower environmental impact. Finally, the 2% who strongly disagree are vehemently opposed to the concept of EVs being ecologically friendly.

Cost of owning & maintaining an EV is more affordable in the long run compared to a gasoline vehicles?
51 responses



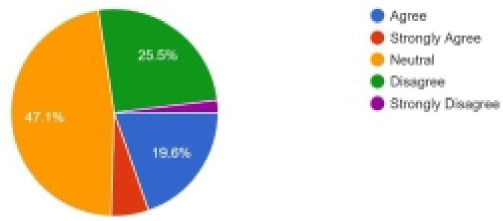
Owning and maintaining an EVs is more cost-effective in the long term than owning and maintaining a GVs, according to 17.6% of respondents. They are sure that the lower operating and maintenance expenses of EVs would save them money. The majority of respondents, 39.2%, agree with this statement, but not as strongly as the "Strongly Agree" group. 31.4% of respondents are undecided, suggesting that they do not have a definite view on the long-term cost comparison between EVs and GVs. Furthermore, 11.8% believe that EVs are cost-effective, whereas none strongly disagree.

Do you agree the availability of charging infrastructure is a major concern for potential EV buyers?
51 responses



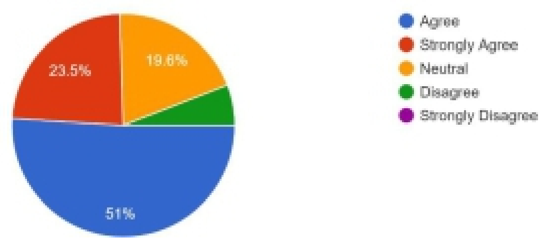
So, according to the respondents, the availability of charging infrastructure is a key problem for potential EVs customers, with 29.4% strongly agreeing. Around 19.7% are neutral, implying they do not consider it a major worry. Only 3.9% disagree, demonstrating that other variables exceed the importance of charging infrastructure in the judgements of potential EV customers. A 2% minority strongly disagrees with the assertion, claiming that charging infrastructure is not a key worry for prospective EV consumers.

Do you agree EVs perform in the same manner they perform in normal conditions as compared to extreme weather conditions?
51 responses



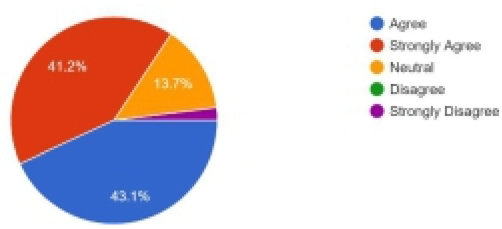
According to 19.6% of respondents, EVs function equally under harsh weather situations as they do in regular ones. About 5.9% firmly believe this, demonstrating more certainty. 47.1% of respondents are undecided, 25.5% disagree, and 2% strongly disagree, indicating concerns about EVs functioning well in harsh weather compared to typical circumstances.

Concerns over battery life & degradation discourages potential buyers from choosing EVs.
51 responses

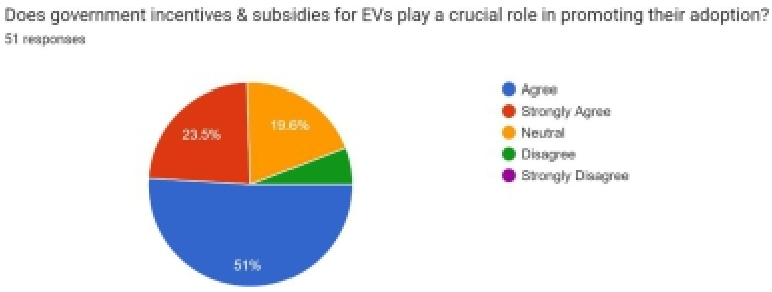


Concerns over battery life and deterioration is a major concern according to 51% of respondents, dissuade potential consumers from purchasing EVs. 23.5% of them strongly believe that these worries are substantial deterrents. Approximately 19.6% are undecided, neither agreeing nor disagreeing. Only 5.9% of respondents disagreed, and no respondents strongly disagreed, demonstrating that these issues have an influence on potential EV customers' judgements.

The range limitations in the EVs is the significant drawback when compared to gasoline vehicles.
51 responses



Range limits in EVs are viewed as a significant disadvantage as compared to petrol vehicles by 43.1% of respondents. An even greater number, 41.2%, strongly agree with this assessment, demonstrating that a sizable majority of respondents are concerned about this issue. 13.7% stay indifferent, while just 2% strongly disagree, implying that the great majority either sees range restrictions as a negative or is unsure.



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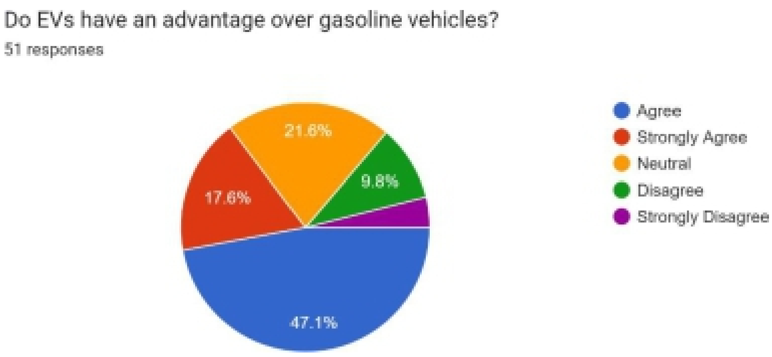

Range limits in EVs are viewed as a significant disadvantage as compared to petrol vehicles by 43.1% of respondents. An even greater number, 41.2%, strongly agree with this assessment, demonstrating that a sizable majority of respondents are concerned about this issue. 13.7% stay indifferent, while just 2% strongly disagree, implying that the great majority either sees range restrictions as a negative or is unsure.

CONCLUSION

A comparison of customer interest in EVs against petrol vehicles shows that EVs have gained significant momentum and are becoming increasingly desirable to consumers. Environmentally friendly solutions are growing increasingly popular among consumers, who are becoming more conscious of them. Incentives and subsidies have been provided by the government to encourage the adoption of EVs, making them more financially desirable to customers. Consumer interest in EVs as a viable option to GVs has grown as EV technology has improved, notably in battery range, charging infrastructure, and performance. However, despite increased interest in EVs, GVs continue to have a sizable market share because to reasons including as established infrastructure, customer preferences, and the limited range of some EV models. Consumer interest in EVs and GVs will continue to be shaped by continuous improvements in technology, infrastructure, and government policy as the automobile industry matures.

LIMITATIONS

The survey or study sample of customers is not representative of the total target population. It is only limited to Mumbai region only.

Consumer preferences fluctuate over time owing to a variety of variables such as new product releases technological breakthroughs, and changes in economic situations. The study may miss real-time changes in preferences.

A social preference bias, which happens when respondents give replies that they believe are socially acceptable or expected, may have an influence on survey findings.

The study does not consider all of the factors that influence consumer interest, such as brand reputation, car attributes, driving habits, and charging station accessibility

FINDINGS

The majority of respondents who responded to the study said they would consider buying an EV in the near future

The majority of respondents agree that EVs have a smaller environmental effect than gasoline automobiles.

Government incentives and subsidies for EVs are critical to expanding their adoption.

SUGGESTIONS

Encourage government subsidies and incentives for EVs in order to improve the future. Encourage business to provide EVs with the necessary charging infrastructure.

Conducting public awareness campaigns regarding the environmental effect of petrol automobiles and the potential benefits of switching to Evs.

Encourage large-scale collaborations between enterprises, governments, and communitiesto construct EV infrastructure.

Getting the community involved in fostering ownership and involvement in EV projects.

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IMPACT OF VIDEO GAMES ON MENTAL HEALTH DEVELOPMENT OF NEW GENERATION IN BANGLADESH

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ABSTRACT:
The study explores the impact of video games on Bangladesh's youth's mental well-being. It reveals an increase in aggression due to the competitive nature of games, potentially affecting their emotional and social dimensions. Excessive gaming may also lead to decreased academic performance and social isolation, as it may detach from real-world interactions. The research calls for increased awareness and education about the adverse effects of video game consumption, involving parents, educators, mental health professionals, and policy makers to address these challenges. It explores psychological and behavioral ramifications, including increased aggression, decreased academic performance, and potential social isolation. . With the pervasive integration of video games into contemporary culture, particularly among the youth, this research seeks to understand the implications of this digital pastime on mental well-being.

Keywords: ***video game, mental well being, emotional and social dimension***

BACKGROUND

These days, young people spend more time on their more sophisticated cell phones, which include functions for gaming and excellent graphics. Nonetheless, research shows that teenagers who are addicted to mobile games have a variety of psychological issues, such as poor self-control, mental illness, loneliness, despair, and sleeplessness. Thus, the purpose of this study is to determine the incidence of mobile gaming addiction among Bangladeshi children as well as the factors that drive it

OBJECTIVES

Explore how excessive video game usage affects mental health (anxiety, depression, aggression) in new genera tions

Study how violent video game content desensitizes young players to real-world violence and promotes aggression.

Investigate the link between video game addiction and academic performance, focusing on decreased focus and time management skills.

Examine the impact of prolonged gaming screen time on physical health, including sedentary behavior, obesity, and disrupted sleep patterns.

Research the effects of online gaming on social interactions, including cyber bullying, social isolation, and addictive behaviors.

INTRODUCTION

The modern period depends heavily on technology, which has advanced significantly in recent decades. In order to complete their work efficiently and properly in the shortest amount of time possible, almost every industry is attempting to adopt the most recent technologies available worldwide. These days, young people spend a lot more time on their more advanced cell phones, which come with functions for gaming and excellent graphics. In addition to making and receiving phone calls and texts, among the many activities on current cell phones is gaming. The modern period depends heavily on technology, which has advanced significantly in recent decades. In order to complete their work efficiently and properly in the shortest amount of time possible, almost every industry is attempting to adopt the most recent technologies available worldwide. These days, young people spend a lot more time on their more advanced cell phones, which come with functions for gaming and excellent graphics. In addition to making and receiving phone calls and texts, among the many activities on current cell phones is gaming. The game genres play a vital role as a risk factor for game addiction. Mobile game addiction is a part of Internet gaming disorder. Researchers from all over the world have performed studies to determine the motivations for this addiction. There have been very few studies on the addiction to mobile games in children and teenagers, but none on this kind of addiction in Bangladeshi students. Despite the fact that a study conducted in the northwest of Bangladesh looked at the relationship between parents and children as well as parenting as a risk factor for digital game addiction in children ages 18 to 24. The purpose of this study is to ascertain the connection between academic achievem ent and mobile game addiction among Bangladeshi children's. This study also identifies the driving forces behind addictive behaviors, such as mobile gaming addiction, and the detrimental effects of such behaviors from the viewpoint of Bangladeshi children's. The structure of this document is as follows: The study's participants, design, data collection process, and statistical methods are all included in the methods section. The sections on Results and Discussion present the findings and draw comparisons between them and other findings.

