ASSESSMENT FOR E-BOOK READING HABITS AMONG SCHOOL TEACHERS DURING COVID-19 PANDEMIC

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ABSTRACT

In the present study focused to identify whether there was any significant difference between attitudes towards e-book reading among the school teachers in Dindigul district. Survey method has been adopted. Stratified random sampling method has been advocated to selecting the sample in Dindigul district. Attitude Scale on Digital e-books Reader, Princy Immaculate (2019) was used to identify the e-book reading habits of school teachers. In this study 200 samples were selected in Dindigul district. The major finding shows the there is significant influence between e-book reading habits based on their gender, locality and type of institution. Hence a new type of reading called 'reading on the screen' and a new type of reader called 'screen reader' created.

Keywords: COVID-19; e-Book; Digital Reader; School Teachers.

Introduction

E-book has become more applicable in current circumstance of COVID-19 pandemic as it has caused a worldwide lockdown on the planet and India. At the point when numerous alternatives are free during the lockdown to keep oneself occupied with different exercises. This study directed for gathering information for reading propensities for school teachers during COVID-19. Today's technology advancements, educational contexts should take advantage of innovative pedagogy and digital rich tools for deeper content exploration, ease of classroom management, engagement and motivation of students in learning contexts, and generally revolutionizing the learning spaces of old to meet the learning needs of today's students (Dr. C. Ashok Kumar, 2021). Reading is the procedure of using over 'eyes', our mind to grasp or comprehend the literal as well the hidden meaning of what the writer was endeavoring to pass on. Appropriately reading gives both power and pleasure with understanding by reading the material as a unified whole by which one can amplify the frontiers of knowledge and scholarship (Ahuja, Mishra & Goyal, 2010). Reading has social, financial, scholarly and survival significance, in the light of the fact that democracy of a nation can survive when individuals all over the place having reading competence. Computers have made a dramatic impact on the contemporary society. Almost all aspects of our lives are affected by computers to a significant degree. It is even difficult to imagine a job or a task that we can complete without using computers. Of course, the field of education is no exception. Computers are used increasingly in teaching and learning processes within all subject areas at all levels of schooling (S. Bhaskaran & C. Ashok Kumar, 2016). A viable college library increases pupil learning results by providing a range of electronic materials reference book, journal and projects, offices and assets which support teaching and learning(S. Anbalagan,2021)

Need and Significance of the Study

The changes may occur in both of teaching methods and learners, so the mediator like teachers can make the appropriate changes in their teaching competencies with the use of computer based technologies in the classroom. The computer based technologies can upgrade teacher's knowledge and their skills and it helps to lessen the work load of the teachers (C. Ashok Kumar, 2015). Bringing innovation into study halls emphatically affects the quality of training conveyed. Understudies and instructors collectively concur upon the advantages of utilizing eBooks in schooling. The point of eBooks is to streamline and improve the generally learning experience (S. Anbalagan, 2021). Computerized Books make the learning cycle more intelligent and locks in. Rather than paying attention to one individual constantly talking, understudies can now

effectively take part in the learning interaction. Incorporating eBooks into homeroom showing makes learning a fun and connecting with experience. Gone are the days at the point when understudies needed to convey a sack loaded with books each day to study halls and back home. With eBooks entering the instructive area, one gadget is sufficient to incorporate the whole year's prospectus. These computerized books can be acquainted with understudies at an extremely youthful age, directly from kindergarten to college level, guaranteeing that adapting never becomes exhausting for them. A viable learning framework should guarantee that understudies are effectively associated with the learning interaction. Digital books have achieved an instructive change which assists understudies with learning better and quicker. The E-book could guarantee significant degrees of information conveyance and openness so, it made durable remembrance of information. Teacher's me

ntality or assessment about the electronic books has made the gigantic impact in the educational program exchanges to the understudies. Individuals are not a single technique for learners" blended strategy for instructional procedures needed for the two students and instructors to encourage the teaching and learning cycle (S. Anbalagan,2021).We realize that instructor schooling is the mother of all calling. Instructor teachers can do a marvel in the general public through their understudies. Leaner plays an active role in learning process. Learning is individualized, self-paced and hands on (S. Anbalagan,2019)In the event that the instructor teachers having an uplifting perspective towards the digital books, it might impact the instructor teachers study hall exchanges just as their understudies learning measure. In this way the investigation intends to quantify the e-

book reading habits of school teachers during the COVID-19 pandemic period for an academic purpose.

Objectives Of The Study

The following objectives are framed by the investigator are;

1. To find out whether there is any significant difference between the e-book reading habits of men and women school teachers in Dindigul districts.

2. To find out whether there is any significant difference between the e-book reading habits of rural and urban school teachers in Dindigul districts.

3. To find out whether there is any significant difference among the e-book reading habits of language, arts and science subject handling school teachers in Dindigul districts.

4. To find out whether there is any significant difference between the e-book reading habits of government and private school teachers in Dindigul districts.

Methods Of This Study

Survey method will be employed in the present study. Survey method is a method for collecting and analyzing data, obtained from large number of respondent representing a specific population collected through highly structured and detailed questionnaire or other techniques. Scale on Digital e-books Reader, Princy Immaculate (2019) was advocated to discover the e-book reading habits among school teachers. 200 samples were selected from Dindigul district.

Analysis And Interpretations

Null Hypothesis-1

There is no significant difference between the male and female school teachers in their e-books reading habits.

Table - 1
Difference between the male and female school teachers e-book reading habits
Mean scores

Variable	Gender	N	Mean	SD	t - value	Remarks
e-Book Reading Habits	Male	70	95.21	10.45	2.98	S
	Female	130	87.45	8.36		

Inference

From the above table, it is inferred that t- value (2.98) is greater than the table value (1.96) at 0.05 level. Hence there is a significant difference between the e-book reading habits of male and female school teachers in Dindigul District. The male mean score is (95.21) greater than the female mean score (87.45) and it indicates that male teachers e-book reading habits higher than their counterparts. Therefore, the above hypothesis is rejected.

Null Hypothesis-2

There is no significant difference in the mean scores of the school teacher's e-book reading habits with respect to their locality of institution

Table: 2
Difference between the rural and urban school teacher's e-book reading habits Mean scores

Variable	Location of the School	N	Mean	SD	t - value	Remarks
e-Book Reading Habits	Rural	80	81.45	11.25	3.14	0.05
	Urban	120	96.47	14.65		

Inference

From the above table, it is inferred that t- value (3.14) is greater than the table value (1.96) at 0.05 level. Hence there is a significant difference between the rural and urban school teacher's e-book reading habits in Dindigul District. The rural area school teachers means score (81.45) was less than the urban area school teachers mean score (96.47) and it indicates that urban school teachers are having better reading habits than their counterparts. Therefore, the above hypothesis is rejected.

Null Hypothesis: 3

There is no significant difference among the language, arts and science subject handling school teacher's e-book reading habits.

Table -3
Difference between e-book reading habits of language, arts and science subject handling school teachers mean scores

Subject	Number	Mean	SD	F	Remarks
Language	70	82.14	12.36	5.82	S
Arts	42	79.54	10.25		
Science	88	94.15	14.95		

Inference

The above table reveals that the calculated F- value 5.82 is greater than the tabulated value, it confirms that there is a significant difference among the language, arts and science subject handling school teachers e-books reading habits in Dindigul district. The mean score of science subject handling teachers (94.15) was higher than their language (82.14) and arts (79.54) subjects handling school teachers. Therefore, the above hypothesis is rejected.

Null Hypothesis: 4

There is no significant difference between e-book reading habits of teachers working from government and private schools.

Table -4
Difference between e-book reading habits of teachers working from government and private schools mean scores

Variable	Type of Institution	N	Mean	SD	"t" - Value	Remarks
e-Book Reading Habits	Government	50	98.56	15.67	3.98	S
	Private	150	87.48	12.69		

Inference

From the above table, is observed that the "t"-ratio (3.98) of e-book reading habits of teachers working from government and private schools was greater than the table value (1.96) at 0.01 level. The mean score of e-book reading habits of government school teachers (98.56) was greater than private school teachers (87.48) and it indicates that government school teachers digital reading habits has better than their counterparts. Hence the hypothesis is rejected.

Conclusion

Digital reading is an accurate strategy which incorporates unequivocal, point by point back to back discernment and conspicuous affirmation of letters, words, spelling examples, representations and huge tongue units. This assessment set up that the COVID-19 lockdown emphatically impacted the reading propensities for school teachers, utilizing digital media for their learning purpose. It was shown that most school teachers just read for one to two hours in a day prior to the lockdown. In any case, there was critical increment with large numbers of them further developing their reading hours fundamentally to three to four hours during lockdown. It was set up in the review that individuals readership is normally custom-made to their present condition or need.

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THE IDEOLOGY OF LY-TRAN DYNASTIES "PEOPLE ARE THE FOUNDATION" AND LESSONS FOR VIETNAM TODAY

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ABSTRACT

The Ly-Tran Dynasties are the historic stage full of events and achievements about economy, politics, culture, and ideology in Vietnamese history. That was when the feudal state consolidated and developed statism; many reforms related to politics, economy, military affairs were applied, which brought about many brilliant results in many aspects. Furthermore, more importantly, it was a brilliant milestone that marked the basic turning-point in Vietnamese's thinking and awareness of patriotism and the spirit of independence and strengthening on our own. The ideology "People are the foundation" was one of the most prominent ideologies at that time, which created uniqueness in the history of political ideology in Vietnam from the 10th to 15th centuries. Over 35 years of implementing the process of innovation and integration until now (August 2021), Vietnam has obtained outstanding achievements that had historical significance in all the fields. The scale and level of the economy have been raised; people's material and spiritual life have been improved; economic and socio-cultural development have been harmonized; human development, social justice, protection of resources, and environment are paid more attention. Vietnam is facing new opportunities in the current context, and the study of "People are the foundation" in the Ly-Tran Dynasties is still valid in the current stage. The article is researched on philosophy, cultural philosophy, culturology, textology, and the investigation and analysis of archives and other related documents. Moreover, it focuses on studying the ideology "People are the foundation" in the Ly - Tran Dynasties and lessons applied to Vietnam. The research shows that the content of ideology "People are the foundation" in Ly - Tran Dynasties is expressed through three main contentions: (i), treating people as an essential factor and cause that have a significant influence on the court's important decision; (ii), the decisive role of the people in the prosperity of the nation; (iii), the relationship between the leader and the people. Three lessons that can be utilized for current Vietnam when studying the ideology "People are the foundation" in Ly - Tran Dynasties also have specific values and contributions to the reality of current Vietnam in the context of innovation and integration.
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Keywords: Ly-Tran Dynasties, ideology, lessons, Vietnam, Vietnam today

Introduction

The lesson of trusting the people, looking after the people, treating people as the foundation is a great one drawn from the depth of humanity's history from the East to the West. The ideology "People are the foundation" or treating people as the foundation was not a sudden phenomenon in the Ly - Tran Dynasties. Still, it can be said that in that period, the ideology of being close to the people was especially dignified and became an orthodox political ideology that dominated the entire cultural politics of the era with much more specific and original manifestations than those of other monarchy dynasties in Vietnamese history. It is the political practice - the practice of the undertaking of national construction and defense, and the need to consolidate social order and protect benefits of the contemporary Vietnamese feudal class that are the decisive catalyst for the development of ideology "People are the foundation" in the Ly - Tran Dynasties. Besides, we confidently assume that in addition to the significant impact and influence of Confucius ideology, it is the demand for national construction and defense, together with patriotism, consolidation of centralized state apparatus, and the need for consolidation of the order of feudal society that is one of the essential factors contributing to the formation of the ideology "People are the foundation" in the Ly - Tran Dynasties. When considering the contents of the ideology "People are the foundation" in the Ly - Tran Dynasties, if we ignore limitations due to historical conditions and classes, the content of those ideologies still have practical values to the current contemporary society of Vietnam.

Research questions

Question 1: What are the primary contents of the ideology "People are the foundation" of the Ly - Tran Dynasties in Vietnam?
Question 2: What lessons can we learn when studying the ideology "People are the

foundation" of the Ly - Tran Dynasties in Vietnam today?

Research purpose

The purpose of the article is to analyze and clarify the primary content in the ideology "People are the foundation" of The Ly - Tran Dynasties, thereby showing lessons that can be applied to Vietnamese society today.

Research methodology

The author utilizes a qualitative method based on investigating related studies, analyzing, synthesizing, evaluating, and judging to draw the actual content from ideology "People are the foundation" of the Ly - Tran Dynasties in Vietnam. Simultaneously, proposing lessons that can be applied to Vietnamese society today. Specific research methods such as inductive and deductive method, logical and historical method, comparative method, textology, and contrasting theory with practice are also used in this research.

Literature Review

Related research works can be summarized in the following basic directions:

First, discussing the History of the ideology.

- Work: General History of Chinese philosophy, Trinh Doan Chinh author (editor), National Political Publishing House, Hanoi, 2004. The work analyzed China's historical - social conditions and highlighted Chinese philosophical schools and doctrines from ancient times to modern times. He analyzed and evaluated the Confucian school of philosophy and socio-political thought, including the people's ideology.

- Work: Confucianism, Tran Trong Kim author, Ho Chi Minh City Publishing House, 1992. The work has analyzed and evaluated the content of Chinese Confucian philosophy through periods and analyzed, evaluated Confucianism's content in Vietnam.

- Work: Understanding Confucian political thought in Vietnam from Le Thanh Tong to Minh Menh by Nguyen Hoai Van author, National Political Publishing House, 2002. The work has analyzed the application of Confucian political thought into governing the country in the History of the Vietnamese nation from the Le Dynasty to the early Nguyen Dynasty.

- Book: "History of political thought" of the Faculty of Political Science, Academy of Journalism and Communication, was published in 2001 by the National Political-Su That Publishing House. The book generally presents the History of human political thought from the East to the West through periods: Ancient, Middle Ages, Early modern period; The Marxist-Leninist period, Ho Chi Minh, and Vietnam.

- Work: History of Vietnamese philosophical thought from national construction to the early 20th century, Trinh Doan Chinh author (editor), National Political Publishing House, Hanoi, 2013. The work has studied the ideology of prominent thinkers in historical periods. In which, the work mentions the ideas of people first, the humanity of some thinkers.

- Work: History of Vietnamese Thought – Literature collection, Institute of Philosophy, National Political Publishing House, Hanoi, 2004; The work of Vietnamese History thought by Le Sy Thang author, Social Science Publishing House, Hanoi. These works have studied the History of Vietnamese thought from its origins. In that process, the authors analyzed the political ideology of the people-first in the History of Vietnamese thought expressed through feudal dynasties and typical thinkers.

- Work: Vietnamese thought in the Ly - Tran dynasties by Truong Van Chung, Trinh Doan Chinh (co-editor), National Political Publishing House, Hanoi, 2008. The work has researched, analyzed, and evaluated historical, social, cultural, and ideological conditions of the Ly - Tran dynasties, which mentions the ideology of the people-first, "people are the foundation" of the Ly - Tran dynasties.

- Work: The History of Vietnamese socio-political thought from Chinese domination to the Ly - Tran dynasties by Le Van Quan author, National Political Publishing House, 2008. The work has analyzed and commented on historical events during Northern domination to the flourishing period of independent Vietnamese feudalism.

- Work: The political thought of Phan Chau Trinh, Tran Mai Uoc author, Publishing House of Political Theory, 2017. The work has studied the conditions and premise regarding the formation and development of Phan Chau

Trinh's political thought about state institutions and management, democratic ideology and intellectual exploring, intellectual oppressing, and people's life-supporting. On that basis, the values, limitations, meanings, and historical lessons for the actual construction of the current Vietnamese political system are outlined.

Second, the content related to the political ideology of the dynasties within the scope of the research article.

- Article: Reflecting on values in the History of Vietnamese political ideology published in the journal Political Information, issue 3, 1999 by Ho Van Thong. The article analyzed the values of the political ideology of our forefathers in the History of national building and defense.

- Article: Ruling by virtue in Ly - Tran Dynasties, a manifestation of Dai Viet's political culture, Proceedings of the national scientific conference "The ideology of Vietnam in the Ly - Tran Dynasties," National Political Publishing House, 2008 by Tran Mai Uoc. The article has analyzed the values of the ideology of ruling by virtue in Ly - Tran Dynasties associated with Dai Viet's political culture.

- Article: Hong Duc Law-the essence and historical value, Proceedings of the national scientific conference "Vietnam ideology from 15th to 19th century", National Political Publishing House, 2011 by Tran Mai Uoc author. The article has analyzed the primary contents of Hong Duc Law and its historical value in the current stage.

- Article: An overview of the History of political ideology published in the journal Political Information, issue 4, 2000 by author Nguyen Van Vinh. The article provides readers with a broad vision of humanity's History of political ideology.

In the works mentioned above, most of the authors have thoroughly grasped objective and comprehensive opinion and historical viewpoint - Specifically, putting the ideology of being close to the people, treating people as the foundation, and politics in the context of specific Vietnamese society to make judgment and assumption. However, no work has in-depth research on the system of lessons applied to Vietnam when studying the ideology "People are the foundation" in the Ly - Tran Dynasties of current Vietnam.

Result and discussion

a. Overview of the Ly - Tran dynasties in Vietnam

In terms of historical context, *the Ly Dynasty* began by Ly Cong Uan in 1010 and lasted until 1225, ending in the ninth generation as Ly Chieu Hoang. In 1005, Le Hoan died. His children competed for prominence; finally, Le Long Dinh ascended the throne, but he is a brutal king, addicted to alcohol and women, so he became seriously ill. At the end of 1009, Le Long Dinh died, the courtiers hated the Anterior Le Dynasty, so the monks and great ministers, led by Dao Cam Moc, honored Ly Cong Uan to the throne, and the Ly dynasty was established. In 1009, Ly Cong Uan ascended the throne to establish the Ly dynasty. Recognizing that Hoa Lu was narrow and unsuitable for the capital of a rising independent country, in 1010, Ly Cong Uan (Ly Thai To) moved the capital to Dai La and renamed it to Thang Long. Since then, Thang Long is the capital, the country's political, economic, and cultural center. In 1054, Ly Thanh Tong changed the country's name to Dai Viet, affirming the maturity of an independent and sovereign nation. The Ly dynasty lasted for 215 years, which can be divided into three periods: the period of prosperity (1010-1127), the middle-down period (1128-1175), and the declining period (1175-1225). It is not the first dynasty, but it has a vital part for the long way to come.

The Tran Dynasty (1226 - 1400) was a prominent dynasty, lasting for 174 years with 12 kings and a 7-year later Tran dynasty period with two kings. The transfer of the Ly dynasty to the Tran dynasty was the gentlest power transfer in the history of Vietnamese feudalism because the Ly dynasty was weakened, unable to continue its mission of leading the country. After ascending the throne and beginning the Tran dynasty, King Tran Thai Tong quickly overcame the consequences of the crisis caused by the later Ly. He encouraged farmers to reclaim land, take care of flood control, and pursue a policy of easing people. These policies have promoted the development of the agricultural economy and the people's well-being. The history of Vietnam has also proved that the delivery of the Tran Dynasty was a turning point of Dai Viet in the feudal period.

The Tran Dynasty is also the dynasty that created the spirit of Dong-A - king and servants are united, brothers are in harmony, the whole country joins forces to defeat the Mongol armies three times. The Tran dynasty can be divided into three periods: the first period, from Thai Tong to Nhan Tong (1225 - 1293), is the period of construction and protecting against Mongol armies; the second period, from Anh Tong to Hien Tong (1293 - 1341), is the period of succession development; the third period, from Du Tong to the end (1341 - 1400) is the period of decline.

It can be affirmed that, although influenced by the Northern feudal rites, the tyranny of the Ly - Tran feudal system is not high; the gap between the king and servants, between the nobles and the ordinary people, is not very large. The way of life in court activities also showed the democracy of the community. The aristocracy of the Ly - Tran dynasties was a young, developing social class, the aristocracy's tendency to rule as a feud was not a common phenomenon. Opposition within the government or class antagonism was not significant at that time. This feature has created a healthy political atmosphere in the ruling circles and the country in general, creating strength for the government and the country in internal relations and complex challenges facing foreign invasion. Besides, we believe that, along with the renaissance, the Dai Viet culture of the Ly - Tran dynasties has become prosperous and advanced to a new top through a process of acculturation and cultural integration. Based on the core of ancient Vietnamese culture, as independent feudal dynasties, the Ly and Tran dynasties voluntarily actively absorbed and revised elements of the Chinese East Asian culture and that of the southern Champa culture influenced by India, integrated into the national culture. However, the imported exogenous cultural influences, which are limited, are filtered and refined into endogenous factors and mixed, combined between South Asian and East Asian elements in place of cultural balance. That balance is characterized by the phenomenon of "Three religions in the same place"; Buddhism, Taoism, and Confucianism are interwoven between village folklore and royal bureaucracy,

showing an exceptional and different value in the history of Vietnam political thought.

b. The ideology "People Are The Foundation" in Ly - Tran dynasties

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showing the contents of the ideology "People Are The Foundation" in the Ly - Tran dynasties are expressed through three main points: (i) considers the people as an essential factor, a cause, greatly influence on the court important decisions; (ii) the decisive role of the people in the prosperity of the nation; (iii) the relationship between the leader and the people.

In the thought of the people, *firstly, the Ly - Tran dynasties considered the people as an essential factor, a cause, which had a significant influence on the court's important decisions.*

Thinkers, rulers of the Ly - Tran dynasties often considered "the people's will," "the people's hearts," "easing the people" as the essential things in their political career. For them, "the people's will," "the people's hearts," are the basis for establishing kingship, the grounds for significant decisions such as relocating the capital, succession, and launching wars.

At the beginning of the Ly dynasty, the event that Ly Cong Uan ascended the throne to replace Ngoa Trieu in the Early Le dynasty was considered to be according to Heaven's Mandate and the commons. The imperial minister Dao Cam Moc said to Ly Cong Uan: "Why don't you take advantage of this time, follow the footsteps of the old Thang, Vo, follow the example of new Duong, Le, above agreeable to Heaven's Mandate, below agreeable to the commons. Do you keep retaining the details? Now hundreds of the people are tired, and they cannot stand the order. If you comforted them with kindness and virtue, they would all be happy to listen, and no one would be able to stop them, like water flowing into low terrains." [9, p 66-68]. Ly Cong Uan wrote: "That was in respect to the Mandate of Heaven and accordance with the commons, moving to a place to ensure the eternal existence of the nation and the richness of customs." [3, p 64]. Thus, the imperial capital was for the people, for the sake of the nation, for the country's survival.

The Emperor rules the dynasty, but whether it is sustainable depends on the people who seem insignificant. King Tran Nhan Tong once frankly affirmed: "On weekdays, there are left and right guards, when the country is in trouble, only them (the servants) present."

Because the king loves "them" who followed him to protect him when he had to run out of the capital, he said so [1, p 78]. Those people at the bottom of the society are always loyal, protecting the king, the throne, and the dynasty. It can be said that it is a rare perception in the era of feudal monarchy. For the prosperous Tran dynasty leaders, the people were a powerful force, where economic and defense potentials converged, ensuring national independence and sovereignty. With the belief that the people's will is a solid wall, the Tran dynasty, represented by Tran Quoc Tuan, advocated taking farmers as an abundant and inexhaustible supplementary source for the army through the form of "bach Tinh Giai vi Binh" (the people are the army), and "tan dan vi Binh" (each citizen is a soldier). The people were placed in the central position in the military strategy of defending the citadel and the country. The easing of the people's strength is a long-term plan for the prosperity and longevity of the nation: "Easing the people's strength to make a deep and lasting successor." It is the common philosophy of all righteous wars against invasion and a profound lesson in national defense for not only the monarchies in our country.

Thus, for the rulers of the prosperous Tran dynasty, the people became a political entity, the leading social force, and played a decisive role in the defendant war and maintaining social order or national development. Even within the framework of feudal thinking, this thought also expressed belief in the strength of the people, an essential principle of the art of governing the country and building progressive politics.

From the perception that power belongs to the people, the government considers listening to the opinions and aspirations of the people as the top duty in governing. From travel incognito to "Quietly listen to the people's words to consider their will, to understand their hardships" [6, p 517] to make timely and appropriate decisions in the process of governing the country to listen to the people's opinions towards critical national decisions, or advocating "Easing the people's strength to make a deep and lasting successor," the Tran dynasty granted the people the power to decide

the nation's destiny, gain their consent and support

Second, the decisive role of the people in the prosperity of the nation.

The people's decisive role in the survival of the nation-state and the permanence of the dynasty is the truth that only a man with a clearheaded mind can notice. Therefore, the noble kings and mandarins of the Ly - Tran dynasties firmly believed in the cause of fighting the enemy whenever they could mobilize the whole people to participate in the battle. Before the threat of King Nguyen that he would once again attack and destroy Thang Long citadel, Dao Tu Ky, an ambassador from Dai Viet, proudly said that: "That Thang Long citadel is just a petty thing to prevent petty thieves and robbers, so it is easy to destroy it. As for fighting against enemies, we have already owned a firm stronghold like a mountain. Therefore, no one can break through it, and that is the power of our people" [5, p 175]. Tran Quoc Tuan pointed out that the reason for defeating the Mongol armies was because of the unanimity in mind of the king and mandarins, the concord of brothers, the contribution of the whole nation, and the aim to arrest the foes; Tran dynasty built a solid wall of the will of the people "the will of the people is the strongest wall for national defense." Tran Quoc Tuan summarized the war experience for national defense, thereby giving an assessment that is a profound lesson for all time and all wars of national defense; it is the ideology of perceiving great potential about the military, national defense, economy of the people that firmly ensured the nation's independence and self-determination. He said, "Loosening the burden for people is essential. That is the best policy for national defense". Thus, for national construction and defense, the court had to loosen the burden for people.

With the Dien Hong conference, the Tran dynasty was the only dynasty in the history of Vietnamese feudalism that held a conference of representatives of the entire people to consult the people (represented by senior counselors) about the decision of politics that was vital to the nation's destiny: Should we surrender or fight? By this action, the Tran dynasty turned the policy of fighting against the enemy to defend the nation of the court into the

unanimous will of the entire people; thus, the court could mobilize the maximum synergy of the whole nation.

Third, individuals and leaders cannot succeed without the support of the people.

In Tran Quoc Tuan's conception of the people, he also noticed the decisive role of the people to the great men in history. He once said: "The flamingos who want to fly high must rely on the six wing posts. If there are no six pillars of wings, then the birds are normal." [1, p 55]. Thus, outstanding heroes make a great career thanks to the masses of people. In the relationship between the king and the people, the Ly - Tran dynasties kings assumed that they were the sons of Heaven, ruled over the people on behalf of Heaven, and considered themselves the parents of the masses. Therefore, they assumed they had to take responsibility for making the people well-fed and peaceful. King Ly Thai Tong "loved the people like his children," and King Ly Thanh Tong once said: "I love my children like my heart for the people as a parent.." King Tran Anh Tong affirmed: "I am the parents of the people. If I see my people in distress, I will immediately help them without hesitation". In "Lo Bo Van," Ly Thuong Kiet affirmed: "Heaven gave birth to the masses, and if there is a gentle king, the relationship between the king and the masses will be harmonious. The best way to be the leader of the masses is to take care of the people "[9, p 174]. Although the kings were supreme, they had their relationship and responsibility for their people with the concept. The king's concern and other rulers in the court are sometimes expressed in compassion between the sufferings and hardships. On the occasion of the cold weather, King Ly Thanh Tong sympathized with those who were imprisoned, those whose sins were uncertain, and those who had no food to eat and had no warm clothes to put on. Thus, in the feudal dynasties of Vietnam, the kings often considered themselves the center that helped connect the national community and people; and they also regarded themselves as the ones who directly protected the people.

It can be affirmed that the notion about people of the Ly-Tran dynasties contained many positive factors. Thanks to those factors, the Ly-Tran Dynasties achieved outstanding results in the cause of national construction and defense. However, the notion about people in the Ly-Tran Dynasties was not outside the mold of the feudal state consciousness and did not overcome the era's limitations.

c. Today's lessons are applied to Vietnam when studying the "People Are The Foundation" ideology in the Ly - Tran dynasties

With what has been presented and analyzed above, in some specific aspects, the thought "People Are The Foundation" in the Ly - Tran dynasties is beyond the times, has great significance both in theory and practices for the construction and development of contemporary Vietnam today. Lessons that Vietnam can apply in the current development process are:

Firstly, the lesson on promoting the power of the people in the cause of national construction and development.

Experiencing historical events which deciding the destiny, the development of the Vietnamese nation has proved that the people always have a vital role and contribution. The people are the subject, deciding the development of history. The power of the masses determines the success - failure of every revolution; During his lifetime, President Ho Chi Minh emphasized and affirmed that: "There is nothing in the sky as precious as the People. There is nothing stronger in the world than the united force of the People." [4, p 726]. The Party adheres to the ideology of "The country takes the people as the root"; define revolution as the cause of the people, by the people, and for the people. They consider meeting the practical benefits of the people, unifying the rights and obligations of citizens as the driving forces to promote mass movements; Promoting the role of mastery and strength of the people is the responsibility of the Party, State, Vietnam Fatherland Front, the organizations and unions.

In the future, to "strongly arouse the spirit of patriotism, nation's will of self-reliance, the strength of great national solidarity and the aspiration to develop a prosperous and happy country" [2, p 109], and to successfully implement aims and tasks of socio-cultural development and improving the people's living conditions, our Party and state need to strongly arouse the spirit of patriotism, the will of self-reliance and self-improvement of the nation,

and the aspiration to develop a prosperous and happy country. Accordingly, it is necessary to research and launch many movements to arouse all potentials and resources and create new motivations and breakthroughs for fast and sustainable development. In the initial stage, we can focus on (i) vigorously develop science - technology, innovation, and improve the economy's productivity, quality, efficiency, and competitiveness; (ii) construction and development of culture and society, and the improvement of material life and spirit of the people; (iii) Improve the quality and effectiveness of the movement "All people unite in building a cultural life" and the movement in all fields, especially in defense, security, foreign affairs, and building the Party and State. Mobilize the masses of people to participate; create positive effects on national construction, protection, and development. Most recently, the occurrence and outbreak of the COVID-19 pandemic on a global scale have greatly influenced all of the fields. Before the unpredictable developments of COVID-19 in the world, especially, India and other countries that have a border with Vietnam, such as Laos and Cambodia, can cause the outbreak of the disease on a large scale at any time. In fact, in the previous outbreaks of COVID-19, besides the government's drastic intervention, the people's role in pandemic prevention and control is significant. Thanks to the promotion of the people's strength and the strict observance of the majority of the people, Vietnam has gradually repelled the pandemic, returned the country to its previous status, and implemented the "dual goal" of developing the economy and ensuring the requirement of pandemic prevention and control. Now, due to COVID-19 may break out in Ho Chi Minh City, Hanoi, and provinces that presently have many infected cases like Bac Giang, the departments, ministries, branches, and authorities from central to local participated and set out a new requirement, which is the participation of the people themselves. Each of them needs to turn themselves into an epidemic fighter. Strictly complying with the regulations on disease prevention and control has been promulgated. Being willing to denounce individuals and organizations violated regulations on pandemic prevention and control. Suppose each person gets into a fight against the pandemic. In that case, regardless of the unpredictable developments with different types of variants of COVID-19, we can step by step control and repel the pandemic in the not too distant future

Secondly, the lesson on exercising political power

"People are the foundation" is not only the core value of the socialist rule of law State of Vietnam, but it also stipulates, throughout the Constitution, laws and socio-cultural-economic policies in Vietnam. In Vietnam, the Constitutions recognize the subject of the State's power [8, p 17] as: "All the State's power belongs to the people." The people are the supreme subject of the State's power.

The 2013 Constitution was promulgated with many new points, including democracy, human rights, and people's mastery. The system of legal documents on democracy in the operation of state power agencies is concretized and institutionalized. The forms of democracy implementation (representative democracy and direct democracy) are paid attention. The implementation of the Regulation on grassroots democracy and the Ordinance on the implementation of democracy in communes, wards, and townships has achieved significant results. The ambiance of democracy in the Party and society has been expanded wider. The Fatherland Front and socio-political organizations have had many innovations in democracy, streamlining the apparatus and bringing into play the active, positive, democratic, and self-disciplined role. In addition, the 2013 Constitution and many other vital documents of the Party and the State of Vietnam have affirmed "*the role of being a subject and central position of the people in national development strategy and the whole process of national construction and defense*" [2, p 173], and continued to build and perfect the socialist rule of law state, improve management and administration capacity and efficiency, and capacity for development creation. To perform well the State's function and well handle the relationship between the state-market-society, the State manages and operates the economy through laws, strategies, planning, plans, and other regulatory tools

based on the rules of the market. Focusing on social development and effective management, and national assets are the orientations that need developing and concretizing in new conditions. Focusing on perfecting the legal system, owning a mechanism for assigning, coordinating, and controlling power among state agencies in the exercise of legislative, executive, and judicial powers gradually becomes more precise and more positive. The state apparatus was rearranged in a streamlined way associated with downsizing the payroll and operating effectively and efficiently. The role of law and law enforcement is more and more focused on organizations and activitíes of the State and social life. Administrative reform and judicial reform in several areas have breakthroughs. The organizational apparatus of the people's courts, people's procuracy, investigation agencies, and agencies of judicial supplement continues to be strengthened. Besides, its quality of operation has been improved. The benefits of the State, rights and legal benefits of organization and individual are better protected; human and citizen rights are respected, protected, and ensured.

However, it is also necessary to frankly notice that in that process of mobilization, change, and development, issues in Vietnam related to the exercise of political power, democracy, and building a socialist rule of law state still have limitations and points that are not synchronized with the requirements of innovation of Vietnam. The limitations are expressed through: some contents about democracy and human rights have not been concretized into laws and policies; awareness of some levels of party committees and authorities on democracy and democratic practice is inadequate; the people's right to mastery in some places is still violated, and the exercising of democracy in some places is sometimes formalist, separating democracy from discipline and law; the exercising of hierarchical division and decentralization of central and local governments in Vietnam still has many limitations, which causes the roles, responsibilities, and initiative of the grassroots not fully brought into play, especially in economy and resource management; The accountability of agencies in the State apparatus to the people is still formalistic in

some places; the role of the information and press system is sometimes not influential; responsibility for solving some cases is not clear and transparent to the public; the construction of a professional, modern, fair, and honest Vietnamese judiciary which serves the fatherland and people still takes particular time to perfect in practice.

In the process of innovation and integration, the ideology about the unity of the State's power with mutual allotment, coordination, and control in the exercise of legislative, executive, and judicial powers has consistently manifested in the theoretical thinking of Vietnam. It is one of the critical points of view, which shows the development in the theoretical awareness of Vietnam's Party and State in the process of organizing and exercising the State's power, belonging to the people and treating the people as the foundation which are traditional lessons in the thousand years of national construction and defense of Vietnamese nation. Besides, it also becomes the basic principles guiding the task of reform and construction of the State apparatus of Vietnam in the current period of renovation and integration. Drawn from the experience of the ideology "People are the foundation" in Ly-Tran Dynasties and other Dynasties in the Vietnamese nation's history, from the practice of 35 years of renovation, the document of the 13th National Congress of the Communist Party of Vietnam has added one new important and meaningful content which is "People are the beneficiary" with the motto "people know, people discuss, people do, people inspect, people monitor, people are the beneficiary"[2, p 249]. It shows that Vietnam's Party and State have paid more attention to putting the people's benefits in the center of the critical decisions and policies with the ultimate goal of the people enjoying the benefits. In addition, the exercise of political power should also pay attention to the role of the people. In Vietnam, the people are the ones who create historical histories, and it is they who are the sole and supreme subjects of political power. Therefore, the entire activities of the political system have to originate from the legitimate interests and aspirations of the people. The strength of organizations in the political system lies in their close-knit attachment to the people.

At the same time, in a democratic polity, the exercise of political power requires ensuring the unity of power and simultaneously eliminating any danger of monopolizing power from any organization or political force. Therefore, the exercise of political power always needs the allotment and coordination among the organizations to exercise the right to decide the political policies, the right to execute the political policies, and the right to inspect and supervise the decision and the exercise of political policies. It contains a significant meaning that ensures the political power always serves the people's benefits and will and prevents the risk of misuse and deterioration of power harming the people's power.

Thirdly, the lesson on "Support the people' lives."

"Support the people's lives" is Phan Chau Trinh'sthe saying of Phan Chau Trinh (1872-1926), a culturalist with many innovative and progressive ideas related to Vietnam's economic and political, cultural, and social life in the late 19th and early 20th centuries. Our view emphasizes and believes that taking care of the material and spiritual life of the people in a nation-state is fundamental for sustainable development. It is necessary to focus on economic development, closely and harmoniously combine economic development with cultural development, and implement social progress, social justice, and social policies to continuously improve people's living standards. At the same time, it is necessary to promote the campaign "All people unite to build new rural and civilized cities" in Vietnam more deeply and widely; however, it is essential to notice not to mobilize too many people just because of achievements. In economic development, it is necessary to create an increasingly transparent and safe environment and conditions for production and trade, provide favorable conditions for people and businesses to promote their creativity, investment, trading, and fairly compete in the market economy. In addition, it is essential to strengthen the development of the social welfare system, support people to have jobs and stable incomes, and improve working conditions; promote the movement of "poverty reduction, hunger alleviation," especially in remote and isolated areas; support resources for production to help low-income families rise out of poverty sustainably, narrow the gap in living standards and access to social services. Building a cultural life is both resolutely eliminating backward and objectionable customs, fighting and criticizing, repelling the evil while preserving traditional cultural values, and at the same time honoring and replicating the right, the good, the positive, and the noble for everyone to see and follow.

In the current period, when the COVID-19 pandemic continues to have complicated and unpredictable developments, it has spread and broken out in many countries and regions worldwide, significantly affecting the global economy and Vietnam's major partners. In Vietnam, the COVID-19 pandemic has affected many aspects of the economy and society; people's lives face many difficulties; many companies, business households, and cooperatives have to suspend operations, reducing production scale or producing production perfunctorily, which increasing unemployment, losing jobs in the short term. The situation will be more intricate if the pandemic prolongs. To share difficulties, ensure the lives of people and laborers nationwide, and contribute to social stability, the Vietnamese Government has proactively advanced timely and appropriate decisions to support businesses, the people overcome difficulties, together with the participation of the whole political system, the consensus, and solidarity of the whole people and army, which have created the strength to help Vietnam fundamentally control the COVID-19, while maintaining macroeconomic stability, social stability, strengthening cooperation, sharing experiences, equipment, and medical supplies with other countries, which is recognized and appreciated by the world.

Conclusion

In the arena of political thought during the Ly - Tran dynasties of Vietnam, the people were recognized as an important social force in nation-building and defending. The thought of "People are the foundation" in Vietnam's Ly - Tran dynasties gives us lessons on promoting the people's strength, affirming their essential role, and profoundly taking care of the people,

pacifying them, improving their life-quality. Even though more than 650 years have passed, the lessons gained from studying the ideology of "People are the foundation" in the Ly - Tran dynasties of Vietnam are still imbued with modern Vietnamese society today./.

Conclusions and suggestions for governance implications

This study was conducted to analyze and clarify the primary content of the "People are the foundation" thought of the Ly - Tran dynasties, thereby pointing out the lessons for applying to Vietnamese society today. The results show that, in terms of historical context, *the Ly Dynasty* began as Ly Cong Uan in 1010 and lasted until 1225, ending in the ninth generation as Ly Chieu Hoang. The Ly dynasty lasted for 215 years, which can be divided into three periods: the period of prosperity (1010-1127), the middle-down period (1128-1175), and the declining period (1175-1225). It is not the first dynasty, but it has an essential part for the long way to come. *The Tran Dynasty* (1226 - 1400) was a prominent dynasty, lasting for 174 years with 12 kings and a 7-year later Tran dynasty period with two kings. The transfer of the Ly dynasty to the Tran dynasty was the gentlest power transfer in the history of Vietnamese feudalism because the Ly dynasty was weakened, unable to continue its mission of leading the country. The content of the ideology "People Are The Foundation" in the Ly - Tran dynasties expressed through three essential points as follow: Considering the people as an essential factor, a cause, greatly influence on the court important decisions; Affirming the decisive role of the people in the prosperity of the nation; The relationship between the leader and the people. From the research results, the article provides a lesson for applying to Vietnam today related to the study of the "People are the foundation" thought in the Ly - Tran dynasties, which is about promoting the strength of the people in national construction and development; lessons on operating political power; Lesson on "Supporting the people's life."

Management implications of historical factors

The ideology of "People are the foundation" in the Ly - Tran dynasties has become a valuable tradition, solid luggage, a substantial foundation in the context of Vietnam's renovation and integration. Therefore, it is necessary to further promote this tradition in the process of national construction and development.

Management implications of applied value factors

In the current period, each person's patriotism is associated with responsibilities and obligations in the career of national construction and protection, achieving the goal of "a prosperous people and a strong, democratic, equitable, and civilized country." In particular, in times of difficulty and tribulation, the strength of the Vietnamese people, which has been forged for generations, will be spread and aroused even more strongly. Always believe in the strength of the people, love the people, respect the people, wholeheartedly and devotedly serve the people, and absorb the development philosophy of Vietnam summed up by the wise men and philosophers "carrying boats is the people, overturning boats is also people," "people are roots."