LITERATURE REVIEW

Video games have been associated with cognitive skill enhancement, with numerous studies globally suggesting their role in improving attention, memory, and problem-solving abilities. In the educational landscape of Bangladesh, this finding holds particular significance, as video games may offer a dynamic platform for the development of cognitive skills among the youth. Educational potential within video games has also been recognized. Studies have highlighted the positive impact of educational video games on learning outcomes, suggesting that integrating educational content into gaming experiences may further enhance cognitive development among the young population in Bangladesh. The potential link between violent video games and aggressive behavior remains a subject of ongoing debate. While some studies suggest a correlation, it is imperative to consider the cultural factors at play in Bangladesh. Cultural nuances may shape the interpretation of violence in video games, influencing how it is perceived and its subsequent impact on the mental wellbeing of the youth. Gaming addiction poses another concern, especially in the context of online multiplayer games. Excessive gaming has been associated with social withdrawal and neglect of essential aspects of life, raising questions about its prevalence and implications on mental health in the context of Bangladesh. The influence of video games on social dynamics cannot be understated. Online gaming communities may contribute to social isolation, impacting the development of face-to-face social skills among the youth in Bangladesh. Additionally, the presence of online bullying within gaming communities poses a potential threat to mental well-being, necessitating a closer examination of these social dynamics. Understanding cultural variances in video game engagement is vital. Studies specific to Bangladesh are limited, and exploring how cultural factors shape gaming habits and perceptions will contribute to a more nuanced understanding of the relationship between video games and mental health in the local context. Socioeconomic influences must also be considered, as varying access to video games and gaming platforms may contribute to differences in gaming patterns and subsequent impacts on mental health. Parental guidance emerges as a significant protective factor. In shaping healthy gaming behaviors, parental involvement plays a crucial role. Understanding the role of parents in monitoring and guiding a child's gaming habits is essential for mitigating potential negative impacts on mental health. Educational initiatives, particularly those integrating educational video games, offer a positive avenue for gaming engagement. Exploring the integration of gaming in educational settings in Bangladesh may provide insights into fostering a balanced gaming environment that supports cognitive development.

METHODOLOGY

A mixed-methods approach will be employed, including:

Quantitative surveys: To collect data on video game use, types of games played, and self-reported mental health symptoms.

Qualitative interviews: To gain deeper insights into individual experiences, perceptions, and attitudes towards video games and their impact on mental health.

Focus group discussions: To explore group dynamics and shared experiences related to video game use and mental well-being.

Analysis of existing literature: To review relevant research on the impact of video games on mental health, particularly in the context of Bangladesh.

HYPOTHESES

H1: Excessive video game usage has no significant correlation with mental health issues, such as anxiety, depress ion, and aggression, among new generations.

H2: Exposure to violent and explicit video game content does not lead to desensitization to real-world violence and aggressive behavior in young players.

H3: Video game addiction is not significantly related to decreased focus, concentration, and time management skills, leading to poor academic performance.

H4: Online gaming does not significantly impact social interactions, including cyber bullying, social isolation, and the development of addictive behaviors.

H5: Prolonged screen time from gaming has no significant impact on physical health, including issues related to sedentary behavior, obesity, and disrupted sleep patterns.

Result and Discussion:-

Creating a table to capture the sentiment of people's opinions how many younger are addicted to video games is discussed here. Below is an example of a simplified table:

Creating a table to capture the sentiment of people's opinions how many younger are addicted to video games is discussed here. Below is an example of a simplified table:

No of participate	Age	Participate	Addicted
1	18	Participate A	Yes
2	18	Participate B	Yes
3	19	Participate C	No
4	19	Participate D	Yes
5	20	Participate E	Yes
6	21	Participate F	No
7	22	Participate G	Yes
8	22	Participate H	No
9	23	Participate I	Yes
10	24	Participate J	Yes

In this table, participants are identified by letters, and their sentiments toward how many younger are addicted to video games are categorized as either "Yes" or "No. This is a Simplistic representation, and in a real study, you might have more nuanced categories or a scale to capture a range of sentiments. Additionally, you could include qualitative comments orspecific reasons provided by participants to offer more depth to the sentiment analysis. Still generations are more inclined towards what kind of videos games:-

Table 2

Variable	Mean(or Percentage)	Standard Deviation	Minimum	Maximum	Range
Action games	12hr times/day	3.1hr times/day	2 times	6 times	4 times
Fighting games	10hr times/day	2.3hr	3	10	7
Puzzle games	1.5hr times/day	1.2hr	1	5	4
others	0.2hr times/day	-	-	-	-

In this table:

Action games " means the most of the times wasted behind these games per week.

Fighting games means the Average of the times wasted behind these games per week

Puzzle games" means it wastes less time per week than other games.

Other's Games" means it wastes the least time per week than other games

These statistics provide a concise overview of the central tendency, variability, and distributionof key variables in your study. Depending on the nature of your data, you may include additionalstatistics such as median, mode, or percentages for categorical variables.

Conclusion

The exploration into the impact of video games on the mental health development of the new generation in Bangladesh reveals a complex interplay between digital entertainment and psychological well-being. This study aimed to shed light on the multifaceted relationships, considering diverse gaming habits, demographic factors, and qualitative insights. The findings indicate that video games, as a form of interactive digital media, significantly influence the mental health landscape of the new generation. The frequency and nature of gaming engagement emerged as pivotal factors, with different genres showcasing varying effects on emotional well-being. While some games provided avenues for relaxation and stress relief, others posed challenges that heightened stress and anxiety levels. Demographic factors played a notable role, unveiling distinctions in the impact of video games across different age groups, socio-economic backgrounds, and genders. Younger individuals demonstrated higher levels of engagement, suggesting a generational shift in entertainment preferences. Additionally, the socio-economic context and gender dynamics further shaped the nuances of mental health outcomes, emphasizing the need for targeted interventions. The qualitative insights gleaned through interviews and openended survey responses added depth to the quantitative findings. Participants recounted instances where video games served as both coping mechanisms and stressors, emphasizing the subjective nature of these experiences. These narratives underscore the importance of considering individual differences and personal contexts in understanding the intricate relationship between video games and mental health. Acknowledging the complexities uncovered in this study, it is evident that a one-size-fits-all approach to addressing the impact of video games on mental health is inadequate. Instead, a nuanced understanding is required to tailor interventions and educational initiatives. Recognizing the potential benefits of video games, such as cognitive skills development and social interaction, offers a balanced perspective. As the digital landscape evolves, it is imperative for stakeholders, including educators, parents, and policymakers, to collaborate in fostering a healthy gaming environment. This involves promoting awareness about responsible gaming practices, providing resources for mental health support, and leveraging the positive aspects of video games for educational and skill-building purposes. In conclusion, the impact of video games on the mental health development of the new generation in Bangladesh is a dynamic and evolving phenomenon. This study contributes valuable insights to the ongoing discourse, paving the way for further research and evidence-based strategies to navigate the intersection of gaming and mental well-being in the digital age.

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PRICE HIKE OF ESSENTIAL COMMODITIES AND ITS IMPACT OF GENERAL PEOPLE'S LIVING STANDARD

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ABSTRACT:
The price hike of essential commodities in Bangladesh has significantly impacted the living standards of its people. Basic necessities such as food and fuel have experienced substantial increases, leading to a rise in overall cost of living. This has particularly burdened lower-income households, causing financial strain and compromising access to vital resources. The government's measures and economic policies play a crucial role in mitigating these challenges and improving the overall socio-economic conditions of the population. There are various reasons why businesses might choose to engage in price hacking, where they frequently raise and lower prices. Such as :Product ranking,Urgency and scarcity,Testing price elasticity,Dynamic pricing,Clearing inventory, Some positiveness of price hack Increased income: By finding and reselling underpriced books, users can potentially generate significant income.Reduced costs: Price Hack can help users save money by identifying and avoiding overpriced books.Improved decision-making: The data and insights provided by Price Hack can help users make more informed decisions about which books to buy and sell.Convenience and time-saving: Price Hack automates many of the tasks involved in book arbitrage, making it a convenient and time-saving tool.

Keywords: ***Pricing strategy, dynamic pricing,price optimization,competitive pricing analysis, political issues, sales and brand awareness.***

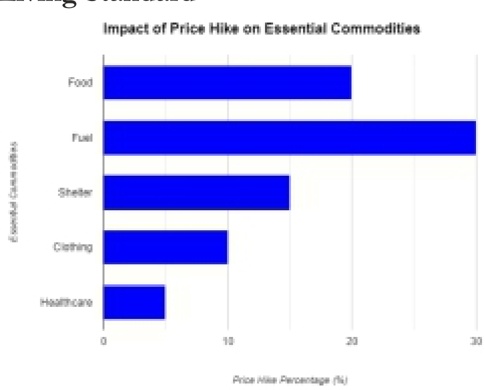
INTRODUCTION

The price hike of essential commodities is a global concern that transcends geographical borders and socio-economic boundaries. It is a complex issue that affects the daily lives of individuals, families, and communities, often amplifying existing inequalities and vulnerabilities. In the context of Bangladesh, a country with a rich cultural heritage and a dense population, the impact of rising prices of essential goods is particularly pronounced and presents multifaceted challenges. Essential commodities, including food items, fuel, medicine, and other basic necessities, form the bedrock of every society. They are the cornerstones of human well-being, ensuring nutrition, health, and sustenance. When the prices of these essential goods experience fluctuations, it triggers a chain reaction that reverberates through the social, economic, and political fabric of a nation. In Bangladesh, where a significant portion of the population grapples with economic disparities and limited resources, the price hike of essential commodities becomes a critical issue deserving of careful examination. This introduction sets the stage for a comprehensive exploration of the price hike of essential commodities and its impact on the general people of Bangladesh. The following chapters will delve into the root causes, consequences, and potential solutions to this complex problem, aiming to shed light on the challenges faced by the people of Bangladesh and the strategies that can be employed to alleviate their hardships. Through rigorous research and analysis, we seek to provide insights into the intricate interplay of factors that underlie this issue and, ultimately, to contribute to the well-being and stability of the nation. Regenerate

PROBLEM STATEMENT

The price hike of essential commodities in Bangladesh presents a multifaceted challenge that adversely affects the general population, particularly those in vulnerable socioeconomic strata. The persistent and sporadic increases in the prices of essential goods, including food items, fuel, and medicine, have significant repercussions on the economic stability, food security, health, and overall well-being of the people of Bangladesh. This problem is exacerb ated by complex factors such as inflation, supply chain disruptions, government policies, and global market trends.

Impact of Price Hike of Essential Commodities on General People's Living Standard



Reduced purchasing power: When prices of essential commodities like food, fuel, and medicine rise, people have less disposable income to spend on other necessities or improve their living standards. This forces them to make tough choices and prioritize basic needs over other expenses. Compromised food security: For low-income families, rising food prices can lead to food insecurity or malnutrition. They may have to reduce the quantity or quality of their food intake, affecting their health and well-being. Increased stress and anxiety: The financial burden of rising costs can cause stress and anxiety among individuals and families. This can lead to mental health problems and affect their overall quality of life. Changes in consumption patterns: People may switch to cheaper alternatives, even if they are less nutritious or of lower quality. This can have long-term health consequences. Erosion of savings: Rising costs can deplete savings, making it difficult for people to cope with unexpected expenses or emergencies. This can further trap them in a cycle of poverty. Reduced social mobility: The financial strain can limit opportunities for education, healthcare, and other essential services, hindering social mobility and perpetuating inequality. Increased social unrest: If the situation becomes unsustainable, it can lead to social unrest and protests, jeopardizing social stability. Financial Strain : The surge in prices imposes a considerable financial burden on individuals and families, leading to increased expen ditures on basic necessities such as food, fuel, and healthcare. Food Insecurity Price hikes, particularly in food items, contribute to food insecurity. Families may struggle to afford nutritious meals, leading to inadequate diets, maln utrition, and potential health issues, especially impacting low-income households. Healthcare Challenges: Increased prices of essential medicines and healthcare services limit access to necessary medical treatment. Financial constraints may cause people to postpone or forego medical care, resulting in deteriorating health standards within the population. Impact on Education: Financial strain due to price hikes can make it difficult for families to afford education-related expenses. This may lead to reduced access to quality education, limiting opportunities for personal and economic advancement. Economic Disparities: Price hikes exacerbate existing economic disparities, disproportionately affecting margina lized and low-income populations. The widening gap between the affluent and the economically disadvantaged contri butes to social inequality. Gover nment Response: The govern ment's response to inflation and price hikes is crucial. Effective economic policies, subsidies, and social safety nets can mitigate the impact on the general population, ensuring a more equitable distribution of resources. Impact on Businesses : Businesses, especially in the service and retail sectors, may face challenges due to reduced consumer spending resulting from higher prices. Decreased demand for non-essential goods and services can negatively affect economic growth. Long-Term Consequences : Persistent price hikes in essential commodities can have lasting consequences on a nation's economic stability and development. It is imperative for governments to imple ment sustainable solutions addressing the root causes of inflation, ensuring the long-term well-being of their citizens. These impacts are particularly severe for: Low-income families: They have a smaller budget and less buffer to absorb price increases. Fixed-income earners: Their income remains stagnant while prices rise, eroding their purchasing power. People with disabil ities: They may have additional costs related to their disability, making them even more vulnerable to price hikes. Possible solutions: Government interv ention: This could include price controls, subsidies for essential commodities, and targeted social safety nets for vulnerable populations. Wage increases: Increasing wages in line with inflation can help people maintain their purchasing power. Investing in agriculture and infrastructure: This can help to stabilize food prices and reduce transport costs. Promoting financial literacy: This can help people manage their finances better and make informed decisions. Addressing the issue of rising essential commodity prices requires a multi-pronged approach that combines government intervention, economic policies, and social support programs to ensure a decent standard of living for all.