Acknowledgement

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A STUDY ON ARTIFICIAL INTELLIGENCE AND ITS IMPACT ON LEADERSHIP

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ABSTRACT

AI and automation will change the very nature of work. The leadership in the business is the capacity to lay out and achieve provocative objectives to make an indispensable move when organization required, dominate the competition and incite others to accomplish at the most extreme level they can. Accordingly, leaders give the direction to the workers and being spurred to learn new things. The success of organisation depends on the effective leadership, plays an important part by attaining certain objectives through a human group. Understanding and effectively performing change leadership is precarious in organizations. Trends embryonic in the market exert tremendous forces for changes in the approach of work together in organizations. One such kind of tremendous change is the artificial intelligence in the great technological developments.

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Keywords: Artificial Intelligence, Leadership, Organisation

Introduction

The term Artificial Intelligence (AI) was formulated in 1956, yet it's become more famous on account of the information volumes and progressed calculations. Along these lines man-made reasoning is the computer-generated experience of human insightfulness in machines that are robotized to consider like people. A definitive unmistakable of robotization is its ability to legitimize and yield commitment that have the best random of achieving a specific goal.

Man-made intelligence is getting far farther than industry 4.0. Man-made reasoning includes PCs to examine gigantic sizes of information to find out blueprints and sort expectations.

The job of AI is set a huge chance to upgrade human asset capacities incorporates selecting measure, finance, ability procurement, self-administration exchanges, detailing, access methods and approaches. In the current time, AI skills are getting modern heights and have a preeminent wave in each business. Blending AI in to HR capacities will further develop the general worker experience and this will bear the cost of added capacity, time and accurate data for conclusive individuals the executives. Artificial intelligence is renovating the business models and conveying value by augmentation. Countless widespread leadership models are not enough to deal with constant, prompt, and intricate change. It is important for leaders to cope up with the technologies and requires a different leadership mind-set. The trend of artificial intelligence is leading edge of accelerating leaders in the organizations need to validate the informed decisions to employ artificial intelligence in their business.

Human and Technology

There is an emergent threat that forms will become in excess of dependent on technology is ignoring the value of humans. Even the complex roles can be replaced by smart technologies sometimes it can outperform humans in conflict resolution, crisis response, negotiation, creativity, collaborative design. Humans are struggling to adapt with digital transformations and the change in cultural aspects and future solutions. It's a leader point to make the employees familiarise with the technology by maximise their potential and making them aware of their role's may be replaced in future by AI. The awareness of AI will help them in raise the digital literacy and to understand the technology changes in the world.

In the AI centric world, training is must to facilitate the changeover of working cultural and the thoughtfulness exercise to permit workers to turn out to be familiarised to the new-fangled technology.

In the world of AI, no more hard skills going to pay off- the soft skills are become even more imperative. Automation thrive businesses expertise like verbal reasoning, spontaneity, indifference, empathy, creativity and more may be progressively anticipated.

The human resources has to interplay between the personal and artificial intelligence, this will facilitate the aspect of personal development.

The change in Leadership

Traditional exploration in leadership has originate that behaviours such as captivating guidance and edifice sturdy associations are significant for foremost individuals (DeGroot, Kiker, & Cross, 2009). Automated machines have not yet extended passionate intelligence. Thus, artificial intelligence leadership will necessitate a stride back to deliberate again and regulate from present stimuli used for foremost creatures.

Managerial grid (Blake & Mouton, 1964) was one of the primary theories of leadership, delivered an exemplary for leaders to investigate with a combination of apprehension for people and organisation. Two different styles of leadership emphasized in leading roles such as authoritative and team styles. In anticipation of the advent of artificial intelligence based sensitive, a group administration style as great anxiety for individuals and also for organisation may be used for information technology workers. The competing arises between the near to the ground cost versus complexity of hardware and software in the preliminary stages of machinelike brain leads to the low concern for people and high concern for structure, authoritative style of robotic leadership. Constructing cherishing interactions with automated machines is also predictable to be transformed with a superior attention on beliefs and principles, perhaps employing both a top-down and bottom-up automaton integrities method.

Rethinking the fundamentals of leadership in order to deploy the artificial intelligence appropriately taking humanoid as a part. The conformist commercial leaderships are adapting to innovative methods, chances and extortions in the age of artificial intelligence and leaders are in demand to proceeds over the contest to effort healthier improvement and affordability.

Despite the optimism in the artificial intelligence, the business leaders cannot neglect the circumstance on the subject of its potential risks. Corporate level executives and forerunner's team are indeterminate about to capitalise in automation technologies as of safety and concealment distresses. Though to spectacle the courageous and liberal qualities of direction, although safeguarding refuge through advance, some protruding administrators are carrying out trials. Front-runners need to comprehend and recompense courtesy to as their organisation boards on the automation journey. Several resolutions necessitate discernment elsewhere' whatever automation can encirclement from data independently. Leaders can utilize a compassion and moral reflection used along with their organisational culture and history. This is the spirit of humanoid decision, the presentation of skill and ability to precarious corporate choices and practice. Leaders plotted have a wisdom of a move in the trend and recognize the decision concerned with abilities of resourceful intelligent and trialling, data exploration and elucidation, and policy expansion as three uppermost innovative skills that will be essential to flourish in the future. More often, leaders may require judgement, capacity to improvise, experience and discretion based on rules in the organisation. The potential capability of automation is the capability to assistance in making decisions and that the technology is being intended to support rather than replacing the leaders.

The leaders in the demand to associate with artificial intelligences and recognize no necessity competition in contradiction of machines. Whereas humanoid judgment is improbable to be mechanical, logical technologies can augment immensely to this sort of exertion, supporting in choice livelihood and information determined simulations as well as examine and encounter accomplishments.

Leaders be certain of that they will belief the recommendation of quick systems in construction occupational verdicts in the future. For example, AI system consents investment managers to enquire investment related queries, such as, "What sectors and industries perform best three months before and after a rate hike?" and get responses surrounded by minutes. Depiction how such technologies could sustenance persons and teams of leaders in evaluating decision significances and ascertaining circumstances. Not only will augment forerunner effort, but it

will also empower leaders to intermingle with smart machines, through discussion or other spontaneous crossing point. Artificial intelligence will be their always accessible subordinate and mentor.

Even though the AI augmentation provides such values and benefits in the administration and analytical tasks, the lagging of unfathomable communal abilities precarious to interacting, training and act as a team will help leaders to viewpoint out in a domain beyond automation. While leaders can utilize digital technologies to tap into the knowledge and judgment of associates, customers, and communities, and able to tease out and bring together diverse perspectives, insights, and experiences in near future.

Artificial intelligence threats and opportunities

The determination of artificial intelligence is to supplement, develop, and eventually substitute human intelligence, extensively observed at least by humans as crucial reasonable benefit.

The common question arises thus leadership will be spared in spite of the influence of artificial intelligence. Indeed, the hard elements of leadership such as raw cognitive processing of facts will be supplant by AI. And also the automation will also lead to a better importance on the indulgent fundamentals of management such as attitudes, behaviours, and behaviour traits that permit leaders to relief others accomplish a shared goal or communal drive.

The change of leadership that progressed through thousands of an inordinate length of time are improbable to implement the potential influence of environmental changes, that may reshape the perilous abilities and behaviours which make the front-runners operative or inoperative.

The expertise of leadership transitioned from corporal to perceptive skills with the advent of language, putting an exceptional on intelligence and proficiency at the outlay of power and strength. The present automation uprising to automate the statistics determined facet of leadership and commoditize the entrusting lenient fundamentals of headship to humans.

From the recent investigation reports proposes that there is a need to rethinking the essence of leadership characterized in spite of AI's intense commotion and prompt, ambiguous change. The agile role of leadership is taken a turn in terms of humility, vision, constant engagement and adaptability rather than certain qualities like deep domain expertise, authority, decisiveness and short-term focus.

Skills of Leadership in the age of AI
a. Humility'

In a phase of prompt modification, front-runners are frequently out-of-the-way from learning about new growths by the utter capacity and assortment of innovative evidence apprehended regular. The effective leaders are enthusiastic to absorb and open to seeking input from both the inside and outside of their organisations and understands employees can make a contribution even if they have less experience. In future, leaders can help for the growth of employees in this digital world to succeed, selflessness mind set requires humility. This uniquely human trait that computers will never possess. The management works can be done with the computers but leading the team with humanity cannot. The passions and emotions cannot be sense in artificial intelligence even though it behaves like a human. In today, leaders can passions as an edge by making sense of human. The organisations can implement extensive reverse mentoring programs for leaders to cope with the future trends. These edges are destined to institutionalize the development of erudition to receive, relaxed, and influence the information of crew members, peers, and personnel for the advantage of the 'business.

b. Adaptableness

Adaptability capitals organised to revolutionise and return to chances and intimidations as they look as if at an organisational level. Presence uncluttered to innovative philosophies and shifting to the circumstances is the major compliance at an individual level and being capable to efficiently interconnect that swotted estimation to pertinent investors, as well as peers, crews, and patrons.

In phase of artificial intelligence, adaptable leaders are not anxious about a new progression of exploit when the condition threatens, and permits them to oppose challenges with an emphasis on knowledge.

c. Vision

Vision is playing an important role in the success of an organisation. Effective leadership should have a clear vision and lucidity among cohorts, underlings and workforces regard to destination is vital in the prompt expertise growth and occupational exemplary distraction. The leaders in the AI age should have a compelling and healthier at collaborating employees in an actual way. Additionally, apparition permits a leader to device essential organisational alterations without having to immediate welfares. For example, numerous cream of the crop of today's cardinal giants, such as Amazon, Tesla, Facebook, Tencent', Alibaba, and Google, have evidently pronounced visions for their establishments, even in the face of enormous short-term improbability.

d. Engagement

To be fruitful in the automated age, a front-runner must endure persistently tied up with their contiguous atmosphere so that they can be in harmony, and become accustomed to, the indications rather than the clamour — which will one or the other creep up or sustenance their vision. Responsive front-runners need to stay involved, but they also need to discover techniques to retain their crews engaged, predominantly when the track becomes perplexing. Commitment in an automation age can progressively be proficient using digital. The leaders can invest time to connect with people because machines cannot. Connecting with people emotionally will be essential in the years ahead as technology becomes more entrenched in day to day life.

Based on the competencies prerequisite for leadership in AI, is fundamentally diverse in key discrepancies. The forthcoming leader's hard skill will be substituted with insolent machines where their indulgent proficiency going to play an enormous role in accepting human values such as unending leadership traits like veracity and emotional intelligence.

Leadership in Artificial Intelligence

The business leaders in foremost productions like merchandizing, conveyance, healthcare, monetary services and technology the aforementioned showered with greater accomplishment in artificial intelligence. Those business leaders accepted that impact of AI is aggressively than before by tracing the success map of organisations.

In the age of artificial intelligence, corporate administrators have to emphasis on entrenching automation into their intentional strategies which would consequently empower such leader's progress an enterprise extensive approach for artificial intelligence, which all-encompassing commercial fragments can trail. Furthermore, as a measure of the management team, they are accountable to look after monetary characteristics of the association as well, consequently, relating artificial intelligence to proceeds and customer rendezvous prospects will support them discover the habit of technology for numerous proceeds augmentations and client understanding inventiveness while tracing their individual headway. Automation administrators should also emphasis on engaging numerous opportunities for procuring artificial intelligence and evolving pioneering solicitations in a determination to quicken the implementation of automation initiatives via admittance to an extensive mere of aptitude and technology resolutions.

The future described organisation will be amalgamation of automation and management. Recompenses are in elevation, and cream of the crop will need to be malleable to accomplish line-ups of automated machines and their connected programmers effectively. In receipt of hindmost to the essentials by exploiting leadership rudiments for these multipurpose crews may be required in the commencement phases of automation leadership.

Leadership in the near Future

Uniquely human attribute has been considered as an intelligent behaviour. But the transformational technology of information technology networks evolution exponentially, although automation is progressively upright out in the current age. In the industry 4.0, centrifugally artificial intelligence and human may strive for jobs. But they will progressively act as a team and supplement each other. So the following kind of leadership is required to make it occur.

e. New intelligence requires new leadership

The re-assessment of leadership is the major requirement in the age of artificial intelligence.

Algorithms never fully handle problems and dilemmas of business, leaders in an organisation need a transformation from smart to wise leadership not only to create essential economic value but also a sustainable and legitimate organisation. Based on the wise leadership performance, the value of AI can enhance, erode or destroy in an organisation. In spirit, resolution creation is around enlargement the circumstantial outline and given that an additional universal viewpoint. It means existence capable to comprehend and decide uncertainties and rigidities. In the ear of AI, leaders should adopt a multi pleat standpoint, emotional ripeness and open-handedness of depth to instigate and guide others. Automation can benefit front-runners to emerge an administration's apparition, but deprived of understanding, it may compromise an additional benevolent prospect.

f. Leveraging AI's predictive power in wise judgement

Leaders identifies the prominence of forecasting the ensuing arcade change or pronounced product, creating sagacity of numerous features. AI is even now outpacing humans in escalating over head the clamour, in apprehending outlines and indications. Its defined extrapolative command is functioning with, and improving, human conclusion. On the other hand leveraging AI means transmuting vital effective accomplishments and collaborating beyond inner business precincts to form an environment of collective digital influences and performs. Prophecies, besides, must lead to deliberately effective activities, with data analytics entrenched as an essential administrative competency, used to distinguish discomfort opinions, proposal solutions and empower decisions. Corporate is about foreseeing the indescribable, revolutionising resolutions, exciting and assembling persons. Determining an upcoming circumstance, relatively than only foreseeing definite aftermaths. Positioning AI as an actual tool, the intelligent leaders has to combine the artificial intelligence and human together as part to make the term effective. The leaders can use their individual creativeness where it will make an alteration, by founding a novel elucidation can influence.

g. Is AI vulnerable to human flaws?

If the human brain has intended to compete with the machine learning, it's frail and subject to predisposition. It has a tendency to markdown the opportunity of substantial change, functioning within the realm defined by the data used to standardize it. For example, somebody from a destitute area smear for a debt. That solicitation is deteriorated grounded on a system data predisposition. So artificial intelligence, and predominantly machine learning, must be de-muddled, supervised and succeeded by prudent, accountable leaders, with data veracity protected, the accurate data contributions and demonstrable, malleable processes.

h. AI is a black box - trust must be put together

The processing data which helps mechanical systems to learn. The algorithms capture the deep neural network layer that gradually recognizes the further multifaceted features. Furthermore, the artificial intelligence residues the human mind that intended or achieves it. The appropriate goals and explicit needs guided AI and the algorithms are coded as per the term. Too subtle for human detection, the AI can identify patterns, generate precise insights and allow enhanced, more conversant decisions. AI assumes with definite socio ethical importance element, in predictable future AI may be keen. But to customary accurate objectives and involve in resourceful interpretation AI needs human, that it can't act as a wisdom as equal to human intelligence.

i. Machines are unlikely to replace humans

Artificial intelligence and machine learning may drastically amend effort gets done, by supplementing and enhancing human competences. Human creativeness immobile outshines workstation power, exclusively for immaterial representative perceptive cannot yield connotation on its particular. From the words of European Commission, there are neuromorphic computers which impersonating the vital features of natural brains by being vigour well-organized, buoyant and able to learn and it can also accomplish such an achievement in a detached prospect. The judicious leaders will recognise the massive opportunities and the power of computer learning, progressive the insights of

neuroscience, although accentuating human resourcefulness. Developing human qualities such creativity, perspicacity, social collaboration, impartiality of judgement and holistic apparition of the future, not to compete with the computers however as self enhancement.

j. Human Emotions are ultimate strength

Artificial Intelligence shows a significant role in human choice making progression. An individual not only intellectual, also demonstrative and thus emotions have to be measured when to stimulate a person how a person will respond when circumstances arise. In imperative to comprehend the associations between emotion and the astuteness decision making, the artificial intelligence has to direct by the human as a leader to unleash the bias. AI can be a massive help to the forerunner who's tiresome to develop additional inwardly agile and foster creative approaches to transformation. Eventually the forthcoming of work and the imminent of people are intensely entangled. If AI interrupt that association between exertion and distinct uniqueness is successful to have extensive effects. On the advantageous side, individuals have evidenced themselves to be extraordinarily flexible.

Conclusion

The cutting-edge movements in AI and computerized reasoning are expeditiously getting instrument, followed in a colossal change in the way people from one corner to another the world demonstration along with devices and groups. The relationship between the people and advances is being reclassified at effort, and there is nobody size fits all strategy to sublimely dealing with this change. As an elective chiefs need to monogram the technique to executing AI, to meet the fluctuating possibilities all throughout the planet. Simulated intelligence will eventually approve to be financially savvy, strengthening talented, and maybe extra unprejudiced in its exercises than humanoid. The following plans and assets can be advancements however the recruiting approach needs human in the spot. The underwriting is to contraption computerization to program oversight and to intensify yet ought not exchange humanoid decision. To detail themselves and their associations for the sorts of human-drove work that will build differentiation as apparatus continues on extra dreary assignments, pioneers should make the resulting strides as to investigate early, and with embrace new key execution pointer to drive reception and furthermore to further develop planning and business methodologies for imagination, participation, judgment abilities and sympathy.

The man-made reasoning associates will convergence in the labour force will be engaged with mindfulness about individuals to endeavour to make remains alive re-established like extrapolative record messages and the web search bar. In such case, civilisation ought to predate man-made consciousness supportive job in the working environment over the coming decade.

People and machines can cooperate in the period of AI, it's an urgent to reconsidering business measure. The fitting administration in indorsing responsible man-made reasoning by managing the conviction, allowed and appropriate worries that caravan man-made consciousness and by remembering the overall extents of explicit advancement deviations.

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CONSUMER PERCEPTION AND SATISFACTION TOWARDS PACKAGED FOOD PRODUCTS WITH REFERENCE TO COIMBATORE CITY

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ABSTRACT

The main purpose of doing research on preference given to packaged food industry in India is to analyse the consumer behaviour and their buying behaviours towards packaged food business in India. Research report is to recognize the components that could impact their purchasing conduct and could be further utilized as a part of the business techniques of the retailers. The study is about analyzing the consumer preference of packaged food products and the main objective is to know about the preference on the products by the consumers. The study was analysed using descriptive research with 250 samples as sample size. Percentage analysis, chi-square with cross tabulation, factor analysis, were used as tools for analyzing the study and the conclusion is that when compared with Traditional food products the level of satisfaction is high for Packaged foods and if the company tries to solve the issues in the product then the sales, volume and profit can be increased in future period of time.

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Keywords: Consumer Perception, Satisfaction and Packaged food products.

Introduction

Meaning

"Consumer preference" is a marketing term meaning a consumer likes one thing over another. For instance, a trend may indicate consumers prefer using debit cards over credit cards to pay for goods.

Origin of Consumer satisfaction

Its originated on a competitive marketplace where businesses compete for consumers, consumer satisfaction is seen as a key differentiator and increasingly has become a key element of business strategy.

Consumer Satisfaction is the feeling or attitude of a consumer towards a product or service after it has been used and is generally described as the meeting of one's expectations. Companies have to deal with many consumers every day and render various types of services to its consumers. It is a well-known fact that no business can exist without consumers. Packaged food is a consumer oriented service industry, therefore, the consumer is the focus and consumer service is the differentiating factors.

In a competitive marketplace where businesses compete for consumers, consumer's satisfaction is seen as a key differentiator and increasingly has become a key element of business strategy. The consumer satisfaction is a challenging task in the packaged food industry. The consumer requirements must be translated and quantified to the measurable targets. This provides an easy way to monitor improvements and deciding upon the attributes that need to be concentrated on in order to improve consumer satisfaction.

Consumer prefers some product or some service because they determined the object was best aligned with the performance and emotive requirements as judged through the comparative norms. Consumer evaluate the performance in light of how well the product, person or service meets their perception and expectations. Companies tend to ask their consumers about corporate performance on a predetermined set of behavioral topics which may or may not align to the perception and expectations of those consumers. Most of the studies point out that there is a positive correlation between consumer awareness and their perception about that product or services (Yoganandan & Vetriselvan, 2017). In addition, Vetriselvan &Yoganandan (2020) found that the perception of public is considered as necessity. Further Yoganandan (2020) articulated that the consumers' perception about the attractiveness and freshness, a challenge the marketers need to overcome with suitable strategies on increasing aspects of consumer sales. A study found that

consumer perception is evolving and rapidly changing with the changes happening (Yoganandan & Prabhukumar, 2015).

It is essential, especially for companies attempting to serve highly competitive markets with many product/service offerings, to differentiate preference formation components and preference expectations within "naturally forming" or emergent consumer segments. Every service industry will need to strive even harder to ensure the consumer experience with every aspects of contact with the service (through Service quality, hospitality etc) will exceed their expectations. The increased emphasis of service providers brand and the importance of relationship with the service users will further change the way of business. Increase the distribution of service will push up the image of the industry.

The perception of service is effectively done in the minds of people by the observed service quality. The services are activities which are intangibles in nature; therefore standardization is one of the major issues in services. Services are so varied and diverse that needs to classify them to identify selected areas which need to be managed strategically. Consumer perception is more complex than many think (Selvakumar & Yoganandan, 2019).

Quality is "the totality of features and characteristics of a product or services that bears on its ability to satisfy given needs". Quality in service has two viewpoints: internal and external in the service firm. Internal is all about conformance and compliance to design standards, external quality is about the consumers perception, expectation, preference, satisfaction, attitude and delight.

Problem statement

The main purpose of doing research on preference given to packaged food industry in India is to analyse the consumer behaviour and their buying behaviours towards packaged food business in India. Research report is to recognize the components that could impact their purchasing conduct and could be further utilized as a part of the business techniques of the retailers. A centre has been given to the extent of client dedication program and the rise of successful advertising correspondence

diverts in packaged food organizations to enhance their associations with the clients.

Researcher question

1. Have the limited time promoting methodologies of packaged food retailers ended up being powerful as far as picking up piece of the overall industry?
2. What is the extent of client dedication projects to impact the client purchasing conduct?
3. What sorts of developing showcasing correspondence channels can be acquainted with advance the overall advertising system of the organizations?

Objective of the Study

The researcher main objectives of the project report is to
1. To inspect the current limited time endorsing systems of the packaged food retailers.
2. To explore the shopper conduct to packaged food retailers and the elements to inspiration their acquiring conduct.
3. To explore the shopper conduct towards packaged food retailers and the basics to impact their purchasing behaviour.
4. To know about the socio-economic factors of the respondents of packaged food products in Coimbatore city.
5. To find out the consumer preference and factors influencing them to purchase packaged food products.
6. To analyze the level of satisfaction towards the consumption of packaged food products among the consumers.
7. To identify the problems faced by the respondents while consuming packaged food products.
8. To offer suggestions based on the findings.

Scope of the study

The study is to analyse about the consumer perception towards packaged food and the scope of the study to analyse about the perception of the consumers towards the product which will be helpful for the company in decision making process.
The study is to find out the consumer satisfaction in packaged foods. The need of the study is to analyze the consumer satisfaction as it plays a key factor for the development of companies in particular industry.

Importance of the study

The Indian packaged food market has seen across the board expansion and improvement in the late years as the number of household retailers made their nearness in different areas of the nation and moreover, the simplicity of business sector passage permitted outside players to grow their ranges of operations in India. Thus the advertise steadily turned out to be more focused as the business sector players built up their marketing strategies all the more forcefully trying to expand their piece of the pie.

Hypothesis

H01: There is no significance relation between age and level of satisfaction
H02: There is a significance relation between educational qualification and level of satisfaction
H03: There is a significance relation between occupation and level of satisfaction

Research methodology

Research Method and Design are to show the activities and process of how to do the process of enhancement of packaged food industry in India.

Research Process Researcher has to use research onion thought to recognize research process. In this way, research procedure of research onion's fundamental coating are the research philosophy, strategy, choice, time horizon, research approach, techniques and procedures and data collection method. These Research Onion's components will give the expert the indebted learning to direct the reading. This study aims to show some important features that are directly responsible for the preference to packaged food industry in India this study also depends on the living standard, way of living and dependency on packaged food. As this way of study also a great research for most of the research question in the project will be possible to reply with many quantitative data. By this research using this type of technique it could be researched that why packaged food is preferred in India.

Research Approach: In this research approach, logical methodology was taken a shot at the examination as it was grounding on the sensible state of mind and to reach

inference from the hypothesis to evaluate the perception of respondents towards packaged food.

Research Strategy: Remembering the deciding objective to set up the examination procedure, review methodology will be used grasped for this study. It could think about assorted size of masses and from this people to locate the relative event, sociological interrelations appointment and mental variables.

Sampling Method: As Coimbatore is one of the most packaged food dependent countries in the world as adjudicating the data from websites, as sampling methods integrates the participants that drive age from 18 to 45 and a sample size of 11 will be tested for pilot test. This pilot test will also be used as a basic in order to safeguard the questioners are being structured in a precise way so that the data collection and analysis can success. This analysis will be carried out using non probability sampling. This type of sampling gives equal chances to everyone so that everyone has chance to get selected and will be based on availability and right time to work on that.

Accessibility Issue: There drive is no genuine regulator over the information quality for the auxiliary information accessible from the governments and information archives. Some of the optional information are impacted by the flora of these information in some setting in this way, it must be painstakingly assess before it is utilized.

Area of the study: The area of the study is Coimbatore only.

Sampling design: For the purpose of this study the data were collected from 250 respondents using convenience sampling technique.

Sampling size: The sample size of the research is 250 respondents.

Source of data collection: The data bases of the study consist of both primary and secondary data that helped the researcher in systematic frame work of the study.

Primary data: The primary data was collected through questionnaire .It was prepared and administered by taking a sample of 250 respondents, which contains different categories of respondents like male & female etc.

Secondary data: The secondary data were collected from books, journals and magazines. Periodical information from different websites was also used for the study.

Tools used for study: Percentage analysis, chi-square with cross tabulation, factor analysis.

Limitations of the study

- Due to time constraint, the sample size is limited to 250 and the study area is restricted to Coimbatore.
- Respondent may fail to express their opinions and beliefs.
- There may be a bias in collecting the data.

Analysis and interpretation
Table 1: Demographic variables of the Respondents

Demographic variables	Particulars	Frequency	Percent
Age	Below 20 yrs	53	21.2
	21-30 yrs	96	38.4
	31-40 yrs	48	19.2
	41-50 yrs	53	21.2
	Total	250	100
Gender	Male	221	88.4
	Female	29	11.6
	Total	250	100
Marital status	Married	94	37.6
	Unmarried	156	62.4
	Total	250	100
Educational qualification	School level	74	29.6
	Diploma	99	39.6
	Graduate	54	21.6
	Post Graduate	23	9.2
	Total	250	100
Occupational status	Student	95	38
	Housewife	60	24
	Business	56	22.4
	Agriculturist	36	14.4
	Others	3	1.2
	Total	250	100
Type of family	Nuclear family	148	59.2
	Joint family	102	40.8
	Total	250	100

Out of 250 respondents 21.2% are from the age group of below 20 years, 38.4% are from the age group of 21-30 years, 19.2% are from the age group of 31-40 years, 21.2% are from the age group of 41-50.88.4% are male and 11.6% are female in our survey.37.6% are married and 62.4% are unmarried. 29.6% are from school level, 39.6% have completed diploma, 21.6% have completed their graduation and 9.2% have completed their post graduate.38% are students, 24% are house wife's, 22.4% are business people, 14.4% are agriculturist, and 1.2% are from other category.59.2% are from nuclear family and 40.8% are from joint family.33.6% are having up to 3 members, 16.4% are having up to 3- 5 members, 29.6% are having 5-7 members, 20.4% are having above 7 members.23.6% are earning below Rs.10,000, 16.8% are earning from Rs.10,001 to Rs. 25,000, and 25.2% are earning from Rs.

25,001 to Rs. 40, 000 and 34.4% are earning above Rs. 40,000.

Table 2: Time of using the brand

Particulars	Frequency	Percent
Below 1 year	70	28.0
1-2 years	75	30.0
3-4 years	66	26.4
Above 4 years	39	15.6
Total	250	100.0

It is observed from the above table that out of 250 respondents 28% are using the brand below one year, 30% are using 1-2 years, 26.4% are using 3-4 years and 15.6% are using above 4 years.

Table 3: Influence by persons

Particulars	Frequency	Percent
Self	40	16.0
Spouse	73	29.2
Friends and relatives	60	24.0
Advertisement	77	30.8
Total	250	100.0

It is observed from the above table that out of 250 respondents 16% are influenced by themselves, 29.2% are influenced by their spouse, 24% are influenced by friends and relatives and 30.8% are influenced by advertisement.

Table 4: Frequency of purchasing the product

Particulars	Frequency	Percent
Weekly once	10	4.0
Weekly twice	112	44.8
Fortnightly	128	51.2
Total	250	100.0

It is observed from the above table that out of 250 respondents 4% are purchasing the brand weekly once, 44.8% are using the brand weekly twice, 51.2% are using the brand fortnightly.

Factor analysis towards level of satisfaction of using the packaged products

A total of 26 variables were identified for the purpose of collecting expectations from the service users. In order to reduce the number of variables and to identify the key factors contributing towards the expectations of services, factor analysis is performed. KMO and Bartlett's test is conducted to identify the sampling adequacy.

Table 5: KMO and Bartlett's Test for level of satisfaction of using the packaged products

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.609
Bartlett's Test of Sphericity	Approx. Chi-Square	145.271
	df	36
	Sig.	.000

KMO of sampling adequacy value for the service quality measures is 0.609 and it indicates that the sample is adequate to consider the data as normally distributed.

Table 6: Rotated Component Matrix for level of satisfaction of using the Packaged Products

Particulars	Component		
	1	2	3
Level of satisfaction on price	.050	.708	-.279
Level of satisfaction on taste	.001	-.002	.567
Level of satisfaction on quantity	.666	-.055	-.137
Level of satisfaction on quality	-.052	-.036	.615

Level of satisfaction on Availability	.755	.230	.102
Level of satisfaction on packaging	.376	-.321	.349
Level of satisfaction on recipe	.394	.339	.578
Level of satisfaction on smell	-.199	.567	.376
Level of satisfaction on time saving	.325	.575	.136

The common variables above 0.5 are taken in to consideration for the decision making process of the study. The factors are level of satisfaction on taste, level of satisfaction on recipe, level of satisfaction on smell and level of satisfaction on time saving.

Table 7: Level of satisfaction on taste

Particulars	Frequency	Percent
Highly satisfied	40	16.0
Satisfied	124	49.6
Neutral	29	11.6
Dissatisfied	48	19.2
Highly dissatisfied	9	3.6
Total	250	100.0

It is observed from the above table that out of 250 respondents 16% are highly satisfied, 49.6% are satisfied, 11.6% are neutral, 19.2% are dissatisfied, and 3.6% are highly dissatisfied.

Table 8: Level of satisfaction on Recepie

Particulars	Frequency	Percent
Highly satisfied	98	39.2
Satisfied	84	33.6
Neutral	38	15.2
Dissatisfied	30	12.0
Total	250	100.0

It is observed from the above table that out of 250 respondents 39.2% are highly satisfied, 33.6% are satisfied, 15.2% are neutral, and 12% are dissatisfied.

Table 9: Level of satisfaction on Smell

Particulars	Frequency	Percent
Highly satisfied	63	25.2
Satisfied	128	51.2
Neutral	23	9.2
Dissatisfied	22	8.8
Highly dissatisfied	14	5.6
Total	250	100.0

It is observed from the above table that out of 250 respondents 25.2% are highly satisfied, 51.2% are satisfied, 9.2% are neutral, 8.8% are dissatisfied and 5.6% are highly dissatisfied.

Table 10: Level of satisfaction on Time Saving

Particulars	Frequency	Percent
Highly satisfied	96	38.4
Satisfied	78	31.2
Neutral	24	9.6
Dissatisfied	31	12.4
Highly dissatisfied	21	8.4
Total	250	100.0

It is observed from the above table that out of 250 respondents 38.4% are highly satisfied, 31.2% are satisfied, 9.6% are neutral, 12.4% are dissatisfied and 8.4% are highly dissatisfied.

Table 11: Comparison between Age and Level of Satisfaction on Taste

H01: There is no significance relation between age and level of satisfaction on taste

Crosstab							
Count							
		Level of satisfaction on taste					**Total**
	Particulars	**Highly satisfied**	**Satisfied**	**Neutral**	**Dissatisfied**	**Highly dissatisfied**	
Age	Below 20 yrs	3	31	11	7	1	53
	21-30 yrs	11	47	3	31	4	96
	31-40 yrs	14	24	7	0	3	48
	41-50 yrs	12	22	8	10	1	53
Total		40	124	29	48	9	250

Table 12: Chi-Square Tests for Age and Level of Satisfaction on Taste

Chi-Square Tests			
Particulars	**Value**	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	44.360[a]	12	.000

The above table shows about the relationship between age and level of satisfaction on taste were the level of significance is at 0.000 which is less than 0.05. Hence alternative hypothesis is accepted. It shows that there is a significant relation between age and level of satisfaction on taste.

Table 13: Age * Level of satisfaction on Recipe

H02: There is no significance relation between age and Level of satisfaction on Recipe

Crosstab					
Count					
		Level of satisfaction on Recepie				
	Particulars	Highly satisfied	Satisfied	Neutral	Dissatisfied	Total
Age	Below 20 yrs	22	19	8	4	53
	21-30 yrs	35	35	19	7	96
	31-40 yrs	22	18	4	4	48
	41-50 yrs	19	12	7	15	53
Total		98	84	38	30	250

Table 14: Chi-Square tests for age and level of satisfaction on Recipe

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	21.255[a]	9	.012

The above table shows about the relationship between age and level of satisfaction on recipe were the level of significance is at 0.012 which is less than 0.05. Hence alternative hypothesis is accepted. It shows that there is a significance relation between age and level of satisfaction on recipe.

Table 15: Educational qualification Vs Level of satisfaction on Smell

H03: There is no significance relation between educational qualification and level of satisfaction on smell

Crosstab							
Count							
		Level of satisfaction on smell					
	Particulars	**Highly satisfied**	**Satisfied**	**Neutral**	**Dissatisfied**	**Highly dissatisfied**	**Total**
Educational qualification	School level	22	33	5	7	7	74
	Diploma	34	41	11	8	5	99
	Graduate	7	32	7	7	1	54
	Post Graduate	0	22	0	0	1	23
Total		63	128	23	22	14	250

Table 16: Chi-Square tests for educational qualification and Level of satisfaction on Smell

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	35.379[a]	12	.000

The above table shows about the relationship between educational qualification and level of satisfaction on smell were the level of significance is at 0.000 which is less than 0.05. Hence alternative hypothesis is accepted. It shows that there is a significance relation between educational qualification and level of satisfaction on smell.

Table 17: Educational qualification Vs Level of satisfaction on time saving

H04: There is no significance relation between educational qualification and Level of satisfaction on time saving

Crosstab							
Count							
		Level of satisfaction on time saving					
		Highly satisfied	**Satisfied**	**Neutral**	**Dissatisfied**	**Highly dissatisfied**	**Total**
Educational qualification	School level	14	23	15	12	10	74
	Diploma	45	30	5	14	5	99
	Graduate	26	15	4	5	4	54
	Post Graduate	11	10	0	0	2	23
Total		96	78	24	31	21	250

Table 18: Chi-Square tests for Educational Qualification and Satisfaction on Time Saving

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	33.278[a]	12	.001

The above table shows about the relationship between educational qualification and level of satisfaction on saving were the level of significance is at 0.001 which is less than 0.05. Hence alternative hypothesis is accepted. It shows that there is a significance relation between educational qualification and level of satisfaction on saving.

Findings

• Maximum of the respondents are from the age group of 21-30 years.
• Most of the respondents are male in our survey.
• Maximum of the respondents are unmarried in our survey.
• Most of the respondents have completed their diploma in our survey.
• Maximum of the respondents are students in our survey.
• Most of the respondents are from nuclear family in our survey.
• Maximum of the respondents are having up to 3 members.
• Most of the respondents are earning above Rs.40,000.
• Majority of the respondents are using the brand between 1-2 years.
• Maximum of the respondents are influenced by advertisement to buy the brand.
• Majority of the purchasing modern day packaged foods each and every day.

Factor analysis towards level of satisfaction of using the packaged products

Based on the factor analysis the factors level of satisfaction on taste, level of satisfaction on recipe, level of satisfaction on smell and level of satisfaction on time saving are taken for decision making process of the study and it reveals that maximum of the respondents are satisfied towards taste and smell of packaged foods and meanwhile, the respondents are highly satisfied towards recipe and time saving factor related to packaged foods.

Suggestions

• Maximum of the respondents are having level of satisfaction on packaged brand and they are using the brand for a long time, so it shows that the quality of packaged food is not up to the mark of its competitor and the quality of the brand can be developed in future to increase the sales of the companies.
• The company can revise the price of the products so that the unit of sales can be increased in near future.
• The respondents feel that they are facing problem while using packaged products. So if the companies try to reduce the harmful ingredients of packaged products then the quality and sales can be increased.
• There is significant relation between age and level of satisfaction on price, level of satisfaction on taste, level of satisfaction on quantity, level of satisfaction on quantity, level of satisfaction on packaging, level of satisfaction on recipe, and level of satisfaction on smell and can be taken for the decision making process of the companies.

Conclusion

The conclusion is that the respondents have higher level of satisfaction towards recipe and time saving factor of modern day packaged foods. It is also concluded that, when compared with traditional food products the level is satisfaction is high for packaged foods and if the companies try to solve the issues in the product then the sales, volume and profit can be increased in future period of time.

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USERS IMPACT OF VARIOUS ACTIVITIES TOWARDS ADOPTION INTENTION IN SOCIAL MEDIA WITH REFERENCE TO COIMBATORE CITY

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ABSTRACT

When it comes to information sharing on social media, data is critical, and people are more ready to search for tourism-related information on social media than ever before. The primary goal of the study is to examine the relationship between demographic characteristics and user perceptions of information sharing, as well as the relationship between adoption intention of the user and elements linked to social data sharing. This was accomplished by gathering a sample of 124 people who were active on social media platforms. It is concluded that Users' adoption intentions toward data in social media are determined by their participation in social media, sharing of information with social media, connectivity with big data in social media, service quality, and convenience towards user face with social media, all of which are positively correlated.

Keywords: Social data, Tourism and Social media

Introduction

Social media have grown up as a result of advancements in internet and computer technology, particularly the introduction of tracking platforms 2.0 and cellphone Internet, and have gained widespread acceptance. More than 90 percent of Indian Internet surfers have used social media, and more than 60 percent of these users have signed on to a social media system at least once in the previous year. By the end of 2018, the number of Indian Internet surfers had reached 710 million people, and the rate of Internet penetration had reached 51.7 percent.

The birth of ethnical mass media is not accompanied by any new inventions or systems, in contrast to the beginning of conventional press, such as for example periodical and newspaper publications. Because it allows Internet surfers to create their own content, social able information improves the engagement and interactivity of Internet users. It also elevates the traditional media of one-way communication and relationships to the level of two-way conversation and relationships; as a result, it has a greater influence on culture than any other form of data transmission device available. Web users will no longer be passive, one-way recipients of information; instead, they will communicate with data publishers as well as with other Internet users. "We overestimate the merit of the computer web 2.0 and undervalue the worthiness of social networking ever offered," writes Clay surfaces Shirky in his book "Future is Wet." It is the participation of end users that primarily ensures the circulation, salary, and growth of a social networking system. Social websites software produces results that are solely dependent on an individual's data, which is often derived mostly from the range and breadth of the user involvement. It is critical that customers become involved in the community press in order to help it grow its interpersonal capital. Individuals will spend around one-third of their function time interacting with social information platforms in the usual course of business.

Statement of problem

Now a days virtual effect towards user interface has gone big and that play a vital role towards convenience and time saving towards each and every use interface. The main problem of the study is that whether the user interface is having an adoption towards various factors while using bug data for their tourism purpose.

Objectives of the study

- To study about the demo graphic variables of the respondents.
- To know about the perception of users towards value creation using data
- To analyse the impact of demographic variables towards user perception on information sharing.

- To evaluate the impact of adoption intention of the user face towards factors related to social data.

Scope of the study

The study is to find out the impact of adoption process by the user face towards value creation with data among social media. This research will help the companies who create source through social media to reach their services to their customers.

Research methodology

Type of research: Descriptive type or research was used with the study.
Type of data collection
Primary data: Questionnaire
Secondary data: Websites, journals and articles.
Method of data collection: Survey method was used as method of data collection to collect the data from the customers who use online for tourism.
Type of sampling: Stratified random sampling
Sample size: 124 customers who use social media for their tourist venue.
Tools used for the study: Percentage analysis, Descriptive statistics, Kruskal Wallis test, Oneway Anova and Multiple regression

Limitations of the study

- The total sample size is limited to 124.
- The demographic area of the study is limited to Coimbatore.
- There may be a bias towards primary data collection from the respondents.

Model used for the study
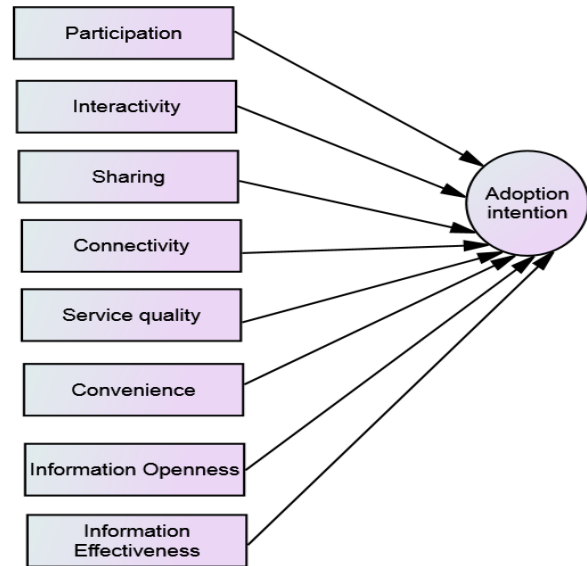
Based on the study made by Qian Cao et al., (2017) the following factors were taken for the study to analyse the impact of user factors towards adoption intention of social media in tourism.