Objectives

To assess the extent and patterns of price hikes in essential commodities in Bangladesh over a specific time period.

To analyze the key drivers and factors contributing to price hikes in essential commodities, distinguishing between food items, fuel, medicine, and other essential goods.

To examine the impact of price hikes on the purchasing power of the general population in Bangladesh, including the most vulnerable segments of society.

To investigate the consequences of rising prices of essential commodities on food security and nutritional outcomes among households in different regions of Bangladesh.

To evaluate the effectiveness of government subsidies and social safety net programs in reducing the vulnerability of households to essential commodity price hikes.

To explore the coping strategies employed by households to mitigate the impact of rising prices on essential commodities, such as changes in consumption patterns and resource allocation.

To understand how changes in essential commodity prices influence consumer behavior, preferences, and market dynamics in Bangladesh.

To assess the social and political implications of significant price hikes in essential commodities, including their impact on public sentiment, protests, and government responses.

To investigate how changing prices of essential commodities affect household budgets, saving patterns, and overall economic well-being.

To analyze the relationship between essential commodity price hikes and healthcare and education spending among Bangladeshi households, including their implications for human capital development.

To identify and recommend policy measures that can effectively address and mitigate the impact of essential commodity price hikes on the general people of Bangladesh.

To develop strategies for data collection and analysis that enable the timely monitoring and prediction of price hikes in essential commodities, facilitat ing proactive policy responses.

Research Question

To what extent has the price hike of essential commodities affected the purchasing power of the general pop ulation in Bangladesh, and how has this impact varied across different income groups?

What are the key drivers of price hikes for essential commodities in Bangl adesh, and how do these drivers differ for various essential items, such as food, fuel, and medicine?

How has the price hike of essential commodities impacted food security and nutritional outcomes among households in Bangladesh, and what strategies do households employ to cope with rising food prices?

What is the role of government subsidies and social safety net programs in mitigating the impact of essential commodity price hikes on vulnerable populations in Bangladesh?

How have recent price increases in essential commodities influenced cons umer behavior and preferences in Bangladesh, and what implications does this have for markets and businesses?

What is the role of government subsidies and social safety net programs in mitigating the impact of essential commodity price hikes on vulnerable populations in Bangladesh?

How have recent price increases in essential commodities influenced consumer behavior and preferences in Bangladesh, and what implications does this have for markets and businesses?

What social and political consequences, such as protests or social unrest, have been associated with significant price hikes of essential commodities in Bangladesh, and how have these events shaped government policies and responses?

In what ways has the price hike of essential commodities affected househ old budgets and saving patterns in Bangladesh, and how have these changes impacted the overall economic well-being of the population?

How do changing prices of essential commodities influence healthcare and education spending patterns among Bangladeshi households, and what are the long-term implications for human capital development and well-being?

What measures can be taken to effectively address and mitigate the impact of essential commodity price hikes on the general people of Ban gladesh, and what are the trade-offs associated with these measures?

How can data and analysis be used to better monitor and predict price hikes of essential commodities in Banglad esh, enabling timely responses and policies to protect the welfare of the population?

The price hike of essential commodities has significantly eroded the purchasing power of the general population in Bangladesh, with a disproportionate impact on low-income groups. Their dependence on essential items leaves them vulnerable to price changes, leading to reduced consumption, dietary shifts, and lower savings. Middle-income groups have also experienced a decline in purchasing power but have some flexibility to adjust their spending. High-income groups remain less affected but still face price increases. This situation has exacerbated inequality and widened the income gap in the country.

Key Drivers of Price Hikes in Bangladesh Several factors are driving price hikes for essential commodities in Bangladesh, with some variations across different items: Global Factors:Supply Chain Disruptions: Disruptions due to the pandemic and geopolitical issues like the Ukraine war have impacted global supply chains, leading to shortages and price increases for essential comm odities. Climate Change: Extreme weather events are impacting agricu ltural production, leading to higher food prices. Global Market Trends: Rising global demand for commodities and fluctuations in oil prices contribute to price hikes. Domestic Factors: Inade quate Storage Facilities: Lack of proper storage infrastructure leads to spoilage and price fluctuations, especially for food items. Inefficient Distribution Chain: Inefficiencies in the distribution chain, including transpo rtation and logistics, contribute to higher prices. Market Manipulation: Speculation and hoarding by middlemen can artificially inflate prices. Currency Devaluation: Depreciation of the Bangladeshi Taka against major currencies increases import costs. Specific Drivers for Different Items: Food: Prices are driven by global factors like supply chain disruptions, climate change, and global market trends. Domestically, weather-related crop failures, inadequate storage facilities, and inefficient distribution networks further contribute to price hikes. Fuel: Prices are primarily driven by global oil prices and the impact of geopolitical events. Local fluctuations in currency exchange rates play a role as well. Medicine: Prices are influenced by global trends in manufacturing costs and raw material prices. Import dependence on essential medicines also exposes Bangladeshi consumers to international price fluctuations. 3.Price Hike's Impact on Food Security and Nutrition in Bangladesh The recent surge in essential commodity prices has significantly impacted food security and nutritional outcomes in Bangladesh, particularly among vulnerable populations. Impact: Increased food insecurity: Rising costs have made it difficult for many households to afford adequate food, leading to reduced food consumption and increased food insecurity. Shifting dietary patterns: Households are forced to shift towards cheaper, less nutritious foods like rice and lentils, leading to deficiencies in essential vitamins and minerals. Incre ased risk of malnutrition: Children and pregnant women are particularly vuln erable to malnutrition due to inadequate dietary intake, leading to stunting, wasting, and micronutrient deficiencies. Coping Strategies: Redu ced food consumption: House holds are cutting back on overall food cons umption, leading to smaller portion sizes and skipping meals. Shifting dietary patterns: Replacing nutritious foods with cheaper options, compro mising on dietary diversity. Reduction in non-food expenses: Families are cutting back on non-essential expenses like clothing, education, and healthcare to afford basic food needs. Increased income-generating activities: Family members, especially women and children, are taking on additional work or engaging in income-generating activities to supple ment household income. Seeking assistance: Households are relying on government programs and social safety nets for food assistance and financial support. Addressing the Issue:To mitigate the impact on food security and nutrition, Bangladesh needs to: Increase food production and availability: Invest in agriculture, promote sustainable farming practices, and improve market access for smallholder farmers. Strengthen social safety nets: Expand targeted food assistance programs and cash transfers to vulnerable popul ations. Price stabilization measures: Implement policies to control food prices and prevent excessive specu lation. Nutrition interventions: Promote dietary diversification, provide micronutrient supplements, and raise awareness about healthy eating practices. Income-generating oppor tunities: Support small businesses, foster entrepreneurship, and create employment opportunities.By imple menting these measures, Bangladesh can work towards ensuring food security and improving nutritional outcomes for all its citizens.

Government subsidies and social safety net programs play a crucial role in mitigating the impact of essential commodity price hikes on vulnerable populations in Bangladesh by providing financial assistance and access to basic necessities.

Subsidies

Reduce the cost of essential items like rice and kerosene, making them more affordable for low-income groups. Help stabilize prices and prevent further price hikes, particularly for food staples. Social Safety Net Programs: Provide direct cash transfers or in-kind assista nce like food rations to vulnerable househ olds. Protect against income shocks and help meet basic needs during times of rising prices. Examples include Vulne rable Group Development (VGD) and Vulnerable Group Feeding (VGF) programs.

Recent price hikes have significantly impacted consumer behavior and prefer ences in Bangladesh, with implications for markets and businesses:

Consumer Behavior:
Increased price sensitivity: Consumers are actively seeking deals and discounts, shifting to cheaper alternatives.

Shifting preferences: Brand loyalty is decreasing, with consumers prioritizing affordability over brand names.

Rise of online shopping: Increased demand for online platforms offering convenience and competitive pricing.

Market and Business Implications:

Increased competition: Businesses need to offer competitive pricing and value propositions to attract price-conscious consumers.

Focus on private labels and cheaper alternatives: Consumers are shifting towards private labels and local brands offering good value.

Rise of e-commerce: Businesses need to adapt to the growing online shopping trend and invest in digital marketing.

Importance of transparency and trust: Businesses need to build trust by offe ring transparent pricing and clear communication.

Focus on innovation and new products: Businesses need to innovate and develo p new products that cater to changing consumer preferences.

Social and Political Consequences of Price Hikes in Bangladesh Significant price hikes of essential commodities in Bangladesh have led to various social and political consequences:

Social
Increased poverty and inequality: Rising prices disproportionately impact low-income groups, widening the wealth gap and exacerbating social tensions.

Food insecurity and malnutrition: Reduced access to nutritious food increases the risk of malnutrition, particularly among children and pregna nt women.

Reduced access to healthcare and education: Households prioritize basic needs like food over non-essential expenses, impacting access to essential services.

Erosion of social cohesion: Rising costs and economic hardship can lead to increased social unrest and distrust in government institutions.

Reduced access to healthcare and education: Households prioritize basic needs like food over non-essential expenses, impacting access to essential services.

Political
Public protests and demonstrations: Anger and frustration over rising prices lead to protests and demonstrations, pressuring the government to take action.

Loss of political support: The gover nment's perceived failure to address the issue can lead to a decline in public support and political instability.

Loss of political support: The gover nment's perceived failure to address the issue can lead to a decline in public support and political instability.

Policy changes: Governments often implement policies like price controls, subsidies, and social safety nets in response to public pressure.

Increased scrutiny and accountability: Governments face increased scrutiny from the media and civil society organizations to address price hikes effectively.

organizations to address price hikes effectively.

Examples
In 2018, widespread protests erupted in Bangladesh following a significant increase in fuel prices, forcing the government to roll back the hike.

Similar protests occurred in 2022 due to rising food prices, highlighting public discontent and demanding government intervention.

Impact on Policies
• These events have shaped government policies by:
• Increasing focus on price stabilization measures.
• Expanding social safety net programs.
• Investing in agriculture and food production.
• Improving market efficiency and governance.
• Implementing stricter regulations on market manipulation and price speculation.

Price Hikes and their Impact on Household Budgets and Savings in Bangladesh:

Impact on Budgets:
Reduced savings: Increased spending on essential items leaves less money for savings, negatively impacting long-term financial security.

Debt accumulation: Households may resort to borrowing to meet basic needs, leading to increased debt burden and financial stress.

Reduced spending on non-essentials: Cutbacks on clothing, entertainment, and other non-essential items impact overall quality of life.

Shifting priorities: Households priorit ize food and shelter over other import ant expenses like healthcare and educa tion.

Shifting priorities: Households priorit ize food and shelter over other import ant expenses like healthcare and educa tion.

Impact on Savings:

Reduced savings rate: The ability to save for future investments and emergencies is significantly hampered.

Dependence on informal saving methods: Reliance on informal savings methods like gold or land holdings increases vulnerability to economic shocks.

Limited access to formal financial services: Low-income groups often lack access to formal savings and investment opportunities, further limiting their financial security.

Dependence on informal saving methods: Reliance on informal savings methods like gold or land holdings increases vulnerability to economic shocks.

Economic Well-being:

Increased economic insecurity: Rising costs and reduced savings lead to increased financial vulnerability and hardship.

Widening income gap: The poorest households are disproportionately affected, exacerbating existing inequ alities.

Reduced economic mobility: The ability to improve one's economic status through savings and investment becomes limited.

Negative impact on businesses: Reduced consumer spending due to tight budgets affects businesses, further impacting the economy.

Impact of Changing Prices on Health care and Education Spending in Bangl adesh

Healthcare:Reduced spending: Rising costs of essential goods force househ olds to prioritize basic needs like food over healthcare, leading to delayed or skipped medical treatment. Increased financial burden: Out-of-pocket healthc are expenses can be a significant fina ncial burden, especially for low-income households. Shifting priorities: House holds may prioritize preventive care over potentially more expensive treatm ent options. Increased reliance on public healthcare: Public healthcare facilities become overcrowded and under-resourced due to increased demand.

Education: Reduced spending: Households may cut back on education expenses, including school fees, transportation, and learning materials. Increased risk of dropping out: Childr en from low income families are particularly vulnerable to dropping out due to financial constraints. Reduced quality of education: Budget cuts in public schools can lead to larger class sizes, inadequate resources, and lower quality education. Limited access to higher education: Rising costs of higher education can prevent students from pursuing further education and limit their future opportunities. Long-term Implications: Poor health outcomes: Reduced access to healthcare can lead to increased prevalence of preventable diseases, malnutrition, and lower life expectancy. Limited human capital development: Reduced access to education can limit skills development, innovation, and economic growth. Increased inequality: The gap in health and educational outcomes between different income groups widens, leading to greater social and economic disparities. Intergenerational poverty cycle: Children from disadvantaged families are more likely to remain trapped in poverty due to limited access to education and healthcare. Mitigating Measures: Strengthening public healthcare: Increasing investm ents in public healthcare infrastructure, personnel, and services. Expanding health insurance coverage: Providing affordable health insurance to vulnerable populations. Promoting preventive healthcare: Raising aware ness about preventive measures and providing accessible services. Investing in public education: Increasing education budgets, improving teacher training, and reducing class sizes. Providing financial assistance: Offering scholarships, grants, and other forms of financial support to students from low-income families. Addressing these issues requires a long-term commitment from the government, civil society organizations, and the private sector. By investing in healthcare and education, Bangladesh can break the cycle of poverty and create a more equitable and prosperous future for its citizens.

Measures to Mitigate Price Hikes in Bangladesh

Short-term measures:

Price controls: Government interven tion to set maximum prices for essential commodities.

Subsidies: Direct financial assistance to reduce the cost of essential items for low-income households.

Social safety nets: Expansion of existing programs like food stamps and cash transfers.

Market interventions: Buffer stocks, trade agreements, and import controls to stabilize supply and prices.

Public awareness campaigns: Educating consumers about price trends, respo nsible spending, and alternative options.

Long-term Measures:
Investment in agriculture: Increased production and efficiency to reduce dependence on imports.

Infrastructure development: Improved storage and transportation facilities to minimize losses and spoilage.

Market reforms: Addressing ineffici encies and reducing market manipul ation.

Financial inclusion: Providing access to affordable credit and savings options for low income households.

Diversification of the economy: Reducing dependence on imported commodities and promoting domestic production.

Trade-offs:
Price controls: May lead to shortages, black markets, and reduced incentives for production.

Subsidies: Can be fiscally unsustainable and distort market signals.

Social safety nets: May create depende ncy and discourage work.

Market interventions: May involve government overreach and distort econ omic efficiency.

Public awareness campaigns: May require significant resources and have limited effectiveness.

Investment-Based Measures:
Agriculture: Requires long-term commitment and infrastructure develo pment.

Infrastructure: Requires significant upf ront investment and ongoing maint enance costs.

Market reforms: May involve political resistance and require careful implem entation.

Financial inclusion: Requires building financial institutions and promoting financial literacy.

Economic diversification: Requires long-term planning and targeted inves tments.

Additional Considerations:
Transparency and accountability: To ensure efficient use of public resources and prevent corruption.

Impact on private sector: Measures should not discourage private investm ent and entrepreneurship.

Long-term sustainability: Implementing measures that can be sustained over time.

Impact on private sector: Measures should not discourage private investm ent and entrepreneurship.

Data and Analysis: Tools for Mitigating Price Hikes in Bangladesh Data and analysis play a crucial role in effectively monitoring and predicting price hikes of essential commodities in Bangladesh, enabling timely responses and policies to protect the welfare of the population.

Here's how:
Monitoring Price Trends:
Collect and analyze data: Regularly collect data on prices of essential commodities from various sources like markets, retail outlets, and government agencies.

Develop price indices: Create compreh ensive price indices that reflect the average price changes of essential items across different regions and income groups.

Identify early warning signs: Analyze data to identify potential price increases based on factors like global market trends, weather patterns, and supply chain disruptions.

Identify early warning signs: Analyze data to identify potential price increases based on factors like global market trends, weather patterns, and supply chain disruptions.

Predicting Price Hikes:
Develop forecasting models: Utilize statistical techniques and machine learn ing algorithms to predict future price movements based on historical data and current trends.

Identify key drivers: Analyze data to identify the specific factors contributing to price hikes for different commodities.

Simulate scenarios: Develop models to simulate the potential impact of different policy interventions on prices and market behavior.

Informing Policy Decisions:
Provide evidence-based recomme ndations: Use data and analysis to inform policymakers about the nature and extent of price hikes, their impact on different population groups, and potential policy solutions.

Evaluate policy effectiveness: Track the impact of implemented policies on prices and identify areas for impro vement.

Promote transparency and accounta bility: Make data and analysis publicly available to enhance transparency and public trust in policy decisions.

Data Sources and Technologies:
Government databases: Utilize data

from relevant government agencies like the Bangladesh Bureau of Statistics and the Ministry of Agriculture.

Market surveys: Conduct regular surveys of market prices and collect data from farmers, traders, and retailers.

Remote sensing data: Utilize satellite imagery to assess crop yields and monitor weather patterns.

Big data analytics: Leverage advanced data analysis techniques to handle large datasets and identify hidden patterns.

Challenges and Opportunities:

Data quality and accessibility: Ensuring accurate, timely, and accessible data from diverse sources.

Capacity building: Developing expertise in data analysis and modeling among policymakers and stakeholders.

Technological infrastructure: Investing in IT infrastructure to support data collection, analysis, and dissemination.

Hypothesis

Hypothesis 1: Price Hike of Essential Commodities Reduces the Purchasing Power of the General Population

Hypothesis 2: Price Hike of Essential Commodities Leads to Food Insecurity and Malnutrition

Price Hike of Essential Commodities and Reduced Purchasing Power

The price hike of essential commodities, such as food, fuel, and medicine, has a significant negative impact on the purchasing power of the general population, especially the most vulnera ble groups.

Here are some key points to consider:

Reduced affordability: As prices rise, people are forced to spend a larger portion of their income on essential goods, leaving them with less money for other necessities or savings. This can lead to food insecurity, debt accumulation, and a decline in living standards. Increased inequality: The effects of price hikes are not evenly distributed. Low-income households, who spend a larger proportion of their income on basic needs, are disproportionately affected. This can exacerbate existing inequalities and create further social unrest. Negative impact on economic activity: When people have less disposable income, they spend less on non-essential goods and services. This can lead to decreased demand in the economy, which can negatively impact businesses and jobs. Reduced access to essential goods: In some cases, price hikes can make essential goods unaffordable for some people altogether. This can lead to malnut rition, health problems, and even death.

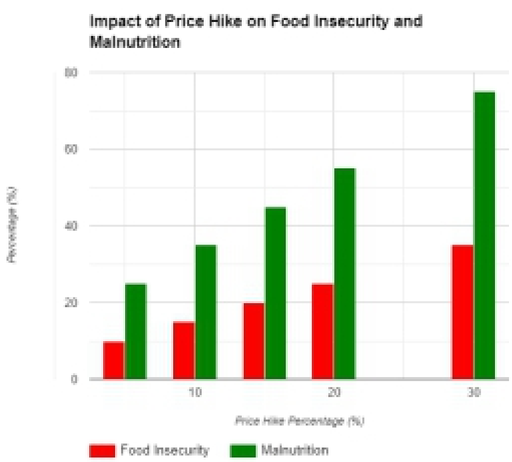
Possible Solutions and Measures to Address The Issue:

Government intervention: Governments can play a role in stabilizing prices by implementing price controls, reducing taxes on essential goods, and providing subsidies to low-income households. Increase in production and supply: Addressing supply chain disruptions and increasing production of essential commodities can help to bring down prices. Promoting competition: Encouraging fair competition in the market can help to prevent price gouging and keep prices in check. Social safety nets: Providing social safety nets, such as food stamps and unemployment benefits, can help to mitigate the impact of price hikes on vulnerable populations.

Specific to Bangladesh

The recent study by an intelligence agency found that the price hikes of essential commodities in Bangladesh were often disproportionate to the increases in the international market, suggesting a role for market manipulation by traders and wholes alers. The government has announced measures to address the issue, including lifting tariffs and taxes on imports of essential commodities and taking stern action against market manipulation. It is important to effectively implement these measures and monitor their impact to ensure they are successful in stabilizing prices and protecting the purchasing power of the general population. In conclusion, the price hike of essential commodities is a serious issue that requires immediate attention. By understanding the problem and implementing effective solutions, we can work towards ensuring that everyone has access to the essential goods they need to live a healthy and dignified life.

Price Hikes and their Devastating Effects: Food Insecurity and Malnutrition



The link between rising prices of essential commodities and food insecurity and malnutrition is undeniable and deeply concerning. Here's how this connection unfolds:

Reduced Access to Nutritious Food

Eroded purchasing power: As prices rise, individuals and families, especially those with limited income, are forced to prioritize cheaper, often less nutritious options. This shift in dietary patterns leads to lower intake of essential vitamins, minerals, and protein. Shift to calorie-dense foods: In an attempt to fill their stomachs, people may opt for energy-dense foods like carbohydrates and fats, which are often cheaper but lack essential nutrients. This can lead to a "hidden hunger" where people consume enough calories but lack the vital nutrients necessary for optimal health and development. Compromised dietary diversity: With limited resources, individuals may be forced to cut back on diverse food options, focusing on staples like rice and bread. This lack of dietary variety can lead to deficiencies in specific nutrients, further contributing to malnutrition.

Increased Food Insecurity

Limited access to food: As prices rise, households may have to skip meals or reduce portion sizes, leading to hunger and food insecurity. This can have devastating consequences for individuals, especially children and pregnant women, who are more susceptible to the detrimental effects of malnutrition. Reduced food affordability: With a larger portion of income dedicated to essential commodities, households have less money to spend on food, leading to a cycle of poverty and hunger. Disrupted supply chains: Price fluctuations and economic instability often disrupt food supply chains, leading to shortages and further exacerbating food insecurity.