Analysis and interpretation

Table 1: Demographic variables

Demographic variables	Particulars	Frequency	Percent
Age	<20	61	49.2
	21-25	24	19.4
	26-30	11	8.9
	More than 30	28	22.6
	Total	124	100
Gender	Male	92	74.2
	Female	32	25.8
	Total	124	100
Educational qualification	SSLC	12	9.7
	Higher secondary	51	41.1
	UG	15	12.1
	PG	20	16.1
	Professional degree	26	21
	Total	124	100
Occupation	Student	1	0.8
	Employee	18	14.5

	Business	51	41.1
	Agriculture	20	16.1
	Others	34	27.4
	Total	124	100
Place of living	Rural	59	47.6
	Semi rural	8	6.5
	Urban	27	21.8
	Semi urban	30	24.2
	Total	124	100

The above table depicts that out of total users who are using social media towards their tourism taken for the study 49.2% are less than 20 years of age, 19.4% are between 21-25 years of age, 8.9% are between 26-30 years of age and 22.6% are more than 30 years of age. 74.2% are male and 25.8% are female. 9.7% have completed their SSLC, 41.1% have completed their under graduation, 16.1% have completed their Post graduation, and 21% are professional degree holders. 0.8% who surf social media for searching tourist destination through social media are students, 14.5% are employees, 41.1% are doing business, 16.1% are agriculturist and 27.4% are doing other occupation. 47.6% are from rural area, 6.5% are from semi rural area, 21.8% are from urban area and 24.2% are from semi urban area.

Table 2 Descriptive statistics for users Impact of Various Activities towards Adoption Intention in Social Media

Dimensions	Variable s	N	Mean	SD
Adoption intention	AI1	124	2.52	.888
	AI2	124	2.45	1.199
	AI3	124	2.84	1.039
	AI4	124	2.59	1.104
Participation	P1	124	1.88	.739
	P2	124	2.35	.807
	P3	124	3.10	1.382
Interactivity	I1	124	2.89	1.320
	I2	124	2.88	1.347
	I3	124	2.83	1.601
Sharing	S1	124	3.44	1.198
	S2	124	3.25	1.304
	S3	124	3.26	1.235
Connectivity	C1	124	3.51	1.304
	C2	124	3.41	1.044
	C3	124	3.36	1.239
Service quality	SQ1	124	3.60	1.360
	SQ2	124	3.54	1.252
	SQ3	124	3.44	1.357
Convenience	CE1	124	3.31	1.284
	CE2	124	3.48	1.220
	CE3	124	3.74	1.293

Information Openness	IO1	124	2.52	1.310
	IO2	124	3.31	1.338
	IO3	124	2.67	1.254
Information Effectiveness	IE1	124	2.75	1.446
	IE2	124	2.53	1.334
	IE3	124	3.09	1.403
	IE4	124	2.85	1.319

The above table depicts about the descriptive statistics for the dimensions taken for the study.

Adoption intention
Out of total variables taken for the study the respondents agree towards searching about tourist information through social media (2.52), perceiving social media as first reference when searching for information related to tourism (2.45), sharing about their tourist experience and information through social media (2.84) and continuously using SM for searching about information regarding tourism in future (2.59).

Participation
The users strongly agree towards active participation towards varieties of social media (1.88). The users agree towards not separating their life from social media (2.35) and the respondents disagree towards accepting the invitation from friends to share the information and interest about tourism via SM.

Interactivity
The users agree towards users willingness towards using SM to interact with their friends about tourism (2.89), using social media for higher instructiveness (2.88) and level of satisfaction towards high interaction with social media (2.83).

Sharing
The users disagree with SM making things easy to connect to a large range of information (3.44), respondents finding friends through connectivity provided by SM (3.25) and respondents connecting to more relevant information with SM (3.26).

Connectivity
The users disagree towards SM making things easy to connect to a large range of information (3.51), finding friends through connectivity provided by SM (3.41), and connecting to more relevant information with SM (3.36).

Service quality
The consumers disagree towards willingness to adopt SM based on better service quality provided (3.60), willingness to adopt SM for its good service quality (3.54) and recommending friends towards adoption of SM based on good service quality (3.31).

Convenience
The users disagree with facilitation of SM increasing the acceptance (3.31), Intention to adopt SM due to facilitating conditions (3.48), and inclining to adopt SM due to 24 hours facilitating solution (3.74).

Information Openness
The user group agree towards adopting SM as the information open to members (2.52) and adopting SM due to more openness of information (2.67) and disagree towards adopting SM as they are obtaining openness of information (3.31).

Information Effectiveness
The user group agree towards s having basic understanding regarding tourist products when getting relevant information from SM (2.75), saving their time and energy by using SM to fetch information about tourism (2.53) and thinking the situation in process of tourism broadly in line with information on SM (2.85) and they disagree towards information about tourism from SM helping them to reduce the cost of money, time and energy and strength (3.09)

Table 3 Comparison between gender and factors related to use of data from social media

Ho1: There is no relationship between gender and factors related to use of data from social media

Particulars	Gender	N	Mean Rank	Chi-square	Sig

Adoption intention	Male	92	64.23	0.854	0.356
	Female	32	57.52		
	Total	124			
Participation	Male	92	64.21	0.823	0.364
	Female	32	57.59		
	Total	124			
Interactivity	Male	92	64.26	0.866	0.352
	Female	32	57.44		
	Total	124			
Sharing	Male	92	62.51	0.955	0.000
	Female	32	62.47		
	Total	124			
Connectivity	Male	92	61.79	0.140	0.708
	Female	32	64.53		
	Total	124			
Convenience	Male	92	64.03	0.660	0.417
	Female	32	58.09		
	Total	124			
Information openness	Male	92	60.80	0.804	0.370
	Female	32	67.38		
	Total	124			
Information effectiveness	Male	92	64.55	1.265	0.003
	Female	32	56.61		
	Total	124			

The above table reveals that there is a relationship between gender and Sharing of information with social media (0.000) and information effectiveness (0.003). It was found that male respondents have higher level of acceptance towards sharing information with social media and gathering effective information with social media.

Table 4 Comparison between age and factors related to use of data from social media

Ho2: There is a significant difference between gender and factors related to use of data from social media

Particulars	Age	N	Mean	SD	F	Sig
Adoption intention	<20	61	2.6598	.44496	1.405	.245
	21-25	24	2.4583	.46431		
	26-30	11	2.6364	.34212		
	More than 30	28	2.5714	.33234		
	Total	124	2.5988	.42029		
Participation	<20	61	2.6557	.47128	9.743	.000
	21-25	24	2.1944	.87872		
	26-30	11	1.6061	.59289		
	More than 30	28	2.5119	.74526		
	Total	124	2.4409	.70813		
Interactivity	<20	61	3.3005	1.09664	7.034	.000
	21-25	24	2.5556	1.30649		

	26-30	11	1.7273	.90453		
	More than 30	28	2.6310	1.34666		
	Total	124	2.8656	1.26942		
Sharing	<20	61	3.3333	.96992	.365	.778
	21-25	24	3.2639	1.13775		
	26-30	11	3.5758	1.30035		
	More than 30	28	3.2143	.83747		
	Total	124	3.3145	1.00072		
Connectivity	<20	61	3.5137	.98050	1.350	.261
	21-25	24	3.2500	.91287		
	26-30	11	3.7576	.79009		
	More than 30	28	3.2619	.63736		
	Total	124	3.4274	.88912		
Service quality	<20	61	3.6503	1.18232	.804	.494
	21-25	24	3.3056	1.12896		
	26-30	11	3.6364	.50452		
	More than 30	28	3.4048	.77702		
	Total	124	3.5269	1.04643		
Convenience	<20	61	3.5519	.87747	.719	.543
	21-25	24	3.5278	.67328		
	26-30	11	3.4848	.56497		
	More than 30	28	3.2976	.68095		
	Total	124	3.4839	.77373		
Information openness	<20	61	2.8470	1.10315	.297	.827
	21-25	24	2.6806	1.28717		
	26-30	11	3.0606	1.00905		
	More than 30	28	2.8333	1.08677		
	Total	124	2.8306	1.12015		
Information effectiveness	<20	61	2.7787	.31983	3.639	.015
	21-25	24	2.8646	.32117		
	26-30	11	2.5682	.16167		
	More than 30	28	2.9018	.29138		
	Total	124	2.8044	.31326		

The above table reveals that there no difference between age and participation of respondents with social media (0.000), interactivity of the respondents (0.000) and gathering effective information through social media (0.015).

It was found out that the respondents from the age group 26-30 have higher level of acceptance towards participation with social media (1.60), interactivity with social media (1.72) and effective information with social media (2.56).
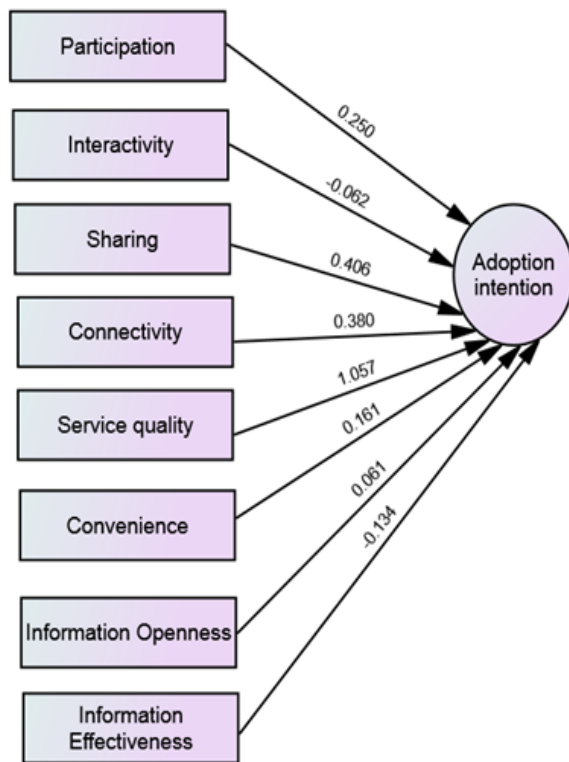
Figure 1Users impact of various activities towards adoption intenetion with social media based on data

Because there is a positive correlation between the variables in the above table, it can be concluded that users have adoption intentions towards data in social media based on participation with social media (0.250), sharing of information with social media (0.406), connectivity with big data in social media, service quality (1.607), and convenience towards user face with social media (0.061).

Findings

• Most of the respondents who are using social media towards their tourism taken for the study are from the age group less than 20 years of age.

• Majority of the users are male.

• Maximum of the respondents have completed their higher secondary.

• Maximum of the respondents are doing business.

• The users with social media who are using data disagree towards factors related to sharing of information using data, connectivity of information with social media, service quality and convenience with social media.

• Male respondents have higher level of acceptance towards sharing information with social media and gathering effective information with social media.

• The respondents from the age group 26-30 have higher level of acceptance towards participation with social media, interactivity with social media and effective information with social media.

Suggestions

The advertisements given by the companies related to information on tourism can be made user friendly as the users don't have convenience towards using the data.

The interface of using SM towards tourism can be scrutinized further so that the quality of service can be increased further.

Conclusion

It is concluded that Users' adoption intentions toward data in social media are determined by their participation in social media, sharing of information with social media, connectivity with big data in social media, service quality, and convenience towards user face with social media, all of which are positively correlated.

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POLYMER MODIFIED BITUMEN WITH FLEXIBLE PAVEMENT AND IT'S CHARACTERIZATION

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Introduction

The use of bitumen as a binder in pavement construction is one of the most important applications of bitumen composite materials. Bitumen is a byproduct obtained from the fractional distillation of petroleum crude oil. In earlier days bitumen is used in many applications like jewel making, pottery, etc (Morgan & Mulder 1995). The development in the area of transportation needed proper surface to travel. People used bitumen in large scale for such purposes (Asphalt Institute; The bitumen Industry 2011). They have used bitumen in the construction of pavement and since bitumen is a flexible material, they called the surfaces as flexible pavement. Thus, bitumen becomes an unavoidable material in the pavement construction.

The pavement surface used for transport is divided into two major sections.

1. Rigid pavements
2. Flexible pavements

Rigid pavements are concrete pavements where cement /cement like material are used as a binding material with stone aggregate and sand. This mixture is spread and rolled to form a layer called rigid pavements. The construction cost of rigid pavements is very high when compared with flexible pavements. So, construction of rigid pavements in smaller fund allocated area is difficult (Praveen kumar et al 2005) to overcome the pavement industry have moved to flexible pavement construction, which can withstand heavy load and can perform well for many years with minor deformations, because of its high load withstanding capacity. Flexible pavements are constructed using bitumen as a binder with stone.

The performance of the flexible pavement mainly depends upon the bitumen used for the construction (Morgan and Mulder 1995). Since bitumen is a visco-elastic material, it behaves like a viscous liquid and elastic solid, and it is used for laying flexible pavement (King et al 1986). The property of the bitumen is related to the temperature and the rate of the load applied. In olden days, the available conventional bitumen is used in the flexible pavement. For many years, this is used without any problem. But in present conditions these conventional bitumen cannot be used, due to the increase in the traffic and change in other parameters such as temperature, rain and monsoon changes. A need rose to improve the properties of the bitumen to be used. This results in the requirement of modified bitumen. The search for the modification of the binder results in the interest of developing new modifiers for flexible pavement mixes (Piazza et al 1980). Special modified bitumen samples are prepared using polymers and this has been studied for many years (Becker et al 2001). The bitumen modified with polymers provides a variety of improved properties to the bitumen (Becker et al 2001). The polymer modification process was started very earlier in the year 1843 (Morgan & Mulder 1995).

Bitumen is a homogeneous mixture of complex molecules made up of carbon hydrogen bonds. In other words, the bitumen can be called as a mixture of polar and non-polar molecules, in which the non-polar molecules serve as matrix where the polar molecules are distributed. The distributed structure of the bitumen is weak and the behavior depends upon the temperature and the rate of load applied over the bitumen. The visco elasticity nature of the bitumen is also decided by the structure of the bitumen. The viscosity property of the bitumen has been given by non-polar molecules and the elasticity is given by the polar molecules (Morgan & Mulder 1995).

On mixing the polymers to the bitumen one of the following interactions will happen

1. Swelling of polymers in bitumen
2. Absorption of polymers in bitumen
3. Dissolving of polymers in bitumen

By forming the above given type of linkages, these polymers can alter most of the properties

of the bitumen by changing the basic matrix. The polymers added interacts with the bitumen chain and forms an inter linking matrix of polymer and bitumen. This linkage enhances the resistance of the Polymer Modified Bitumen (PMB) towards permanent deformation. The major alterations are as follows

The elasticity of the bitumen is increased

The softening point of the bitumen is increased

The hardening nature of the bitumen is decreased at low temperature

The polymer modifications also increase the stiffness of PMB at high temperature and increase the elasticity of PMB at low temperature (King et al 1986). (Terrel and Walter 1986), according to (King et al 1986) the polymers used for modification improves the physical properties such as stripping and MSV of binder – aggregate combinations.

One of the prime roles of a polymer modifier is to improve the resistance of the PMB towards permanent deformation both at high and low temperatures. This is achieved, either by increasing the percentage of elastic constituents such as resins and Asphaltenes of the bitumen; this improves the flexibility of the PMB, or by stiffening the bitumen, and reducing the total viscoelastic response.

Related work

Polymer Modified Seal Coats

Llyod D. Coyne's (1997) article "Evaluation of polymer modified chip seal coatings" discusses the use of the Vialit Drop test and Surface Abrasion to evaluate polymer modified asphalt emulsion chip seal coats. The modified Vialit Drop Ball test was performed to assess the setting properties of the seal coatings. For the longevity of the sealing coatings, the surface abrasion test was performed.

Testing and Evaluation of Large Stone Mixes

Prithvi S. Kandhal produced the paper "Testing and evaluation of large stone mixes using Marshall Mix Design Procedures" (1989). In recent years, heavy-duty asphalt flooring has gone up prematurely because of high-pressure lorry pneums and greater wheel loads. The use of large steels (maximum size of more than 1 inch) has been shown to restrict or decrease heavy flooring in binder and base courses.

Marshall Stability Value

Christophe M. Smemoe(1994), delivered a paper at the Matthew Church, Highway Materials Laboratory, on "Stability and Flow by Means of the Marshall Apparatus." In the Marshall Stability and Flow Test, the stability and flow values of asphalt sample were determined. In order to establish the optimal mixing design, Marshall utilised the values acquired, as well as the weight and the voids in the overall mix. The optimal blend recommended was 6.5% asphalt concrete. It was also determined that 6.5 percent asphalt concrete by weight would provide the paving great stability and strength, excellent weathering, resistance to bleeding and flushing, and resistance to water penetration.

Aggregate Evaluation

The overall assessment is based on the Washington State Department of Transportation Road Manual (WSDOT). A typical assessment of the aggregate is required for mix design using Hveem or Marshall Mix technique (Roberts et al., 1996). Procedure to determine the physical characteristics of aggregates, including gradation, size, specific gravity, water absorption, Los Angeles Abrasion (LAR) test strength measurement, the aggregate impact and crushing test aggregate were described. The strength of the aggregates is calculated on the basis of any of these tests. These testing must also focus on the appropriateness of aggregates to be utilised for flexible paving construction.

Rutting Evaluation

Brian D. Prowell (2004), a "Rutting Evaluation of Lopke Fine Aggregate Blends," presented to the Auburn National Asphalt Technological Center, assessed the rutting performance of two fine angularity levels at two distinct design levels. Mixtures with low particles were found to be less rigid and thus less prone to rutting. It was found that raising the fines to an appropriate asphalt content for this combination would decrease the asphalt content in the design and tendency to strengthen the binder. The modification has been shown to decrease the depth of the rut.

Fatigue Characteristics of Modified Bituminous Concrete Mixes

V.S. Punith and A. Veeraragavan (2004) carried out a fatigue assessment of bituminous

concrete mixtures altered by the inclusion of waste packaging for recovered plastics. Marshall Testing of different percentages of bitumen has been conducted and the best bitumen content has been found. It was found that adding plastics to 80/100 degrees bitumen decreased penetration and ductility characteristics considerably. Also, softening point values have been increased by the use of polymers. In addition, the addition of a shredded plastics modifier to bitumen significantly improved the fatigue life of the bituminous concrete mixture.

Stiffness Modulus and Plastic Deformation

Bambang S SUBAGIO, Kosasih Djunaedi et al. (2005) article on "Desarching the rigidity module and plastic deformation characteristics of poreous asphalt mixture Using Tafpack Super the Tafpack Super which was utilised as an additiv in a porous mix of asphalt enhance the mechanical characteristics of the mixture, such as increase of the resilience module and tensile strength.

Properties of Asphalt

Hot Mix Asphalt (HMA) comprises of an asphalt binder mixture and a graded aggregate ranging from coarse to extremely fine particles, based on the highway design handbook Chapter 630: Flexible Pavement. You may process the aggregate and modify the binder. HMA may be produced using materials that are new or recycled. The physical characteristics of asphalt binders were most prevalent. The physical characteristics of asphalted binder explain exactly how it works in the HMA pavement. Although asphalt binder viscosity is still prevalent, new binder tests and standards being created to describe asphalt binders for usage in HMA pavements more precisely. These tests and standards have been developed specially to address HMA performance characteristics like as routing, fatigue cracking, and thermal cracking.

Aggregate Properties

The report on the performance of Hot Mix Asphalt (HMA) by Brian D. Prowell and Jingna Zhang to the "National Cooperative Highway Research Program 539: March 2005" was mainly defined by asphalt binder and aggregate. Mineral aggregates account for 80% to 90% of the entire volume or 94% to 95% of the hot mix of asphalt mass (HMA). Dullness, soundness (durability), cleanliness, particle shape, angularity, surface roughness, and absorption were the quality of mineral aggregates in road-pairing materials. It was thus found essential to optimise the quality of the mineral aggregates to guarantee that the flexible pavement performs correctly.

Methodology

The waste polymer which was collected from the municipal solid waste was segregated and cleaned. The cleaned polymer was shredded in to small pieces of 1.6 mm to 4.75 mm size. The aggregates to be used in the pavement are heated up to 170ºC as per IRC code, at mini hot mix plant or central mixing plant and transferred to the mixer compartment. Shredded waste polymer was added to the hot aggregates and mixed thoroughly. Polymer gets softened and forms a uniform coating over the heated aggregate. The coating takes place within 30 to 60.seconds after the polymer was added to the hot aggregate. Bitumen was then added to the polymer-coated aggregate, at 160 ºC in the mini hot mix plant and mixed. Eventually, a homogenous mixture was formed, which was used for flexible pavement construction.