Consequences of Malnutrition

Stunted growth and development: Malnutrition in children can lead to irreversible physical and cognitive impairments, impacting their future health, education, and earning potential. Increased vulnerability to disease: Malnourished individuals have weaker immune systems, making them more susceptible to infectious diseases and increasing healthcare costs. Reduced productivity: Malnutrition can lead to fatigue, cognitive decline, and decreased physical performance, impacting individuals' ability to work and contribute to society. Addressing the Issue: Stabilizing prices: Implementing price controls, increasing production, promoting competition, and reducing taxes on essential goods are crucial steps to ensure food affordability. Social safety nets: Providing food stamps, subsidies, and other forms of assistance can help vulnerable populations cope with price hikes and access adequate nutrition. Dietary education: Raising awareness about healthy eating and promoting diverse, nutrient-rich diets can empower individuals to make informed choices even under challenging circumstances. Investing in sustainable agriculture: Supporting sustainable farming practices that increase food production and improve resource efficiency can help to stabilize supply and reduce reliance on volatile markets. The price of essential commodities shouldn't dictate access to food and health. By addressing the root causes of price hikes and implementing comprehensive solutions, we can ensure everyone has access to the nutritious food they need to thrive. This requires a collective effort from governments, businesses, and individuals to build a more just and equitable food system where food security and nutrition are fundamental rights, not privileges.

EXPLORING THE SYMBIOSIS OF SPIRITUALITY AND MANAGEMENT: A COMPREHENSIVE ANALYSIS OF GLOBAL LEADERS

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ABSTRACT:
This paper delves into the intricate relationship between spirituality and management, investigating their interconnection in the context of global leadership. Against the backdrop of a globalized world and diverse cultural dynamics, the study aims to unravel how spiritual principles influence decision-making processes and leadership styles among global managers. Utilizing a research methodology that encompasses an extensive review of current literature and a cross-cultural analysis of managerial practices worldwide, the paper synthesizes insights from both spiritual and management domains. It seeks to uncover commonalities and distinctive challenges faced by global managers navigating the intricate and interconnected landscape of international business. The study emphasizes the increasing acknowledgment of spirituality as a significant factor in managerial effectiveness. Drawing from case studies and interviews with experienced global managers, the research investigates how spiritual values, such as empathy, ethical decision-making, and a sense of purpose, contribute to heightened leadership capabilities. Furthermore, it explores how these values can foster a positive organizational culture and enhance employee well-being. In addition, the paper addresses potential tensions and contradictions that may arise when integrating spirituality into global management practices. Challenges stemming from cultural variations and diverse interpretations of spirituality necessitate a nuanced approach. The research puts forth practical strategies for global managers to navigate these complexities while embracing the positive aspects of spirituality in their leadership roles. In conclusion, this analytical study sheds light on the transformative potential of spirituality in the realm of global management. By deepening our understanding of the interplay between spiritual principles and managerial effectiveness, the research provides valuable insights for both academics and practitioners seeking to navigate the intricacies of contemporary global business environments.

Keywords: *Spirituality and Management, Leadership, Business environment, Organisational culture, empathy, distinctive challenges.*

Introduction

This research paper delves into the intricate interplay between spirituality and management, aiming to provide global leaders with a comprehensive understanding of how these two seemingly disparate realms can symbiotically coexist and enhance organizational effectiveness. The paper explores the historical roots of spirituality in management, its impact on leadership styles, employee well-being, and organizational culture. By synthesizing existing literature and drawing on real-world examples, the research aims to shed light on the potential benefits of integrating spiritual principles into the fabric of contemporary management practices. The implications of this symbiosis for global leaders are discussed, offering insights into how such an approach can contribute to sustainable and ethical business practices. In the dynamic and ever-evolving landscape of global business, leaders are continually challenged to navigate complexities, uncertainties, and ethical dilemmas. Traditional management approaches often focus on strategic planning, efficiency, and profit margins, neglecting the profound impact of spirituality on organizational dynamics. However, there is a growing recognition that spirituality, with its deep-rooted historical connections to leadership, ethics, and culture, can play a transformative role in the realm of management. This research paper embarks on a journey to explore the symbiosis of spirituality and management, offering a comprehensive analysis tailored for global leaders seeking a more holistic approach to organizational leadership.

Background

The intersection of spirituality and management has gained increasing attention in recent years as organiza tions seek holistic approaches to address the complexities of the modern business landscape. This paper exam ines the historical context and evolving perspectives on the integration of spirituality into management practices. The interplay between spirituality and management is not a novel concept but one that has its roots deeply embedded in ancient wisdom and historical leadership practices. As contemporary organizations grapple with challenges such as employee engagement, ethical decision-making, and the quest for meaning and purpose in work, the integration of spiritual principles into management practices emerges as a compelling avenue for exploration. This research seeks to unravel the historical foundations of spirituality in manage ment, tracing its evolution through various philosophical, religious, and cultural traditions to provide a nuanced understanding of its relevance in the modern corporate context.

Objectives of the Study

The primary objective of this research is to explore the symbiotic relationship between spirituality and management. Specific goals include examining the impact of spiritual principles on leadership, organizational culture, employee engagement, and overall business success. The research also aims to provide practical insights for global leaders seeking to implement a more spiritually informed approach to management. On the other hand, the overarching goal of this research is to provide global leaders with a nuanced understanding of the symbiotic relationship between spirituality and management, recognizing its potential to foster sustainable, ethical, and purpose-driven organizations. To achieve this, the study will: a. Explore the historical roots of spirituality in management, unveiling the wisdom embedded in ancient philosophies and tracing its evolution through the annals of management thought. b. Investigate the impact of spiritual leadership on management practices, unravelling the characteristics and strategies that enable leaders to integrate spiritual principles into their decision-making and organizational strategies. c. Examine the role of spirituality in shaping organiza tional culture, delving into how a spiritually informed culture can contribute to employee well-being, engagement, and overall organizational success. d. Analyse the implications of spirituality in management for global leaders, offering practical insights and recommendations for the integration of spiritual principles into contemporary leadership practices. By delving into these key areas, this research aims to contribute to the burgeoning discourse on spirituality and management, providing global leaders with a roadmap for cultivating organizations that not only thrive economically but also embody a deeper sense of purpose, ethics, and interconnectedness in the global business ecosystem. As we embark on this exploration, the paper endeavours to foster a paradigm shift in leadership thinking, challenging leaders to consider the profound impact of spirituality on the very essence of management in the 21st century.

Historical Roots of Spirituality in Management

The integration of spirituality into the realm of management finds its roots in a rich tapestry of ancient wisdom, where leadership, ethics, and organizational dynamics were often intertwined with spiritual principles. Examining these historical roots provides valuable insights into the enduring connection between spirituality and effective management practices.

Ancient Philosophies and Leadership

Across various cultures and epochs, ancient philosophies have espoused principles that resonate with contemp orary notions of effective leadership and management. For instance, the teachings of Confucius in ancient China emphasized the importance of ethical leadership, highlighting virtues such as benevolence, righteousness, and integr ity. Similarly, the Indian subcontinent offers insights from texts like the Bhagavad Gita, where the concept of "dharma" or righteous duty guides leaders in decision-making. In ancient Greece, the philosophical musings of Socrates, Plato, and Aristotle touched upon the ethical dimensions of leadership. Plato's "Philosopher-King" concept, emphasizing wisdom and moral integrity in ruler ship, echoes the contemporary discourse on the role of values in effective leadership.

Religious Traditions and Organizational Governance

Religious traditions have also played a pivotal role in shaping management principles. The Judeo-Christian tradition, for instance, offers narratives and teachings that speak to ethical leadership and stewardship. Concepts such as servant leadership, rooted in the biblical notion of humility and service, find resonance in contemporary management discussions. In Islamic traditions, ethical business practices and fair dealings are emphasized in various Quranic verses and Hadiths, providing a foundation for principles of integrity and social responsibility in manag ement.

Management in Ancient Civilizations

Beyond philosophy and religion, historical evidence reveals instances of sophisticated management practices in ancient civilizations. The organizational structures of the Roman Empire, for example, incorporated administrative efficiency and hierarchical governance, reflecting an early understanding of management principles. Similarly, ancient Chinese dynasties employed administrative and bureaucratic syst ems, influenced by Confucian ideals of virtuous leadership and ethical gove rnance.

Objectives of the Study

Eastern traditions, such as Taoism and Buddhism, offer insights into harmonious living and leadership. The Taoist concept of "Wu Wei," or effortless action, suggests a non-coercive approach to leadership, emphasizing alignment with natural processes. Meanwhile, Buddhist principles of mindfulness and compassion have found applications in contemporary management practices, particularly in promoting employee well-being and stress reduction. In examining these historical roots, it becomes evident that spirituality and management have shared a symbiotic relationship throughout human history. The wisdom distilled from diverse philosophical, religious, and cultural traditions lays the groundwork for a holistic understanding of leadership and organizational governance. As contemporary leaders seek guidance in navigating the complexities of the modern business landscape, these historical roots offer a reservoir of timeless principles that can inform and enrich their approach to effective management.

Spiritual Leadership and its Impact on Management

The concept of spiritual leadership represents a paradigm shift in traditional management thinking, emphasizing values, purpose, and the holistic development of individuals and organizations. Spiritual leadership transcends the confines of profit-centric approaches, focusing on the well-being and fulfilment of both leaders and followers. This section explores the definition of spiritual leadership and delves into its profound impact on various facets of manage ment.

Defining Spiritual Leadership

Spiritual leadership is a multifaceted concept that extends beyond the boundaries of religious affiliations. It encapsulates a leadership style that integrates personal values, ethical considerations, and a sense of higher purpose into the decision-making process. The spiritual leader is charact erized by qualities such as authenticity, humility, compassion, and a commit ment to the well-being of individuals and the broader community. In his seminal work, Fry (2003) proposed a model of spiritual leadership compr ising four dimensions: vision, hope/faith, altruistic love, and a sense of calling. This model emphasizes the leader's ability to inspire a shared vision, instil hope and faith in followers, cultivate altruistic love, and articulate a sense of calling that transcends self-interest.

Impact on Leadership Styles

Spiritual leadership has a transformative impact on leadership styles, moving away from authoritative and transacti onal approaches towards more particip ative and transformational styles. Transformational leaders, influenced by spiritual principles, inspire and motivate followers by appealing to their higher values and sense of purpose. This results in increased employee engagem ent, creativity, and a shared commitment to organizational goals. Spiritual leaders also exhibit servant leadership qualities, prioritizing the needs of their followers and fostering a culture of collaboration and empowerment. This servant-leadership approach contributes to a positive organizational climate, where trust and mutual respect thrive.

Organizational Culture Transformation

The impact of spiritual leadership extends to the organizational culture, influencing the values, norms, and behaviours that define the workplace. Leaders who embrace spiritual princ iples contribute to the developme nt of a culture characterized by authenticity, transparency, and a shared commitment to ethical conduct. A spiritually informed culture encourages open communication, inclusivity, and a sense of community among employees. This, in turn, fosters a positive work environment where individuals feel valued, supported, and connected to a larger purpose.

Employee Engagement and Well-Being

One of the most significant impacts of spiritual leadership is on employee engagement and well-being. By prioriti zing the holistic development of individuals, spiritual leaders create a workplace environment where employ ees feel a sense of meaning and fulfill ment in their work. This sense of purpose translates into higher levels of engagement, increased job satisfaction, and a willingness to go beyond the call of duty for the collective success of the organization. Spiritual leadership is also associated with enhanced employee well-being, as leaders prioritize factors such as work-life balance, mental health, and personal growth. This approach contributes to a healthier, more resilient workforce, ultimately benefiting organizational performance.

Case Studies: Successful Implementation of Spiritual Leadership

To illustrate the impact of spiritual leadership in practical terms, this section presents case studies of organizations that have successfully implemented spiritual leadership principles. These cases highlight the positive outcomes, both in terms of organizational culture and perform ance, resulting from leaders embracing spiritual values in their management practices. Overall, the impact of spiritual leadership on management is profound, touching various dimensions of organizational life. From shaping leadership styles to influencing organizational culture, the integration of spiritual principles offers a transfo rmative approach that fosters not only business success but also the well-being and fulfillment of individuals within the organizational ecosystem. In the subsequent sections, we delve deeper into the implications of spirituality in shaping organizational culture, enhanc ing employee well-being, and addressing the challenges and criticisms associated with this evolving management para digm.

Organizational Culture and Spirituality

Organizational culture plays a pivotal role in shaping the identity, values, and dynamics of a workplace. The infusion of spirituality into organizational culture represents a paradigm shift that emphasizes values, purpose, and the interconnectedness of individuals within the organizational context. This section explores the relationship between spirituality and organizational culture, elucidating how a spiritually informed culture contributes to a positive and purpose-driven work environment.

The Role of Spirituality in Shaping Organizational Culture

Spirituality in the context of organiza tional culture goes beyond religious affiliations and encompasses a broader understanding of shared values, ethical conduct, and a sense of purpose. When spirituality is woven into the fabric of organizational culture, it serves as a guiding force that influences how individuals interact, make decisions, and perceive their roles within the organiza tion. Spirituality fosters a culture of authenticity, where individuals are encouraged to bring their whole selves to the workplace. This authenticity promotes open communication, trust, and a sense of belonging, creating an environment where employees feel valued for their unique contributions. Moreover, a spiritually informed culture places an emphasis on ethical behavior and valuesdriven decision-making. Leaders and employees alike are guided by a moral compass that transcends immediate gains, contributing to an ethical organizational climate that prioritizes the well-being of stakeho lders and the broader community.

Fostering a Spiritually-Informed Organizational Culture

Creating a spiritually informed organiza tional culture involves intentional efforts to embed spiritual principles into the organization's core values, practices, and rituals. Here are key strategies for fostering such a culture:

Articulating Core Values: Clearly define and communicate the organi zation's core values, incorporating spiritual principles such as integrity, compassion, and social responsibility. These values serve as the foundation for the organization's culture.

Leadership Modeling: Leaders play a crucial role in shaping organizational culture. When leaders embody spiritual principles in their behavior and decision-making, they set a precedent for others to follow. This modeling helps create a culture of authenticity and purpose.

Inclusivity and Diversity: A spiritually informed culture recognizes the inhe rent worth and dignity of each individual. Promote inclusivity and diversity, fostering an environment where different perspectives and backgr ounds are respected and celebrated.

Rituals and Practices: Integrate spiritual rituals and practices into the organizational routine. This could include mindfulness sessions, reflection exercises, or team-building activities that encourage a sense of connection and purpose.

Employee Development: Prioritize the holistic development of employees, addressing not only professional growth but also personal well-being. Provide opportunities for skillbuilding, mentor ship, and initiatives that support work-life balance.

Social Responsibility: Embed social responsibility into the organization's mission and activities. Engage in initiatives that contribute positively to the community and the broader societal context, aligning with spiritual principl es of service and altruism.

Benefits of a Spiritually Informed Organizational Culture

A spiritually informed organizational culture yields several benefits that contribute to the overall well-being and success of the organization:

Enhanced Employee Engagement: A culture grounded in spirituality fosters a sense of purpose and meaning among employees, leading to higher levels of engagement. Employees who feel connected to a larger purpose are more likely to be committed and motivated in their roles.

Improved Well-Being: A spiritually informed culture addresses the holistic well-being of individuals, considering not only professional development but also personal fulfillment and mental health. This approach contributes to a healthier and more resilient workforce.

Positive Work Environment: Spirituality promotes values such as compassion, empathy, and respect. In a spiritually informed culture, employees experience a positive work environment characterized by trust, collaboration, and a shared commitment to organizati onal goals.

Ethical Decision-Making: Organiz ations with a spiritually informed culture tend to prioritize ethical considerations in decision-making. This commitment to ethical behavior enhances the organization's reputation, builds trust with stakeholders, and contributes to longterm sustainability.

Attraction and Retention of Talent: A positive and purpose-driven organiz ational culture, rooted in spirituality, becomes a magnet for top talent. Employees are attracted to organiz ations that prioritize values and a meaningful work experience, leading to increased retention and talent acquisi tion.

Challenges and Considerations

While the integration of spirituality into organizational culture offers numerous benefits, it is not without challenges. Some considerations include:

Diversity of Beliefs: Organizations must be mindful of the diverse beliefs and backgrounds of their workforce. An inclusive approach ensures that spiritual principles are applied in a way that respects and accommodates diffe rent perspectives.

Alignment with Organizational Goals: The integration of spirituality should align with the overall goals and mission of the organization. Leaders need to ensure that spiritual principles enhance, rather than detract from, the achievement of strategic objectives.

Balancing Individual and Organiz ational Values: Striking a balance between individual values and organi zational values is crucial. While spirituality encourages authenticity, it is essential to align individual aspirations with the broader goals of the organi zation.

In conclusion, fostering a spiritually informed organizational culture involves a deliberate and thoughtful approach that goes beyond superficial practices. When successfully impleme nted, such a culture can contribute to a harmonious, purpose-driven workplace where individuals thrive, and organiz ations flourish. As we proceed in this exploration of spirituality and manag ement, the next section will delve into the impact of spirituality on employee wellbeing and engagement, providing insights into how organizations can cultivate a more holistic approach to the development of their most valuable asset—their people.

Employee Well-Being and Engagement

In the modern workplace, the emphasis on employee well-being and engage ment has gained prominence as organizations recognize the profound impact that the holistic development of their workforce has on overall perfor mance. The integration of spirituality into management practices provides a unique lens through which to approach employee well-being and engagement. This section explores the connection between spirituality, employee well-being, and engagement, shedding light on how a spiritually informed approach can contribute to a thriving and motivated workforce.

Spirituality and Employee Well-Being

Employee well-being extends beyond traditional notions of physical health to encompass mental, emotional, and even spiritual dimensions. The incorporation of spiritual principles into the work place acknowledges the interconne ctedness of these aspects and seeks to create an environment that supports the holistic well-being of individuals.

Meaning and Purpose in Work

Spirituality in the workplace emphasizes the importance of finding meaning and purpose in one's work. When employees feel a sense of purpose that aligns with their values and beliefs, they are more likely to experience higher levels of job satisfaction and fulfillment. This, in turn, contributes to overall well-being.

Work-Life Harmony

Spirituality encourages a balanced approach to life, recognizing the need for harmony between professional and personal spheres. Organizations that prioritize work-life balance and offer flexible arrangements contribute to the well-being of their employees, fostering an environment where individuals can thrive both at work and in their personal lives.

Emotional Resilience

Spiritual principles often emphasize qualities such as resilience, mindfulness, and emotional intelligence. These qualities contribute to employees' emotional well-being, helping them navigate challenges, manage stress, and maintain a positive outlook even in the face of adversity.

Strategies for Enhancing Employee Well-Being through Spirituality

To enhance employee well-being through a spiritually informed approach, organizations can implement several strategies:

Mindfulness Practices: Introduce mindfulness practices such as meditation or mindfulness workshops to help employees cultivate awareness, reduce stress, and enhance emotional well-being.

Purpose-Driven Initiatives: Align organizational initiatives with a sense of purpose and social responsibility. Engage employees in projects that contribute to the community or address larger societal issues, providing them with a sense of meaning in their work.

Professional Development with a Holistic Focus: Offer professional development programs that go beyond skill-building to include aspects of personal growth, resilience, and well-being.

Recognition and Appreciation: Recognize and appreciate employees for their contributions, fostering a positive work environment where individuals feel valued and acknowledged.

Employee Assistance Programs: Provide support services, such as counseling or wellness programs, to address the holistic well-being of employees.

Spirituality and Employee Engagement

Employee engagement is a multifaceted concept that encompasses the emotional commitment and dedication of employees to their work and the organization. A spiritually informed approach to management recognizes the role of engagement in fostering a positive organizational culture and contributing to overall success.

Aligning Individual Values with Organizational Values Spirituality encourages leaders to align organizational values with the personal values of employees. When individuals see a congruence between their beliefs and the values espoused by the organization, they are more likely to be engaged and committed to organizational goals.

Authentic Leadership Spiritual principles emphasize authenticity and genuine leadership. Leaders who embody these principles create an environment of trust and transparency, fostering strong relationships with their teams. This authenticity contributes to higher levels of engagement among employees

Fostering a Sense of Community Spirituality emphasizes the interconnectedness of individuals. Organizations that foster a sense of community, where employees feel a connection to each other and a shared purpose, promote a positive work environment that enhances engagement.

Employee Involvement in Decision-Making Engagement is closely linked to employees' sense of involvement in decision-making processes. Organizations that encourage employee input, value their opinions, and involve them in shaping the direction of the company foster a culture of engagement and empowerment.

Case Studies: Successful Integration of Spirituality in Employee Well-Being and Engagement To illustrate the practical implementation of spirituality in enhancing employee well-being and engagement, this section presents case studies of organizations that have successfully integrated spiritual principles into their management practices. These cases highlight the positive outcomes and lessons learned from initiatives focused on holistic employee development and engagement. In conclusion, the integration of spirituality into the workplace has the potential to significantly impact employee well-being and engagement. By recognizing the interconnectedness of individuals, fostering a sense of purpose, and promoting a positive work environment, organizations can create conditions conducive to the holistic development of their workforce. As we move forward in our exploration of spirituality and management, the next section addresses challenges and criticisms associated with this evolving paradigm, providing insights into potential concerns and strategies for addressing them.

Challenges and Criticisms

The integration of spirituality into management practices, while promising in its potential benefits, is not without its challenges and criticisms. As organizations explore this evolving paradigm, it is crucial to address concerns, acknowledge potential pitfalls, and adopt strategies to navigate the complexities associated with the symbiosis of spirituality and management.

Addressing Concerns and Criticisms

Appropriateness and Inclusivity

One of the primary concerns surrounding the integration of spirituality into the workplace is the potential for exclusion or discomfort among individuals with diverse religious or nonreligious beliefs. Organizations must take a careful and inclusive approach, ensuring that spiritual initiatives respect and accommodate a range of perspectives. Strategy: Adopt a pluralistic and inclusive framework that allows employees to express and explore their spiritual beliefs or non-beliefs in a respectful and non-coercive environment. Provide flexibility for individuals to engage with spiritual practices or opt-out without facing judgment.

Instrumentalization of Spirituality Critics argue that incorporating spirituality into management practices may risk reducing profound spiritual principles to mere tools for achieving organizational goals, leading to a form of instrumentalization. This instrumentalization may dilute the authenticity and depth inherent in spiritual teachings. Strategy: Emphasize the genuine integration of spiritual principles into the organizational culture, prioritizing values over instrumental outcomes. Leaders should model a sincere commitment to spiritual values rather than viewing spirituality as a means to an end.

Lack of Clarity and Consistency Implementing spirituality in management practices can be challenging due to the lack of clear guidelines and a standardized framework. Inconsistent application may result in confusion, resistance, or skepticism among employees and leaders. Strategy: Develop clear and transparent guidelines for incorporating spirituality into organizational practices. Establish training programs to ensure that leaders and employees understand the principles and expectations associated with a spiritually informed approach.

Resistance and Skepticism Resistance from individuals who perceive spirituality as incompatible with the professional domain or view it as a subjective and nebulous concept is a common challenge. Skepticism about the efficacy of spiritual principles in achieving organizational objectives may hinder successful implementation. Strategy: Facilitate open and honest communication about the rationale behind integrating spirituality into management practices. Provide evidence-based examples and case studies demonstrating positive outcomes, emphasizing the practical benefits of a spiritually informed approach.