Table (5.1 to 5.4) gives the results obtained with samples collected from various quarries and Fig. (5.1 to 5.4) shows the graphical representation of the results.

Table 5.1: Laboratory test results of plain aggregate and polymer coated aggregate of sample collected from Poochampatty quarry

S.no	Details / Particulars	Units	Plain Aggregate	Percentage of polymer coated over aggregate		
				0.5%	1%	2%
1	LosAngelesAbarasionValue(B Grade)	%	37.00	34.10	32.00	29.40
2	Impact Value	%	25.40	23.10	21.20	18.50
3	Soundness Value	%	6.0	0.0	0.0	0.0
4	Flakiness Index Value	%	13.70	13.10	12.80	11.00
5	Elongation Index Value	%	16.20	16.70	17.10	18.00
6	Crushing Value	%	25.90	23.19	21.30	20.00
7	Water Absorption Value	%	0.52	0.48	0.45	0.36
8	Specific Gravity	--	2.904	2.797	2.705	2.606

Table 5.2: Laboratory test results of plain aggregate and polymer coated aggregate of sample collected from Keelavalavu quarry

S.no	Details / Particulars	Units	Plain Aggregate	Percentage of polymer coated over aggregate		
				0.5%	1%	2%
1	Los Angeles Abarasion Value (B Grade)	%	27.50	27.00	26.60	25.40
2	Impact Value	%	39.30	32.00	25.00	22.00
3	Soundness Value	%	10.0	3.0	0.0	0.0
4	Flakiness Index Value	%	4.20	4.10	4.00	3.95
5	Elongation Index Value	%	4.70	5.90	6.90	6.40
6	Crushing Value	%	29.90	28.20	26.60	23.50
7	Water Absorption Value	%	0.45	0.40	0.36	0.29
8	Specific Gravity	---	2.659	2.610	2.585	2.508

Table 5.3: Laboratory test results of plain aggregate and polymer coated aggregate of sample collected from Thiruvathavur quarry

S.no	Details / Particulars	Units	Plain aggregate	Percentage of polymer coated over aggregate		
				0.5%	1%	2%
1	Los Angeles Abarasion Value (B Grade)	%	25.00	24.20	23.10	20.00
2	Impact Value	%	29.25	20.40	14.30	12.00

3	Soundness Value	%	7.0	1.0	0.0	0.0
4	Flakiness Index Value	%	7.00	5.30	3.10	1.60
5	Elongation Index Value	%	6.00	5.10	4.20	3.80
6	Crushing Value	%	23.40	21.50	20.10	16.00
7	Water Absorption Value	%	0.57	0.50	0.49	0.41
8	Specific Gravity	--	2.643	2.620	2.583	2.536

Table 5.4: Laboratory test results of plain aggregate and polymer coated aggregate of sample collected from Othakkadai quarry

S.no	Details / Particulars	Units	Plain aggregate	Percentage of polymer coated over aggregate		
				0.5%	1%	2%
1	Los Angeles Abarasion Value (B Grade)	%	44.00	40.30	37.30	33.80
2	Impact Value	%	33.00	29.30	21.30	19.00
3	Soundness Value	%	9.0	2.0	0.0	0.0
4	Flakiness Index Value	%	5.64	5.40	5.23	4.92
5	Elongation Index Value	%	7.50	8.20	9.50	10.3
6	Crushing Value	%	29.40	26.20	22.10	19.20
7	Water Absorption Value	%	0.51	0.45	0.40	0.32
8	Specific Gravity	--	2.66	2.64	2.623	2.554

It was found that there is significant increase in the strength properties of the polymer- coated aggregates with the addition of 0.5%, 1% and 2% of polymers with respect to the total weight of the aggregates. (In all the samples).

From the above, it is evident that polymer coated aggregates possess better strength (that is 27.20%), hardness, toughness and durability compared to plain aggregate. Water absorption was found to be less in PCA by 30.80% as compared to plain aggregate indicates a higher degree of water susceptibility. The decrease of specific gravity from 2.904 to 2.606 with addition of polymer does not significantly affect its use in the pavement construction. PCA mix showed no stripping even after 96 hours of water immersion and hence avoids the use of anti-stripping agents in bituminous courses.

Further, polymer coated aggregate very well satisfies the MORTH specification (Table .5) for road aggregates.

Table 5.5: Comparison between Polymer coated aggregate and Plain aggregate with MORTH specification

S. No	Property	Plain Aggregate (%)				Polymer Coated Aggregate (Polymer is 10% of Bitumen) (%)				MORTH specification	Remarks
1	LosAngeles Abarasion Value(B Grade)	37.00				29.40				30%	Classified as Strong &suitable for all types of road construction
2	Aggregate Impact Value	25.40				18.50				30%	As specified
3	Flakiness Index Value and Elongation Index Value	29.90				29.00				Combined to 30%	As specified
4	Water Absorption Value	0.52				0.36				Less than 2%	As specified
5	Specific Gravity	2.904				2.606				2.5-2.9	As specified
6	Stripping Value	2 hrs	24 hrs	72 hrs	96 hrs	2 hrs	24 hrs	72 hrs	96 hrs	Less than 5%	As specified
		0	0	2	5	0	0	0	0		
7	Soundness Test	6				Nil				Less than 18%	As specified

Aggregates which are found to be not suitable for road work as per MORTH specification become suitable for road works when coated with polymers.

Conclusion

All the above results suggest the improvement in the basic properties of the aggregate. This is due to the fact that by coating polymer over the aggregates, polymer will play significant role in the following basic properties.

altering the bitumen by various additives, thus increasing the binding of bitumen and road strength. In the Dry process the aggregate is changed with polymers and the flexible pavement produces a new modified primary material. The method has also received a patent. Coating of polymers on the surface of the aggregate has resulted in many benefits and eventually helps not only to enhance the quality of flexible pavement but also many newer scientific details are obtained from the study of the process and from performance studies of the Plastic Tar Road.

This technique has also helped enhance road condition by using waste polymers derived from household and industrial packaging products. This adds additional value to the dry process since 80 percent of the waste polymers are disposed of using an environmentally acceptable manner. The Central Pollution Control Board of New Delhi has already approved this. They have previously issued a guideline on the method and the benefit of dry road paving. The organization's subsidiaries also expand 50 percent to lay Plastic Tar Road. By this technique, which is in-situ, waste polymer like carry bags, foam, laminated

sheets, cups are all used for road laying.

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SIXTH AND SEVENTH HIGHER ORDER TRIANGULAR GRACEFUL LABELING OF GRAPHS

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ABSTRACT

A Graceful labeling of graph G is a vertex labeling $f : V \rightarrow [0,m]$ such that f is injective and the edge labeling $f^*: E \rightarrow [1,m]$ defined by $f^*(uv)= |f(u)-f(v)|$ is also injective. If a graph G admits a graceful labeling, we say that G is a graceful graph. In this paper we have introduced and studied about the sixth and seventh order triangular graceful labeling and also the sixth and seventh order triangular graceful labeling of star graph, subdivision of star arediscussed.

Keywords: Sixth order triangular number, Seventh order triangular number, Sixth order triangular graceful labeling of graphs, Seventh order triangular graceful labeling of graphs.

Introduction

The Swiss Mathematician Leonhard Euler, who invented graph theory in the 18th century. The idea of graceful graphs was first introduced by Rosa in 1966, and the name 'graceful graphs' was given by S.W. Golomb who rediscovered them in 1968. The graph considered in this paper are finite, undirect and without loops or multiple edges. Let G=(V,E) be a graph with p vertices and q edges. Graceful labeling was first introduced in 1960's. Terms not defined here are used in the sense of Harary[5] and K.R. Parthasarathy[6].

In 1966, Rosa introduced graceful labeling and, back then, he called a function f a β- valuation of a graph G with q edges it f is an injection from the vertices of G to the set {0, 1, 2,..,n} such that each edge xy is assigned the label |f(x)-f(y)|, the resulting edge labels are distinct and he called it β- labeling. In 1972 the term ″graceful″ was introduced by Golomb . Acharya [1] constructed certain infinite families of graceful graphs. The concept of polygonal graceful labeling was introduced by D.S.T Ramesh and M.P Syed Ali Nisaya [2, 3, 4]. For number theoretic terminology, we refer to [7, 8] and [9, 10].

Preliminaries

Definition: A graph G is a finite non-empty set of objects called vertices together with a set of unordered pairs of distinct vertices of G called edges. The vertex set and the edge set of G are denoted by V(G) and E(G) respectively. The number of elements of V(G) = p is called the order of G and the number of elements of E(G) = q is called the size of G. A graph of order p and size q is called a (p, q) graph. If e = uv is an edge of G, we say that u and v are adjacent and that u and v are incident with e.

Definition: The degree of vertex v in a graph G is defined to be the number of edges incident on v and is denoted by deg(v). A graph is called r- regular if deg(v) = r for each $v \in V(G)$. The minimum of {deg v : $v \in V(G)$} is denoted by Δ. A vertex of degree 0 is called an isolated vertex, a vertex of degree 1 is called a pendent vertex or an end vertex.

Definition: The complete bipartite graph $K_{1, n}$ is called a star graph.

Definition: A graph which can be formed a given graph G by breaking up each edge into exactly two segments by inserting intermediate vertices between its two ends is called a sub division graph. It is denoted by S(G).

Definition: A closed trail whose origin and interval vertices are distinct is called a cycle. A cycle of length n is called n- cycle. It is denoted by C_n.

Definition: A graph in which two distinct points are adjacent is called a complete graph. The complete graph with n points is denoted by K_n.

Definition: A function for which every element of the range of the function corresponds to exactly one element of the domain is called one to one function.

Definition: A function between the elements of two sets, where each element of one set is paired with exactly one element of the other set is called bijective function.

Definition: Let f: A→B be a function from the domain A to the codomain B. The function f is called injective if it maps distinct elements of A to distinct elements of B. In other words, for every element in the codomain B there exist at most one preimage in the domain A.

Definition: A Sixth order triangular number is a number obtained by adding all the sixth powers of positive integer less than or equal to a given positive integer n. If the nth sixth order triangular number is denoted by F_n, then $F_n = 1^6+2^6+\ldots+n^6 = \frac{6n^7+21n^6+21n^5-7n^3+n}{42}$. The sixth order triangular numbers are 1, 65, 794, 4890, 20515, 67171, 184820, ……………

Derivation of sixth order triangular number:

$\sum_{k=1}^{n}(K+1)^7 - K^7 = 2^7-1^7+3^7-2^7+4^7-3^7+\ldots\ldots\ldots\ldots..+n^7-(n-1)^7+(n+1)^7-n^7$

$\sum_{k=1}^{n}(K+1)^7 - K^7 = (n+1)^7-1$

$(n+1)^7 = n^7+7n^6+21n^5+35n^4+35n^3+21n^2+7n+1$

$\sum_{k=1}^{n}(K+1)^7 - K^7 = n^7+7n^6+21n^5+35n^4+35n^3+21n^2+7n$

$7S_6+21S_5+35S_4+35S_3+21S_2+7S+n = n^7+7n^6+21n^5+35n^4+35n^3+21n^2+7n$

$7S_6+21[1^5+2^5+\ldots+n^5]+35[1^4+2^4+\ldots+n^4]+35[1^3+2^3+\ldots+n^3]+21[1^2+2^2+\ldots+n^2]+7[1+2+\ldots+n]+n$
$=n^7+7n^6+21n^5+35n^4+35n^3+21n^2+7n$

$S_6 = \frac{6n^7+21n^6+21n^5-7n^3+n}{42}$

$1^6+2^6+\ldots+n^6 = \frac{6n^7+21n^6+21n^5-7n^3+n}{42}$

Definition: A Seventh order triangular number is a number obtained by adding all the seventh powers of positive integer less than or equal to a given positive integer n. If the nth seventh order triangular number is denoted by G_n, then $G_n = 1^7+2^7+\ldots+n^7 = \frac{3n^8+12n^7+14n^6-7n^4+2n^2}{24}$. The seventh order triangular numbers are 1, 129, 2316, 18700, 96825, 376761, ………………

Derivation of seventh order triangular number:

$\sum_{k=1}^{n}(K+1)^8 - K^8 = (n+1)^8-1$

$(n+1)^8 = n^8+8n^7+28n^6+56n^5+70n^4+56n^3+28n^2+8n+1$

$\sum_{k=1}^{n}(K+1)^8 - K^8 = = n^8+8n^7+28n^6+56n^5+70n^4+56n^3+28n^2+8n$

$8S_7+28S_6+56S_5+70S_4+56S_3+28S_2+8S+n = n^7+7n^6+21n^5+35n^4+35n^3+21n^2+7n$

$8S_7+28[1^6+2^6+\ldots+n^6]+56[1^5+2^5+\ldots+n^5]+70[1^4+2^4+\ldots+n^4]+56[1^3+2^3+\ldots+n^3]+28[1^2+2^2+\ldots+n^2]+8[1+2+\ldots+n]+n = n^7+7n^6+21n^5+35n^4+35n^3+21n^2+7n$

$S_7 = \frac{3n^8+12n^7+14n^6-7n^4+2n^2}{24}$

$1^7+2^7+\ldots+n^7 = \frac{3n^8+12n^7+14n^6-7n^4+2n^2}{24}$

Main Results

Definition: A sixth order triangular graceful labeling of a graph G is an one to one function f :V(G)→{0, 1, 2, … , F_q} that induces a bijection f^*:E(G)→{$F_1,F_2,…, F_q$}of the edges of G defined by f^*(uv) = |f(u)-f(v)|∀ e = uv ∈E(G). The graph which admits such labeling is called a sixth order triangular graceful graph.
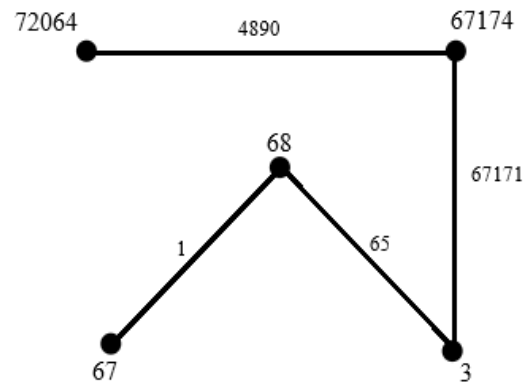
Example:

Definition: A Seventh order triangular graceful labeling of a graph G is an one to one function f:V(G)→{0, 1, 2, … , G_q} that induces a bijection f^*:E(G)→{$G_1,G_2,…, G_q$}of the edges of G defined by f^*(uv) = |f(u)-f(v)|∀ e = uv∈E(G). The graph which admits such labeling is called a seventh order triangular graceful graph.

Example:
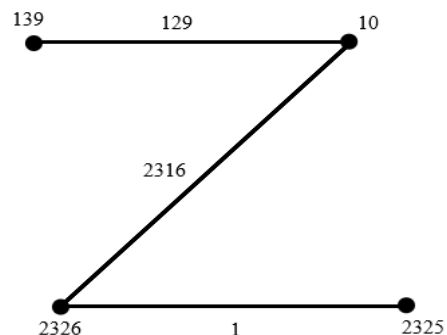
Theorem:

The star $K_{1,n}$ is a Sixth order triangular graceful graph for all $n \geq 1$.

Proof:

Let G be a star graph $K_{1,n}$ for all $n \geq 1$

Let v be the unique vertex in one partition of G and $v_1, v_2, \ldots, v_n$ be the n vertices in the other.

Hence G has (n+1) vertices and n edges

Define $f : V(G) \rightarrow \{0, 1, 2, \ldots, F_n\}$ by $f(v) = 0$ and $f(v_i) = F_i$ where $1 \leq i \leq n$.

Clearly f is one to one.the induced edge function $f*$ is a bijection and $f(E(G)) = \{F_1, F_2, \ldots, F_n\}$is defined as $f*(E(G)) = \{F_1, F_2, \ldots, F_n\}$.

Thus G admits sixth order triangular graceful labeling.

Hence the star $K_{1,n}$ is a sixth order triangular graceful graph for all $n \geq 1$.
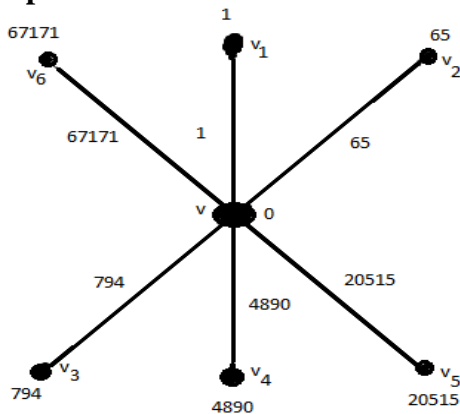
Example:

Theorem:

$S(K_{1,n})$ the subdivision of the star $K_{1,n}$ is a sixth order triangular graceful graph for all $n \geq 1$.

Proof:

Let G be a subdivision of the star $K_{1,n}$ for all $n \geq 1$.

Let $V(G) = \{v, v_i, u_i : 1 \leq i \leq n\}$ and $E(G) == \{vv_i, v_iu_i : 1 \leq i \leq n\}$

Then G has 2n+1 vertices and 2n edges.

Define $f : V(G) \rightarrow \{0, 1, 2, \cdots, F_{2n}\}$ as follows.

$f(v) = 0$ and $f(v_i) = F_{2n-(i-1)}$ where $1 \leq i \leq n$

$f(u_i) = F_{2n-(i-1)} - F_i$ where $1 \leq i \leq n$

Clearly f is one to one. The induced edge function $f*:E(G) \rightarrow \{F_1, F_2, \ldots, F_{2n}\}$is defined as follows.

$f*(vv_i) = F_{2n-(i-1)}$ where $1 \leq i \leq n$

$f*(v_iu_i) = F_i$ where $1 \leq i \leq n$

Clearly $f*$ is one to one and $f*(E(G)) \rightarrow \{F_1, F_2, \ldots, F_{2n}\}$. therefore G admits sixth order triangular graceful labeling. Hence $S(K_{1,n})$, the

subdivision of the star $K_{1,n}$ is a sixth order triangular graceful graph for all $n \geq 1$.

Example:
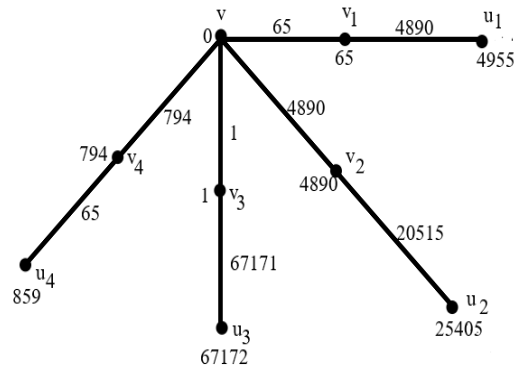
Theorem:

The star $K_{1,n}$ is a Seventh order triangular graceful graph for all $n \geq 1$.

Proof:

Let G be a star graph $K_{1,n}$ for all $n \geq 1$

Let v be the unique vertex in one partition of G and $v_1, v_2, \ldots, v_n$ be the n vertices in the other.

Hence G has (n+1) vertices and n edges

Define $f : V(G) \rightarrow \{0, 1, 2, \ldots, G_n\}$ by $f(v) = 0$ and $f(v_i) = G_i$ where $1 \leq i \leq n$.

Clearly f is one to one.the induced edge function $f*$ is a bijection and $f(E(G)) = \{G_1, G_2, \ldots, G_n\}$is defined as $f*(E(G)) = \{G_1, G_2, \ldots, G_n\}$.

Thus G admits seventh order triangular graceful labeling.

Hence the star $K_{1,n}$ is a seventh order triangular graceful graph for all $n \geq 1$.
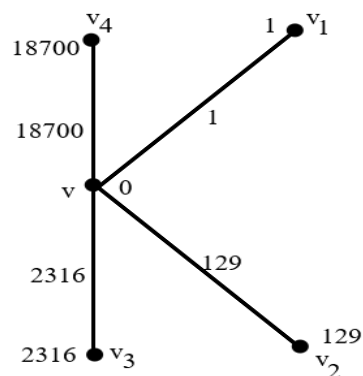
Example:

Theorem:

$S(K_{1,n})$, the subdivision of the star $K_{1,n}$ is a seventh order triangular graceful graph for all $n \geq 1$.

Proof:

Let G be a subdivision of the star $K_{1,n}$ for all $n \geq 1$.

Let $V(G) = \{v, v_i, u_i : 1 \leq i \leq n\}$ and $E(G) == \{vv_i, v_iu_i : 1 \leq i \leq n\}$

Then G has $2n+1$ vertices and $2n$ edges.

Define $f : V(G) \rightarrow \{0, 1, 2, \cdots, G_{2n}\}$ as follows.