Balancing Spiritual Values with Organizational Goals A key challenge lies in harmonizing spiritual values with the pragmatic goals of the organization. Critics may argue that the pursuit of profit and growth may conflict with spiritual principles, potentially leading to ethical dilemmas and compromised integrity. Strategy: Clearly articulate the alignment between spiritual values and organizational goals. Emphasize how a spiritually informed approach enhances long-term sustainability, ethical decision-making, and stakeholder relationships, contributing to both organizational success and societal well-being.

Maintaining Consistency in Leadership Practices Consistency in leadership practices is crucial for the successful integration of spirituality into management. Inconsistencies in how leaders embody spiritual principles or communicate them to employees may lead to skepticism and erode trust. Strategy: Invest in leadership development programs that emphasize the consistent application of spiritual principles. Provide ongoing training, coaching, and feedback to ensure that leaders demonstrate authenticity and integrity in their leadership practices. 6.4 Balancing Individual Autonomy and Organizational Unity Striking a balance between honoring individual autonomy and fostering organizational unity can be challenging. Organizations must navigate the tension between allowing individuals to express their unique spiritual beliefs while cultivating a cohesive and collaborative work environment. Strategy: Promote a culture that values diversity of thought and belief, emphasizing that unity does not require uniformity. Establish shared values that transcend individual differences, fostering a sense of belonging and shared purpose. In conclusion, addressing challenges and criticisms is an integral aspect of successfully integrating spirituality into management practices. By adopting thoughtful strategies, organizations can navigate these complexities, fostering an environment where spiritual principles contribute positively to employee well-being, engagement, and overall organizational success. As we conclude this exploration, the final section of the research paper summarizes key findings and provides recommendations for future research, encouraging continued inquiry into the symbiosis of spirituality and management..

Implications for Global Leaders

As organizations grapple with the complexities of the modern business landscape, the exploration of spirituality in management reveals profound implications for global leaders. The integration of spiritual principles into leadership practices offers a transformative approach that extends beyond immediate business goals, emphasizing sustainable, ethical, and purpose-driven organizational success. This section elucidates the implications of the symbiosis of spirituality and management for global leaders.

The Ethical Dimension of Spiritual Management

Global leaders are confronted with a myriad of ethical challenges in an interconnected world. Embracing spirituality in management provides leaders with a framework for ethical decision-making rooted in values such as integrity, compassion, and social responsibility. By prioritizing the well-being of all stakeholders, including employees, customers, and the broader community, leaders can navigate ethical dilemmas with a focus on long-term sustainability and societal impact. Strategy: Global leaders should prioritize ethical considerations in decision-making processes, aligning organizational goals with the well-being of all stakeholders. Cultivate a culture that values transparency, accountability, and responsible business practices, contributing to a positive organizational reputation.

Developing Global Leaders with Spiritual Intelligence

Spiritual intelligence, encompassing self-awareness, empathy, and a deep understanding of the interconnectedness of all things, is a critical competency for global leaders. By cultivating spiritual intelligence, leaders can navigate diverse cultural contexts, foster collaboration, and address complex challenges with wisdom and discernment. Strategy: Invest in leadership development programs that focus on the cultivation of spiritual intelligence. Provide opportunities for leaders to engage in reflective practices, mindfulness training, and cross-cultural experiences that enhance their ability to lead with empathy and cultural sensitivity.

Nurturing Inclusive and Diverse Organizations

The integration of spirituality in management emphasizes the inherent worth and dignity of each individual. Global leaders must recognize the diversity of their workforce and create inclusive environments where employees from various cultural, religious, and personal backgrounds feel valued and respected. Strategy: Imple ment diversity and inclusion initiatives that celebrate differences and foster a sense of belonging. Encourage open dialogue about cultural and spiritual diversity, creating a workplace culture that embraces and learns from varied perspectives.

Balancing Profitability with Purpose

While profitability remains a central goal for organizations, global leaders embracing spirituality in management recognize the importance of balancing financial success with a higher sense of purpose. Aligning organizational goals with a meaningful mission contributes to employee motivation, customer loyalty, and a positive societal impact. Strategy: Articulate a clear and compelling organizational mission that resonates with spiritual values. Comm unicate this mission consistently to employees, customers, and other stakeholders, emphasizing the dual commitment to financial success and societal well-being.

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Fostering a Culture of Innovation and Collaboration

Spirituality in management encourages a culture of innovation and collaboration by fostering an environment where individuals feel inspired, valued, and connected to a larger purpose. Global leaders must leverage this potential to drive creativity, adaptability, and collective problem-solving. Strategy: Create structures and processes that support innovation and collaboration. Encourage cross-functional teams, provide platforms for idea-sharing, and celebrate diverse perspectives. Leaders should model a collaborative leadership style that inspires creativity and fosters a culture of continuous improvement.

Strengthening Global Leadership Resilience

Global leaders face a volatile, uncertain, complex, and ambiguous (VUCA) world. The integration of spirituality in management provides a foundation for developing resilience, enabling leaders to navigate challenges with a sense of purpose, adaptability, and inner strength. Strategy: Foster leadership resilience through mindfulness practices, stress management programs, and resilience training. Encourage leaders to prioritize their own well-being, recognizing that personal resilience positively impacts their ability to lead effectively in challenging situations. In conclusion, the implica tions of spirituality in management for global leaders are farreaching, encom passing ethical leadership, spiritual intelligence development, inclusive organizational cultures, purpose-driven strategies, collaborative innovation, and leadership resilience. By embracing these implications, global leaders can contribute to the creation of organizations that not only thrive economically but also foster a positive societal impact and contribute to the well-being of individuals and comm unities worldwide. As the field of spirituality in management continues to evolve, the final section of this research paper offers recommendations for future research, encouraging scholars and practitioners to further explore and refine the symbiosis of spirituality and management.

Conclusion

The exploration of the symbiosis of spirituality and management unfolds a narrative that transcends traditional paradigms, offering global leaders a profound lens through which to approach organizational dynamics. The synthesis of spiritual principles into management practices reveals multifa ceted implications for leadership, organizational culture, employee well-being, and the very essence of the global business ecosystem. From the historical roots of spirituality in various philoso phies and religions to its contemporary application in organizational settings, this research paper traversed a journey through time, philosophy, and management theory. The rich tapestry of ancient wisdom, coupled with the adaptability of spirituality to the modern workplace, underscores the timelessness and universality of the its principles involved. The impact of spiritual leadership on management styles, organizational culture, and employee engagement was illuminated, showcasing the transformative potential of leaders who embrace authenticity, purpose, and values-driven decision-making. The case studies provided tangible evidence of successful integra tion, highlighting organizations that have navigated challenges and realized positive outcomes through the impleme ntation of spiritual principles. The implications for global leaders are profound, calling for a shift in leadership paradigms towards ethical decision-making, the development of spiritual intelligence, and the cultivation of inclusive and purpose-driven organizational cultures. Balancing profitability with a higher purpose, fostering innovation and collaboration, and strengthening leadership resilience emerge as imperatives for leaders navigating the complexities of the contemporary business landscape. However, this exploration is not without its challenges and criticisms. The potential for exclusion, instrument alization of spirituality, and the need for clarity and consistency in implem entation underscore the importance of thoughtful and inclusive approaches. Global leaders must grapple with the delicate balance between individual autonomy and organizational unity, all while maintaining a focus on ethical and purpose-driven outcomes. In conclusion, the symbiosis of spirituality and management invites global leaders to embark on a journey of self-discovery, ethical leadership, and holistic organizational development. As the landscape of global business continues to evolve, this research paper serves as a call to action for scholars, practitioners, and leaders alike to further explore, refine, and integrate the wisdom of spirituality into the fabric of contemporary management practices. By embracing this symbiosis, organi zations have the potential not only to achieve sustainable success but also to contribute meaningfully to the well-being of individuals and the broader global community.

Recapitulation of Findings

A summary of key findings and insights derived from the exploration of the symbiosis between spirituality and management.

Recommendations for Future Research

Identifying avenues for future research to further deepen our understanding of the interplay between spirituality and management. By providing a compre hensive analysis of the symbiosis between spirituality and management, this research paper aims to equip global leaders with the knowledge and insights needed to navigate the complexities of the contemporary business landscape while fostering ethical, sustainable, and purpose-driven organizations.

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IMPACT OF ARTIFICIAL INTELLIGENCE ON CUSTOMER RELATIONSHIP MANAGEMENT IN THE RETAIL INDUSTRY

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ABSTRACT:
The infusion of Artificial Intelligence (AI) into Customer Relationship Management (CRM) represents a revolutionary catalyst in the retail sector. In the ever-evolving technological landscape, businesses find themselves navigating a terrain where AI-infused solutions are reshaping their approaches to customer management and engagement. This investigation delves into the profound consequences and the dynamic interplay between AI and CRM specifically in the retail industry. Using primary data, the present study utilized factor analysis to identify three main factors out of twelve components. The results suggest that essential impact factors, grounded in the business success metrics, involve heightened customer satisfaction, increased sales, boosting customer service, etc. Furthermore, the study highlights the significance of operational improvements and business optimization, fostering appropriate customer personalization, reducing costs, contributing to more effective marketing strategies, etc. as crucial impact of artificial intelligence on customer relationship management in the retail sector.

Keywords: *Likert scale, customer retention, competitive intelligence, convenience sampling, encouraging retail businesses.*

Introduction

Overview of AI and CRM in the Retail Sector The infusion of artificial intelligence (AI) into retail customer relationship management (CRM) has notably reshaped the retail landscape. AI, encompassing technologies such as machine learning and predictive analytics, plays a crucial role in elevating various aspects of CRM for retailers.

Tailored Customer Experiences: AI empowers retailers to analyze extensive customer data, enabling the develop ment of highly personalized shopping experiences. Customized product recommendations, focused promot ions, and individualized communication contribute to heightened customer satisfaction and engagement.

Predictive Analytics for Anticipating Demand: Harnessing predictive analytics, AI facilitates more precise demand forecasting. Retailers can predict customer preferences and trends, optimizing inventory manag ement to ensure products are available when and where they are most sought after.

Efficient Customer Service via Chatbots: AI-driven chatbots offer instantaneous and efficient customer support. These virtual assistants can handle routine queries, process orders, and address customer concerns, freeing up human resources for more intricate tasks and enhancing overall service efficiency.

Improved Customer Segmentation: AI algorithms excel at analyzing customer behavior, allowing retailers to create finely segmented target audie nces. This precision in segmentation facilitates targeted marketing campai gns, thereby enhancing the effectiveness of promotions and advertisements.

Fraud Detection and Security Measures: 3 AI plays a pivotal role in fortifying security within retail CRM systems. Advanced algorithms can identify suspicious activities and patterns, helping prevent fraudulent transactions and safeguard customer data.

Seamless Omnichannel Integration: AI facilitates smooth integration across various retail channels. Whether customers engage through online platforms, mobile apps, or in-store experiences, AI ensures a consistent and unified brand interaction, fostering a seamless omnichannel customer experience.

Data-Driven Decision-Making: Retailers can make informed decisions based on AI-driven insights derived from extensive data analysis. This data-centric approach enhances strategic planning, pricing strategies, and overall business operations.

Continuous Enhancement through Feedback Analysis: AI enables retailers to comprehensively analyze customer feedback. By understanding sentiments and preferences expressed in reviews and on social media, retailers can continuously refine products, services, and customer interactions.

Significance of Effective CRM in the Competitive Retail Landscape
Customer Relationship Management (CRM) is pivotal in the competitive retail environment, contributing significantly to customer satisfaction, loyalty, and overall business prosperity.

Customer Retention: CRM systems empower retailers to forge more robust connections with customers, ultimately bolstering loyalty. By comprehending customer preferences and behavior, retailers can customize their offerings and promotions, diminishing the likelihood of customers shifting to rival brands.

Personalization: CRM facilitates retailers in tailoring the shopping experience. Through the analysis of customer data, targeted marketing campaigns, personalized recommen dations, and customized promotions can be implemented, enriching the overall shopping experience and elevating customer satisfaction.

Data-Driven Decision Making: CRM systems offer valuable insights into customer trends, preferences, and purchasing behavior. Retailers can leverage this data for well-informed decisions regarding inventory managem ent, pricing strategies, and product assortment, thereby gaining a compet itive advantage.

Efficient Marketing Campaigns: Utilizing CRM, retailers can categorize their customer base and devise targeted marketing campaigns. This ensures that promotional endeavors are more impactful, reaching the right audience with pertinent messages, consequently maximizing the return on investment (ROI) in marketing.

Multi-Channel Integration: In the contemporary retail landscape, customers engage through diverse channels, including online, mobile, and in-store. CRM facilitates seamless integration across these channels, delivering a unified perspective of customer interactions. This integration guarantees a consistent and unified brand experience, regardless of the chosen customer channel.

Customer Feedback and Improve ment: CRM empowers retailers to gather and assess customer feedback, enabling the identification of areas for enhancement. By addressing customer concerns and preferences, retailers can refine their offerings and services, remaining comp etitive and responsive to market demands.

Competitive Intelligence: CRM systems have the capacity to monitor competitor activities and market trends. Retailers can utilize this information to adjust their strategies, pinpoint new opportunities, and stay ahead of industry developments. CRM plays a crucial role in assisting retailers in navigating the competitive landscape by fostering stronger customer relation ships, facilitating data-driven decision-making, and ensuring a more person alized and streamlined shopping experience.

Objectives

The current study aims to achieve the following objectives:

Uncovering the essential impact factors of artificial intelligence for customer relationship management to foster development in the retail sector.

Assigning suitable names to various factors that mirror the effect of artificial intelligence.

Additionally, the researchers seek to provide some suggestions considering the impact of artificial intelligence on customer relationship management in the retail businesses.

Literature Review

Chatterjee et al. (2020) suggest that AI-powered CRM systems offer the potential to streamline repetitive tasks and improve the customization, segmentation, and prioritization of gathered customer data for businesses involved in B2B partnerships. The integration of CRM and AI has the potential to influence the overall performance of businesses over time. Cheng et al. (2022) found that artificial intelligence significantly influences customer-brand partnerships in the banking sector, affecting brand inclination, brand insight, and the likelihood of repeat purchases. In a separate study in 2021, Al-Omoush et al. highlighted the potential for busine sses to enhance their B2B CRM frame works by leveraging insights gained from customer information analysis. Recent advancements in Artificial Intelligence (AI) technologies, particu larly in machine learning, deep learning, neural networks, and big data (Moreno & Redondo, 2016; Zhang et al., 2018), along with widespread mobile computing (He et al., 2019), have propelled the development of next-generation digital platforms (Khalid et al., 2019; Rai et al., 2019; Zhang et al., 2019). These platforms have increasi ngly achieved human or even super-human performance levels in various domains such as autonomous driving, medical diagnosis (e.g., cancer screening), robots/drones, chatbots, virtual assistants, language translation, 6 governance monitoring (e.g., copycats, content violation), complex game playing, and recommendation systems (Wang, 2023). The integration of AI features in customer relationship management (CRM) platforms introduces novel possibilities for enhancing the customer experience by providing deep insights into customer needs (Kumar Deb et al., 2018). These technological innovations have been fueled by a substantial increase in processing power, cost-effective hardw are, and the proliferation of customer data creation and availability (Gantz et al., 2017; Hossain et al., 2022) (Wang, 2023).

Methodology

Data Collection

In order to accomplish the research objectives, this study employs primary data sources and utilizes a combination of empirical and exploratory research methods. The primary focus is to discern the crucial factors influencing the incorporation of customer relatio nship management in the retail landsc ape. This involves a quantitative statist ical analysis of primary data, exploring the viewpoints of people who are conscious about artificial intellig ence, customer relationship manag ement, and retail industry. A total of 30 respondents were selected through convenience sampling, and data were gathered via direct interviews using a structured questionnaire. The questi onnaire comprised twelve statements, including basic information, with responses rated on a five-point Likert scale (1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree).

Analysis Tool

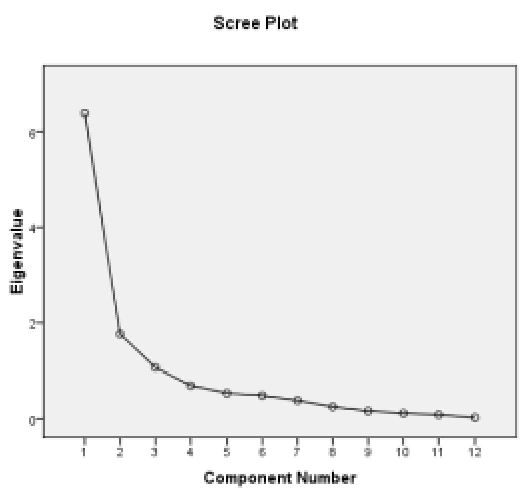
Data analysis applications enable the exploration of business data, revealing intricate patterns, trends, associations, connections, and anomalies that may be challenging to discern otherwise. This study employs SPSS as a tool for factor analysis, aiming to identify the significant impact of applying artificial intelligence on customer relationship management in the retail industry. Factor analysis, a multivariate technique, reduces data to represent a set of variables through a condensed number of variables, aiding in pinpointing impactful approaches. 7 While initially designed for interval data, factor analysis proves adaptable to ordinal data like Likert scale scores. The method necessitates a linear relationship among variables and a moderate correlation, ensuring a clear distinction between factors and variables. In the context of the observable random variable X, with components represented by p, mean by μ, and covariance matrix by □ , X relies on both unobservable random variables (common factors F1, F2, …, Fm) and specific factors (ε1, ε2, ..., εm), contributing to additional variation. Expressed Xi-μi= li1F1 + li2F2 + ……… + limFm + εi, the general factor analysis model can be represented as X- μ = LF + ε. Here, lij denotes the coefficient indicating the loading of the jth variable on the jth factor, the matrix L signifies the factor loadings, and εi represents the specific factor associated solely with Xi. Deviations X1 - μ1, X2- μ2, …, Xp- μp express the p deviations in terms of the unobservable random variables (p+m): F1, F2, ..., Fm and ε1, ε2, …, εm.

Findings and Discussions

In this study, the Kaiser-Meyer-Olkin sampling adequacy measure is above 0.7 (KMO = 0.702), and Bartlett's test of sphericity is statistically significant (p-value is 0.000, < 0.05), suggesting that factor analysis is appropriate for these data.

Comp o nent	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6,393	53,274	53,274	6,393	53,274	53,274
2	1,764	14,697	67,971	1,764	14,697	67,971
3	1,068	8,896	76,867	1,068	8,896	76,867
4	,697	5,807	82,674			
5	,540	4,497	87,171			
6	,491	4,089	91,261			
7	,386	3,218	94,478			
8	,255	2,124	96,602			
9	,166	1,386	97,988			
10	,121	1,004	98,993			
11	,089	,745	99,738			
12	,031	,262	100,000			

The table presents eigenvalues corresponding to 12 components before extraction, after extraction, and post-rotation. These eigenvalues signify the variance elucidated by each component, demonstrating both individual and cumulative percentages. To illustrate, the first component independently elucidates 53.274% of the overall variance, the second contributes 14.697%, resulting in a combined total of 67.971%. Notably, the initial three components account for a significant portion of the variance, while subsequent ones have a diminis hing impact. Components with eigenvalues exceeding 1 are retained in the 'Extraction Sums of Squared Loadings' column, excluding those below 1. Following rotation, the relative importance of the three components equalizes, reshaping their contributions to variance. Initially, the first compo nent explains more variance, and after rotation, it remains the same (53.274%). Collectively, the first three components clarify 76.867% of variability, rendering them suitable for further analysis.



The scree plot illustrates eigenvalues plotted against components, helping decide on factor retention. The key observation is the point where the curve starts to level off, usually seen between factors 3 and 4 with eigenvalue 1. Factor 4, with an eigenvalue below 1, is dismissed, leading to the retention of the initial three factors.

	Estimated Factor Loadings			Rotated Estimated Factor Loadings		
	F1	F2	F3	F1	F2	F3
Heightened customer satisfaction	.706		.542	.739		
Increased sales	.779			.851		
Proper customer segmentation	.839			.815		
Appropriate customer personalization	.783				.799	
Boosting customer service	.790			.671		
Increased customer retention	.744			.801		
Enhancing supply chain efficiency	.787				.846	
Reducing costs	.712				.727	
Contributing to more effective marketing strategies	.570	.667				.750
Workforce challenges		.808				.929
Influencing consumer trust	.696			.679		
Reducing response time	.878				.773	

The table illustrates how 12 variables impact three derived factors. A higher absolute loading value signifies a greater factor contribution to the variable. Omitted loadings below 0.5, denoted by gaps in the table, enhance clarity. Pre- and post-rotation results vary slightly, with rotation simplifying interpretation by minimizing factors with high variable loadings. Examining rotated factor loadings reveals that Factor 1 embodies aspects like heightened customer satisfaction, increased sales, and boosting customer service— business success metrics. Factor 2, operational improvements, emphasizes values such as appropriate customer personalization, reducing costs, and reducing response time. Factor 3, termed the business optimization factor, underscores the importance of contributing to more effective marketing strategies and workforce challenges in the retail industry. 11 The study's unique contribution lies in the impact factors- business success metrics, operational improvements, and business optimization, significantly influencing the customer relationship management in the retail industry.

Conclusion

The recent study explored different facets and pinpointed crucial elements, such as the business success metrics, operational improvements, and business optimization. These elements play a vital role in shaping the customer relationship management in the retail industry. Although the emergence of new issues remains uncertain, addressing them promptly is essential to minimize potential challenges. This study is limited by time constraints, leading to challenges in comprehensive data collection and potential compromises in data accuracy. Additionally, participant awareness levels and concentration were not systematically assessed, introducing a potential limitation to the study's findings. Moreover, this research utilized a limited sample size and employed convenience sampling. Subsequent researchers are advised to use larger sample sizes, employ suitable sampling methods, and adhere to an adequate time frame to strengthen the study's reliability.

Recommendations

The researchers have considered the following suggestions:

Effective strategies to smoothly integrate AI technologies into existing CRM systems, facilitating a seamless transition for retail enterprises are needed. Business leaders and govern ments should advocate for continuous training programs aimed at equipping retail professionals with the necessary skills to leverage the full potential of AI in managing customer relationships. Emphasizing the need to establish ethical guidelines and practices to address concerns related to customer privacy, data security, and algorithmic bias within AI-driven CRM systems is crucial. 12 Implementation of mechanisms for the ongoing monitoring and evaluation of AI algorithms, ensuring alignment with evolving customer expectations and industry standards is mandatory. Highlighting the importance of achieving a balance between AI-driven personalization and respecting customer boundaries, offering recommendations for tailoring personalized experiences without intrusiveness are needed. Propose programs to educate customers about the advantages and limitations of AI in CRM, fostering transparency and building trust in interactions powered by artificial intelligence should be launched. Encouraging retail businesses to stay informed about emerging AI technologies, urging them to remain adaptable and prepared to implement innovations that can enhance customer relationship management must be needed. Fostering collaboration and knowledge sharing within the industry to collectively address challenges, sharing best practices, and expediting the positive impact of AI on retail CRM are necessary.

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