$f(v) = 0$ and $f(v_i) = G_{2n-(i-1)}$ where $1 \leq i \leq n$

$f(u_i) = G_{2n-(i-1)} - G_i$ where $1 \leq i \leq n$

Clearly f *is* one to one. The induced edge function $f^* : E(G) \rightarrow \{G_1, G_2, \ldots, G_{2n}\}$ is defined as follows.

$f^*(vv_i) = G_{2n-(i-1)}$ where $1 \leq i \leq n$

$f^*(v_iu_i) = G_i$ where $1 \leq i \leq n$

Clearly f^* is one to one and $f^*(E(G)) \rightarrow \{G_1, G_2, \ldots, G_{2n}\}$. therefore G admits seventh order triangular graceful labeling. Hence $S(K_{1,n})$, the subdivision of the star $K_{1,n}$ is a seventh order triangular graceful graph for all $n \geq 1$.

Example:
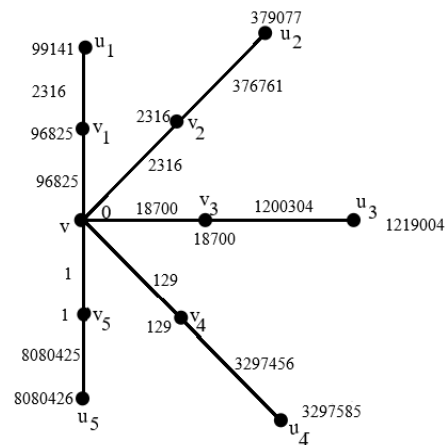
Conclusion

In this paper, we have briefly discussed about the Sixth and Seventh order triangular graceful labeling. We have newly introduced The Derivation of Sixth and Seventh order triangular numbers. The Sixth and Seventh order triangular graceful labeling of Star graph, Subdivision of star are studied. This work contributes several new results to the theory of graph labeling.

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ANALYSIS IN ALGORITHMS OF SPANNING TREE TO REDUCE THE DISTANCE BETWEEN THE CABLE

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ABSTRACT

In this present paper, we compare the three algorithms namely Kruskal's, Prim's and Dijkstra's in order to minimize the distance from one place to another. It has a wide application in real life, among that application in a network plays a major role. Through this we can able to reduce the cost of the cable used for network by reducing the length of the cable.

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Keywords: *Cost effective, Kruskal's Algorithm, Prim's Algorithm, Dijkstra's Algorithm, Internet cable, Minimum spanning tree, Profit.*

Introduction

"The minimum spanning tree (MST) problem has been studied for much of this century and yet despite its apparent simplicity, the problem is still not fully understood" is said by Petite and Ramachandran. This means that the MST looks simply but is very difficult to formulate as it offers all options routes but is very complex to obtain a specific solution.

Kruskal's Algorithm first appeared in proceeding of the American, Mathematical society,48-50 in 1956 and was written by Joseph KruskalPrim's Algorithm was developed in 1930 by Czech mathematician Vojtech and Jarnik and later rediscovered and republished by computer scientists Robert C. Dijkstra's Algorithm was conceived by computer scientist Edsger W Dijkstra in 1956 and published 3 years later.

PRELIMINARIES:
GRAPH:

A Graph is a pair of **(V,E)**. Where **V** is a finite set of vertices and **E** is finite set of Edge.

Example:
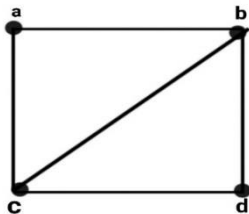
EDGE:

A line joining a pair of nodes is called edge.It is denoted as 'E'.

VERTEX:

Vertex is also called as nodes. It is a point or circle. It is the fundamental unit from which graphs are made. It is denoted as 'V'.

EXAMPLE:

Let us consider a graph of G=(V,E)
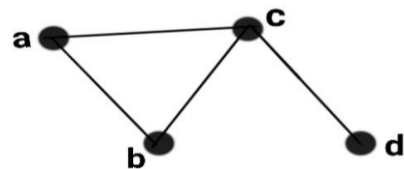
Where V={a, b, c, d}

E= {{a, b}, {b, c}, {c, d}, {a, c}}

MINIMUM SPANNING TREE:

A minimum spanning tree is a special kind of tree that minimizesthe lengths (or weight) of the edges of the tree. A tree has one path joins any two vertices. A spanning tree of a graph is a tree that the graph doesn't have any nodes which loops back to itself.

EXAMPLE:

The following graph,
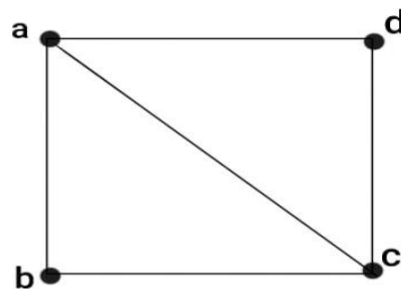
hasmany possibilities for spanning tree. They are,
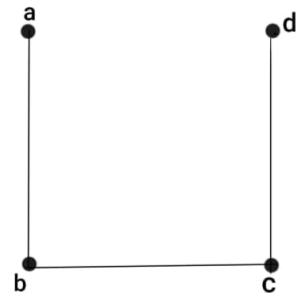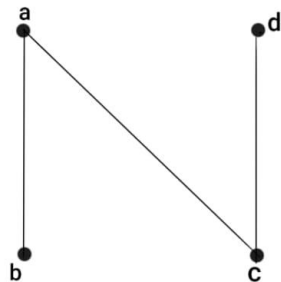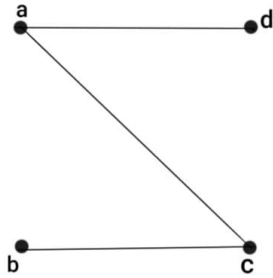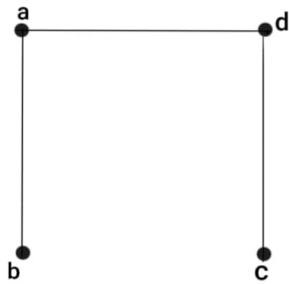
TREE:
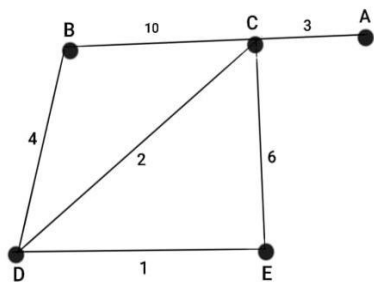
The edges of the tree are know as branches. Elements of the tree are called their nodes.A connected a cyclic graph is called a tree. In other words a connected graph with no cycles is called a tree.

EXAMPLE:
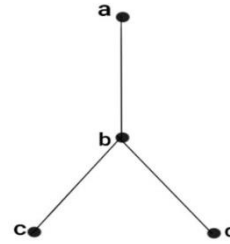
The graph shown here is a tree because it has no cycle and it is connected. It has four vertices and three edges. (i.e.) 'n' vertices and 'n-1' edges.
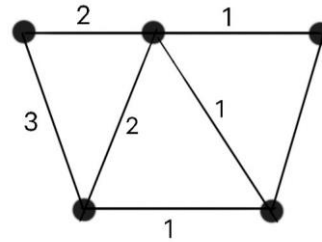
WEIGHTED GRAPH:
A Weighted graph is a graph with edges labeled by numbers (called weights). In General, we only consider nonnegative edge weights. Sometimes ∞ can also be allowed as a weight which in optimization problem generally means we must (or may not) use that edge.

EXAMPLE:

PRIM'S ALGORITHM:
Prim's Algorithm is used to find the minimum spanning tree from a graph. Prim's algorithm finds the subset of edges that includes every vertex of the graph such that the sum of the weights of the edges can be minimized.

Prim's algorithm starts with the single node and explore all the adjacent nodes with all the connecting edges at every step. The edges with the minimal weights causing no cycles in the graph got selected.

ALGORITHM:
Step1: Remove all loops and parallel edges.
Step2: Choose any arbitrary node as a root node.
Step3: Check outgoing edges and select the one with least cost.
Step4: Choose an edge with a least cost which does not forms a cycle.
EXAMPLE:
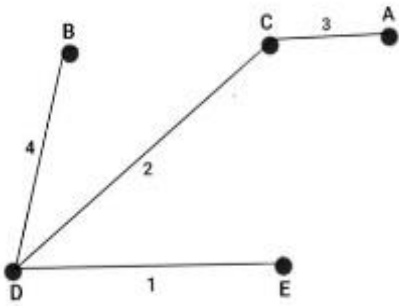
The minimum spanning tree of the given graph using prim's algorithm is

KRUSKAL'S ALGORITHM:

Kruskal's Algorithm is used to find the minimum spanning tree for a connected weighted graph. The main target of the algorithm is to find the subset of edges by using which, we can traverse every vertex of the graph.

ALGORIHM:

Step1: Removal of all loops and parallel edges.
Step2: Arrange all the edges in the increasing order.
Step3: Add the edges which has the least weightage.
Step4: Choose an edge with a least cost which does not forms a cycle.

EXAMPLE:
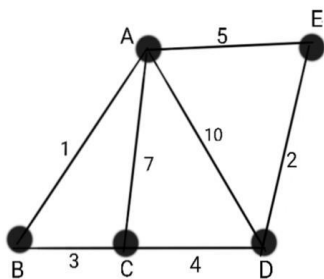
The minimum spanning tree of the given graph
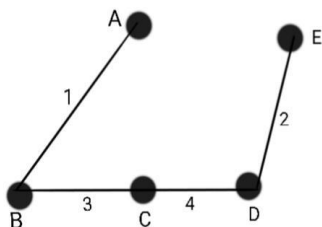
using Kruskal's algorithm is

DIJKSTRA'S ALGORITHM:

It is a greedy algorithm that solves the single source shortest path problem for a directed graph $G=(V, E)$ with nonnegative edge weights, (i.e.) $w(u,v) \geq 0$ for each edge$(u,v) \in E$. Dijkstra'sAlgorithm maintains a set S of vertices whose final shortest-path weights from the source s have already been determined. That's for all vertices $v \in S$; we have $d[v] = \delta(s, v)$. The algorithm repeatedly selects the vertex u $\in V-S$ with the minimum shortest path estimate insert u into S and relax all the edges leaving u.

ALGORITHM:

Step1: Mark all the nodes unvisited. Create a set of all the unvisited nodes called the unvisited node.
Step2: Assign to every node a tentative distance value set it to zero for our initial node and to infinity for all other nodes. Set the initial node as current.
Step3: For the current node consider all of its unvisited neighbors and calculate their tentative distances through the current node. Compare the newly calculated tentative distance to the current assigned value and assign the smaller one.
Step4: When we are done considering all of the unvisited neighbors of the current node, mark the current node as visited and remove it from unvisited set.
Step5: If the destination node has been marked visited (when planning a route between two specific nodes) or if the smallest tentative distance among the nodes in the unvisited set is infinity(when planning a complete traversal; occurs when there is no connection between the initial node and remaining unvisited nodes) then stop. The algorithm has finished.
Step6: Otherwise, select the unvisited node that is marked with the smallest tentative distance set it as the new current node and go back to step 3.
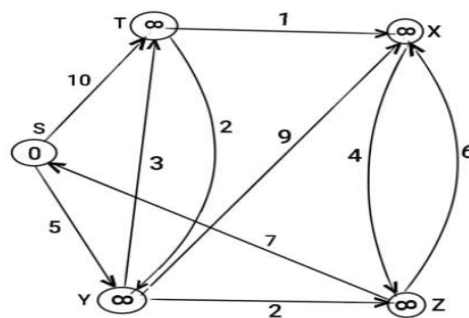
EXAMPLE:
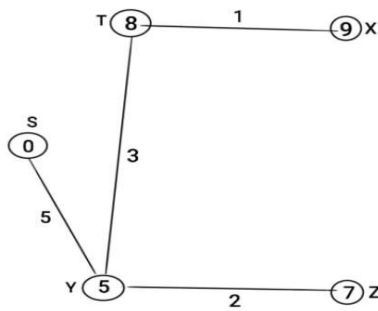
The minimum spanning tree of the given graph using Dijkstra's algorithm is

**COMPARISON OF THE ALGORITHM:**

FIGURE 1

 Represent the layout for particular place in Villupuram. The places are Devaki Hospital, KVR Guest house, KalyanCinemas, Tamil Nadu Arasu cable TV District office, Ramakrishna Mission, Andhra Bank.
Where Tamil Nadu Arasu cable TV District office is source node only we can able to draw the layout. The distance between the places are measured in meter.

The distance between the places

Devaki Hospital to Tamil Nadu Arasu cable TV District office-72m

KVR Guest House to KalyanCinemas-700 m

KVR Guest House to Andhra Bank-240 m

Devaki Hospital to KVR Guest House-110 m

Devaki Hospital to KalyanCinemas-700 m

Devaki Hospital to Andhra bank-130 m

Kalyan Cinemas to Tamil Nadu Arasucable TV District Office-800 m

Tamil Nadu Arasu cable TV District office to Ramakrishna mission-700 m
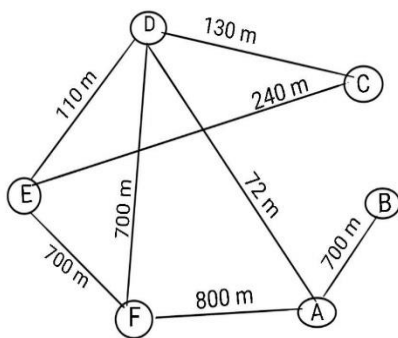
A - Tamil Nadu Arasu cable TV Distric Office.
B - Ramakrishna mission.
C - Andhra Bank.

D - Devaki Hospital.
E - KVR Guest House.
F - Kalyan Cinemas

FIGURE 2
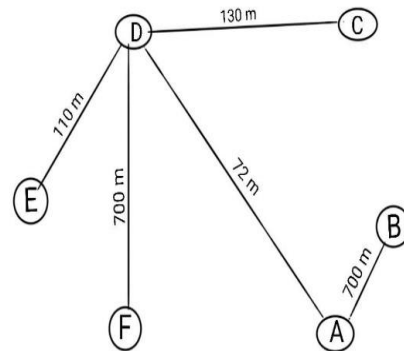
Represent the Kruskal's minimum spanning tree it can formed by keeping all the vertices as same in the layout and including minimum edges with a condition. It could not form a cycle.

Distance=110 m + 130 m + 700 m + 72 m + 700 m

    =1712 m
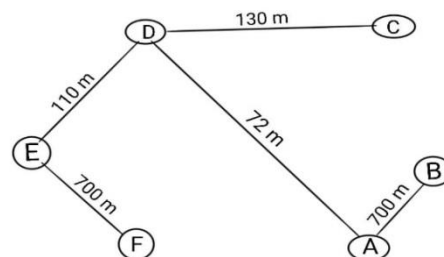
=1.712 km

FIGURE 3

                                          Represent the Prim's minimum spanning tree it can formed by choosing an arbitrary start vertex and keep including connected edges with condition it could not form a cycle.

 Distance=110 m + 130 m + 700 m + 72 m + 700 m

    =1712 m

=1.712 km

FIGURE 4
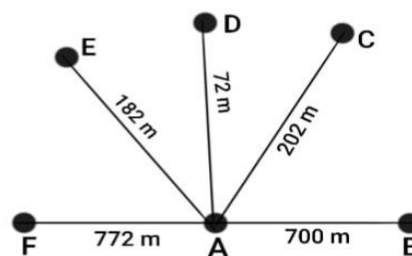
Represent the Dijkstra's algorithm. It is formed by using the procedure mentioned above. By this algorithm we can able to find the distance between the source node to the other node.
Distance = 172 m + 182 m + 72 m + 202 m + 700 m

    =1928 m
    =1.928 km

Conclusion

In this paper we have compared and studied the minimum spanning tree algorithms to find the minimum distance for a particular place. Through this work one can find the minimum distance for a particular place by using Kruskal's and Prim's Algorithm instead of using Dijkstra's Algorithm. By using this minimum distance we can find minimum length for the cable. From this we can able to reduce the cost of the cable wire used for network.

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SOME PARAMETERS OF FUZZY LABELLING TREE USING MATCHING AND MATCHING BRIDGE

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ABSTRACT

In this paper, we introduce the new parameters like eccentric weight, self-centred, diameter and radius in fuzzy labelling tree. We discuss some properties on bipartitein fuzzy labelling tree.
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Keywords:

Introduction

In this paper, using matching and matching bridge the diameter, radius, self-centred and the eccentric weight in fuzzy labelling tree are defined and some special cases of eccentricity and complete bipartite in fuzzy labelling tree are established. And also, the concept of self-centred graphs is generalized to fuzzy self-centred labelling tree and necessary conditions are obtained.

Preliminaries

Definition 2.1. Let x and y be two sets. Then δ is said to be a fuzzy relation from x into y if δ is a fuzzy set of x $_x$y. A fuzzy graph FG = (μ, γ) is a pair of functions γ: x → [0,1] and γ: y$_x$y→ [0,1] where for all x, y ∈ X, we haveγ (x, y) ≤min {μ(x),μ(y)}.

Definition 2.2. Let G: (μ, γ) be a fuzzy graph and H is a subset of G. If points of H is contained (or) equal to the nodes of G then H is said to be a fuzzy subgraph. It is denoted by FSG.

Definition 2.3. A FSG H of the FLGG is said to be fuzzy spanning sub graph [FSSG] of G if points of fuzzy subgraph is equal to the points of fuzzy labelling graph.

Definition 2.4. A graph G =(α, β) is said to be fuzzy labelling tree (FLT) if it has fuzzy spanning subgraph with fuzzy labelling T=(X,Y) which is a tree in which every pair of vertices joined by an alternating path.

Definition 2.5 An M-augmenting path is an M-alternating path whose initial and ending vertices are M-unsaturated.

Definition 2.6. Let G be a fuzzy labelling tree. the distance between any pair of vertices V_i ,V_j is defined by the number of lines in the shortest alternating path connecting these two points.

Definition 2.11 The length of the fuzzy labelling tree T is defined as the number of edges in the FSSG which is a tree in which every pair of vertices joined by an alternating path.

Definition 2.7 The eccentricity of a vertex v ρ(v) in a fuzzy labelling tree is defined as the distance between v to the farther vertex in its spanning subgraph S.

Definition 2.8 The centre of FLT is a vertex with least eccentricity in its spanning subgraph S.

Definition 2.9 A fuzzy labelling graph G = (σ, μ) is bipartite if the node set V can be partitioned into two non-empty sets $V_1$and V_2such that V_1 and V_2 are fuzzy independent sets.

Proposition 2.10 Every fuzzy labelling tree is a fuzzy bipartite graph.

Proof: Since G is a fuzzy labelling tree, it is connected. Then there exists a strong path between any two nodes of G. therefore there exist a fuzzy independent set V1and other in V2. If G have a strong cycle, then bipartite is not possible but strong cycle of any length will not exist in G, since mu is bijective.

Proposition 2.11 If G is a fuzzy labelling tree such that G* is K*$_{1, n.}$ Then G is a complete bipartite graph.

Proof: It is trivial that G is a fuzzy labelling tree if G* is a tree. Therefore K*$_{1, n}$ is a fuzzy labelling tree which is also a complete bipartite graph because K*$_{1, n}$ graph can be partition into two non-empty independent set V_1 andV_2 such that V_1={v} and V_2={ v_1,v_2,…,v_n}. All the arcs of G are strong arc. Therefore, the node v ∈ V_1 is a strong neighbor of {v_1,v_2,…,v_n}∈V_2.

Proposition 2.12 Let G is a fuzzy labelling tree and F is its spanning subgraph, then (G-F)*is a tree.

Proof: Let G be a fuzzy labelling tree, such that G* is not a tree. By the definition of fuzzy labelling tree there exists a spanning subgraph F, which is a tree. The arcs of F are fuzzy bridges of G. therefore (G-F)* contains no fuzzy bridge. Fuzzy labelling cycles have (n-1) fuzzy bridges. Therefore (G-F)*contains no cycle. Hence (G-F)*is a tree.

Proposition the above proposition is not true if G* is complete.

Definition 2.12

Let T be a connected graph then the eccentric weight of T, ew(T), is defined as $\sum_{x\in\beta} f(x)$, where f: $\beta\to$ {0,1} is a function and f(uv)=|e(u)-e(v)| $\forall u,v\epsilon\beta(T)$. Since every pair of adjacent vertices of T have eccentricity difference zero or one, we obtain the obvious bound, $0\leq ew(T)\leq m$. The lower bound attains for complete graph K_n and the upper bound attains for a star $K_{1,m}$.

Main Result

Definition

Let T be a connected graph then the eccentric weight of T, ew(T), is defined as $\sum_{x\in\beta} f(x)$, where f: $\beta\to$ {0,1} is a function and f(uv)=|e(u)-e(v)| $\forall u, v\epsilon\beta(T)$. Since every pair of adjacent vertices of T have eccentricity difference zero or one, we obtain the obvious bound, $0\leq ew(T)\leq m$. The lower bound attains for complete graph K_n and the upper bound attains for a star $K_{1, m.}$

DEFINITION:

The diameter of fuzzy labelling tree diam(T), in T is the maximum distance between the pair of vertices. It can also be defined as the maximal distance between the pair of vertices. In other words, the diameter of fuzzy labelling tree diam(T), is defined as the length of the longest path in a tree T.

DEFINITION:

The radius of the fuzzy labelling tree (T) exists only if it has the diameter. The minimum among all the maximum distance between a vertex to all other vertices is considered as the radius of the graph. It is denoted as r(T). In other words, the eccentricity of a centre is called radius of (FLT).

DEFINITION:

A graph T is said to be self-centred graph if the eccentricity of every vertex of the fuzzy labelling graph is the same. In other words, a fuzzy labelling tree is a self-centred graph if its radius and diameter of the graph are equal.

Theorem: If T is a fuzzy labelling tree and also a complete bipartite graph such that T* is $K^*_{1,n}$, then ew(T)=0 and T contains at least one matching bridge.

Proof: It is trivial that T is a fuzzy labelling tree if T* is a tree.

Therefore, $K^*_{x1, x2}$ is a fuzzy labelling tree which is also a complete bipartite graph because $K^*_{x1, x2}$ graph can be partition into two non empty independent set α_1 and α_2 such that α_1={x$_1$} and α_2={x$_1$,x$_2$,...x$_k$}.

By the remark, for any complete fuzzy bipartite graph $K_{u, v}$, ew $(K_{u,v})$=0.

Therefore, ew(T)=0, for all ew($K^*_{1,n}$)=0.

Let G be a fuzzy labelling graph and T be a fuzzy labelling tree of G.

To prove T contains at least one matching bridge.

By the definition of fuzzy labelling tree, "A graph G = (α,β) is said to be fuzzy labelling tree (FLT) if it has fuzzy labelling and a fuzzy spanning sub graph T=(U,V) which is a tree in which every pair of nodes contains an alternating path", we have T has an alternating path between every pair of nodes in it.

In alternating path, the edges are alternatively in M and β-M.

So, T contains at least one edge from perfect matching M.

Therefore, every fuzzy labelling tree which is complete bi-partite graph contains at least one matching with ew(T)=0.

Observation: Let T$\cong$k$_{x1,x2,x3,...xk}$ be the complete fuzzy k-partite graph, then ew(T)=0 and it contains at least one matching bridge in it.

Theorem: fuzzy labelling tree T is said to be self-centred if and only if it contains n (=2) vertices with n (=2)-1 edges then ew(T)=0.

Proof:

case (1): Let G be a fuzzy labelling graph and it is self-centred, then ew(G)=0.

If T is a fuzzy labelling tree of graph G, then ew(T)= ew(G).

Because we know that "for every fuzzy labelling graph G is a fuzzy labelling tree T".

Therefore, If ew(G)=0 for a fuzzy labelling graph G with two vertices then ew(T)=0, such that e(x)=e(y) for all x, y $\square$ α(G).

Case (2): Let G be a complete fuzzy labelling tree and it is self-centred.

Hence, we know that "every complete fuzzy labelling graph with even number of vertices (n≥2) has a fuzzy labelling tree".

Therefore, ew(G)=0 for a complete fuzzy labelling graph G with even number of vertices (n≥2) and M be a perfect matching in G.

Then ew(T)=0, such that e(x)=e(y) for all x, y □ α(G).

Therefore, comparing (1) and (2), we know that every fuzzy labelling graph with two vertex and every complete fuzzy labelling graph with even number of vertices (n≥2) with a perfect matching in G be M is said to be G always has a fuzzy labelling tree T.

Since from (1) and (2), G is said to be self-centred, then ew(G)=ew(T)=0 if and only if T has two vertices (even number of vertices) and therefore, T is said to be self-centred.

This theorem satisfies only for n=2 vertices of T in graph G. (see example 2).

Theorem: Every fuzzy labelling tree contains at least one matching bridge then diameter of T is said to be equal to the maximum eccentricity of the vertices in T.

Proof: Let G be a fuzzy labelling graph and T be a fuzzy labelling tree of G.

First to prove that T contains at least one matching bridge.

By the definition of fuzzy labelling tree, "A graph G = (V, E) is said to be fuzzy labelling tree T if it has fuzzy labelling and a fuzzy spanning subgraph T= (α, β) which is a tree in which every pair of nodes contains an alternating path", we have T has an alternating path between every pair of nodes in it.

In alternating path, the edges are alternatively in M and β-M.

So, T contains at least one edge from perfect matching M.

Therefore, every fuzzy labelling tree contains at least one matching bridge.

Then to prove that diameter of T is equal to the maximum eccentricity of vertices in T.

Let x, y be the vertices of T such that x, y □ α(T).

Case (1): Let us assume that, T is not a self-centred then e(x)≠e(y).

i.e., we know that by the definition, "The diameter of fuzzy labelling tree diam(T), in T is the maximum distance between the pair of vertices. It can also be defined as the maximal distance between the pair of vertices." And also, we know that, "the eccentricity of vertex v in a fuzzy labelling tree is defined as the distance between v to the farther vertex in its spanning subgraph S". Hence from comparing the above definitions we can obtain that, diam(T)= maximum of the eccentricity of the vertex e(αᵢ).

Case (2): let us assume that, if e(x)=e(y), for ∀x, y □ α(T) then diam(T)=e(αᵢ) and T is said to be self-centred (only for n=2 even number of vertices in G).

By the definition we know that, "A graph G is said to be self-centred graph if the eccentricity of every vertex of the fuzzy labelling graph is the same. In other words, a fuzzy labelling graph is a self-centred graph if radius and diameter of the graph are equal."

Hence, from the above definition, r(αᵢ) = e(x) = e(Y), because we also know that, "The radius of the fuzzy labelling tree (T) exists only if it has the diameter. The minimum among all the maximum distance between a vertex to all other vertices is considered as the radius of the graph. It is denoted as r(T). In other words, the eccentricity of a centre is called radius of (FLT)".

Then r(αᵢ) = e(x) = e(Y), e(x) = e(Y) = centre of FLT of the vertex.

Therefore, diam(T) = r(αᵢ) = centre of FLT of the vertex = e(x)=e(Y).

i.e., diam(T)=maximum of eccentricity of the vertex.

Therefore, from (1) and (2), maximum eccentricity of vertex in T is equal to the diameter of T.

Remark: From the above theorem we also say that, in fuzzy labelling tree, T is said to be self-centred if and only if radius of the graph T is equal to the centre of the graph T
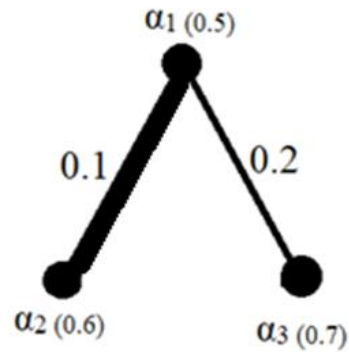
Numerical illustrations:
Example 1:
(from the figure 5.3.1 and figure 5.3.2)
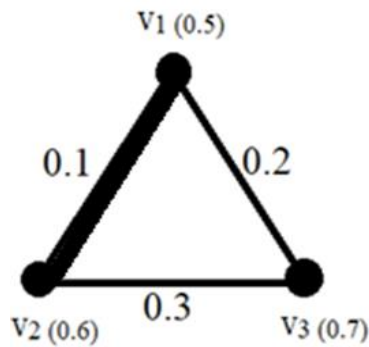
Fuzzy labelling Graph (G)   Fuzzy labelling tree (T)

1. To find distance of graph (T):
a. $d(v_1,v_1)=0$
   $d(v_1,v_2)=1$
   $d(v_1,v_3)=1$

b. $d(v_2,v_1)=1$
   $d(v_2,v_2)=0$
   $d(v_2,v_3)=2$

c. $d(v_3,v_1)=1$
   $d(v_3,v_2)=2$
   $d(v_3,v_3)=0$

To find the maximum distance of the vertices in (T):
   a. Maximum distance of $v_1 = 1$
   b. Maximum distance of $v_2 = 2$
   c. Maximum distance of $v_3 = 2$
2. To find the minimum distance of the vertices in (T):
a. Minimum distance of $v_1 = 0$
b. Minimum distance of $v_2 = 0$
c. Minimum distance of $v_3 = 0$
3. To find the eccentricity of the vertices in the graph (T):
a.
b. $e(\alpha_1,\alpha_1)=0$
   $e(\alpha_1,\alpha_2)=1$
   $e(\alpha_1,\alpha_3)=1$
therefore $e(\alpha_1)=1$
c. $e(\alpha_2,\alpha_1)=1$
   $e(\alpha_2,\alpha_2)=0$
   $e(\alpha_2,\alpha_3)=2$
therefore $e(\alpha_2)=2$
d. $e(\alpha_3,\alpha1)=1$
   $e(\alpha_3,\alpha_2)=2$
   $e(\alpha_3,\alpha_3)=0$
therefore $e(\alpha_3)=$
4. To find the eccentric weight of graph (T):
$f(\alpha_2\ \alpha_1)=|e(\alpha_2)-e(\alpha_1)|$

$\quad\quad =|2\text{-}1|$

$\quad\quad =1$

$f(\alpha_1\ \alpha_3)=|e(\alpha_1)\text{-}e(\alpha_3)|$

$\quad\quad =|1\text{-}2|$

$\quad\quad =1$

$\sum_{x\in\beta} f(x)=$ f(α_2 α_1)+ f(α_1 α_3)=1+1=2

Therefore, eccentric weight of vertices in graph (T)=2.

Therefore, T is not a self-centred graph.

6.Then to find the diameter of the graph T:

diam(T)=length of the longest path in T.

hence the maximum distance of the pair of vertices in T is 2.

Therefore, length of the longest path in T = 2.

Therefore, diam(T) = 2.

Hence the maximum eccentricity of vertices in graph T = e(α_3)=e(α_2)=2.

Therefore, diam(T) is equal to the maximum e(T) (It satisfies the theorem 5.3.4).

i.e., diam(T)=e(T) = 2.

Example 2:
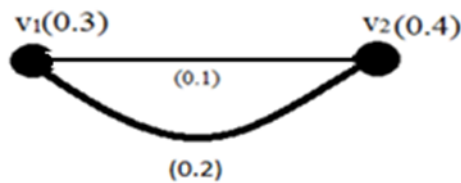
Fuzzy labelling graph (G)   Fuzzy labelling tree (T)
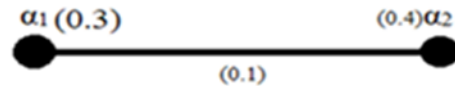
1. To find distance of graph (T):

d(v_1,v_1)=0

d(v_1,v_2)=1

d(v_2,v_1)=1

d(v_2,v_2)=0

2. To find the maximum distance of the vertices in (T):

a. Maximum distance of v_1 = 1

b. Maximum distance of v_2 = 1

3. To find the minimum distance of the vertices in (T):

Minimum distance of v_1 = 0

Minimum distance of v_2 = 0

4. To find the eccentricity of the vertices in the graph (T):

a. e(α_1,α_1)=0

e(α_1,α_2)=1

therefore e(α_1)=1

b. e(α_2,α_1)=1

e(α_2,α_2)=0

therefore e(α_2)=1

To find the eccentric weight of graph (T):

f(α_1 α_2)=|e(α_1)-e(α_2)|

$\quad\quad\quad =|1\text{-}1|$

$\quad\quad\quad =0$

Therefore, $\sum_{x\in\beta} f(x)=$ ew (T)=0.

Therefore, T is a self-centred graph.

1. Then to find the diameter of the graph T:

diam(T)=length of the longest path in T.

hence the maximum distance of the pair of vertices in T is 1.

Therefore, length of the longest path in T = 1.

Since r(T) = 1

And also, that, in this graph the radius = centre of the graph T = 1.

Therefore, diam(T) = 1

Hence the maximum eccentricity of vertices in graph T = e(α_1) =e(α_2)=1.

Therefore, r(T)=centre of the graph T = e (T) = 1.

Therefore, diam(T)=e (T) (It satisfies the theorem 5.3.4 and theorem 5.2.3 and the above graph is $K_{1,1}$ complete bipartite fuzzy labelling tree graph with v_1= {α_1} v_2={α_2} as independent non empty vertex sets. Hence it also satisfies the theorem 5.3.1).

i.e., diam(T)=e (T) = 1.

Conclusion

In this paper, we made an attempt to generalize the concept of self-centred graphs into fuzzy self-centred labelling tree. Using matching and matching bridge the concept of eccentric weight, self-centred, diameter and radius in fuzzy labelling tree are introduced. The concept of diameter and radius in fuzzy labelling tree is relevant as it represents the net flow between a given pair of nodes of a fuzzy labelling graph. Facility location in fuzzy network model can be made easy by using the diameter and radius. A characterisation of fuzzy self-centred labelling tree is obtained.

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TWO MODULO FOUR SUM GRAPHS

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ABSTRACT

Let G = (V,E) be a graph with p vertices and q edges is said to be a two modulo four sum graph if there is an injective function f from V(G) to {a: 0≤ a ≤ 4q-2 } and either a ≡ 0 (mod 4) or a ≡ 2(mod 4) where q is the number of edges of G and such that f induces a bijection f* from E(G) to {a : 2 ≤ a ≤ 4q-2} and a ≡ 2 (mod) given by f*(w) = f(u) + f(u1) and the function f is called two modulo four sum labelling of G.In this paper, we introduce a sum labeling known as two modulo four sum graph.Also, we prove that path, starand complete bipartite graph are two modulo four sum graph.
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Keywords: Two modulo four sum graph, two modulo four sum labelling.

Introduction

The Swis Mathematician Leonhard Euler, who invented graph theory in the 18th century and also introduced various modern terminology and mathematical notation .He was called the "king of Mathematics.

A graph (G) denoted either by G or G=(V,E) consist of a ordered pair of V(G) and E(G) where,V(G) is a non-empty finite set whose elements are called vertices or points.E(G) is a set of unordered pairs of distinct elements of V(G) then the elements of E(G) are called lines or edges of the graph in graph theory,a graph labelling is the assignment of labels,traditionally represented by integers,to edges and vertices of a graph.

The concept of a sum graph was introduced by Harary[11] in 1990 and sum graph was defined as a graph whose vertices can be labeled with distinct positive integers such that there is an edge between two vertices if and only if the sum of their labels is the label of another vertex of the graph.

DEFINITION

Definition:2.1.Graph:

A graph (denoted as G = (V,E)) consists of a non-empty set of vertices or nodes V and a set of edges E.

Example:

Let us consider, a graph is
   G = (V,E),
Where, V = {a,b,c,d} and
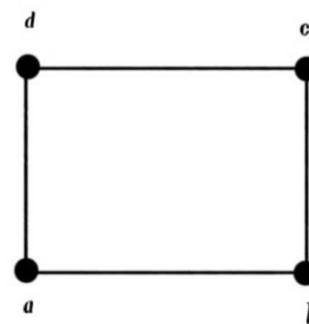   E = {{a,b},{a,c},{b,c},{c,d}}

Figure 2.1

Definition:2.2. Walk:

A walk consists of an alternating sequence of vertices and edges consecutive elements of which are incident,that begins and ends with a vertex.
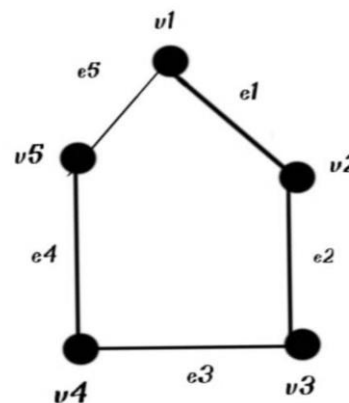

Figure 2.2

Definition:2.3. Trail:

A trail is a walk without repeated edges. A Trail is defined as an open walk in which-vertices may repeat. But edges are not allowed to repeat
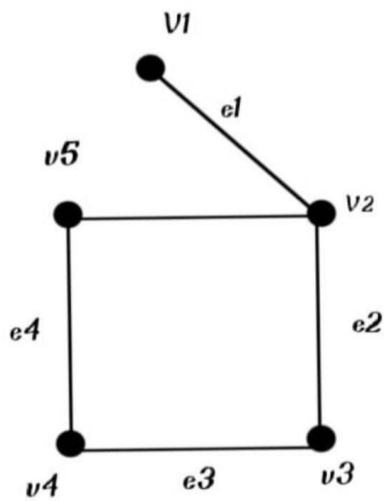
Figure 2.3
Definition:2.4. Path:
A path is a walk without repeated vertices. A
Path in a graph is a finite or infinite sequences
of edges which joins a sequence of vertices
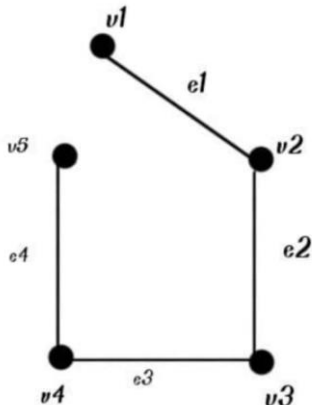which are all distinct.

Figure 2.4
Definition:2.5. Bijective function:
 A function between the elements of two sets,
where each element of one set is paired with
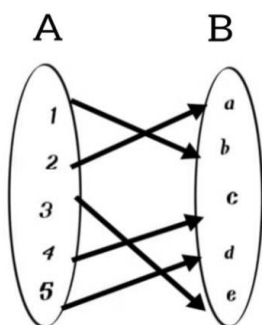exactly one element of the other set.

Figure 2.5
Definition:2.6. Injective function:

Let f: A → B be a function from the domain A
to the codomain B. The function f is called
injective (or one-to-one) if it maps distinct
elements of A to distinct elements of B.In other
words, for every element y in the codomain B
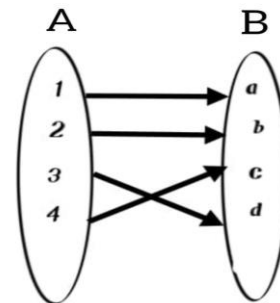there exists at most one preimage in the
domain A.

Figure 2.6

Definition:2.7. Labeled graph:
        A labeled graph is a graph whose
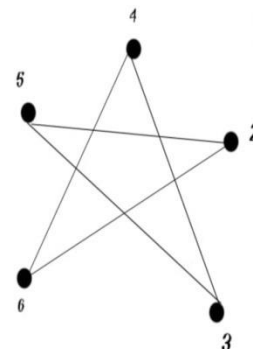vertices are each assigned an element from a
set of symbols.

Figure 2.7
Definition:2.8. Unlabeled graph:
        A graph which has no such labeling is
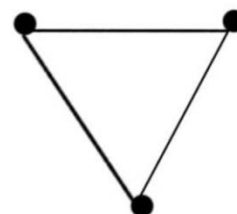called an unlabeled graph

Figure 2.8
Definition:2.9. Modulo:
Modulo is a math operation that finds the
remainder when one integer is divided by
another. In writing, it is frequently abbreviated
as mod, or represented by the symbol %.
Where a is the dividend, b is the divisor (or
modulos), and r is the remainder.

Definition:2.10. Star:

A graph G = (V, E) is called a bipartite graph if it's vertices V can be partitioned into two subsets V1 and V2 such that each edge of G connects a vertex of V_1 to a vertex V_2. It is denoted by K_{mn}, where m and n are the numbers of vertices in V_1 and V_2 respectively.
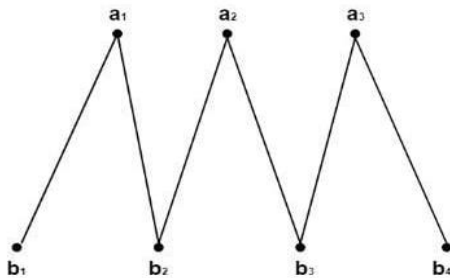

Figure 2.10

Definition:2.11. Complete bipartite graph:

A graph G = (V, E) is called a complete bipartite graph if it's vertices V can be partitioned into two subsets V_1 and V_2 such that each vertex of V_1 is connected to each of V_2. The number of edges in a complete bipartite graph in m,n as each of the m vertices is connected to each of the n vertices.
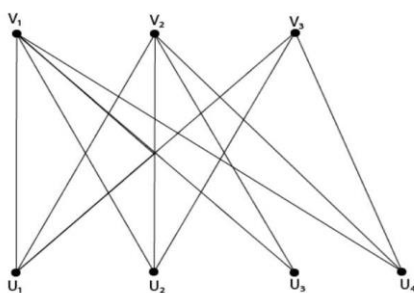

Figure 2.11

Here V1= {v1, v2, v3} and V2= {u1, u2, u3, u4,}

Main Result

Definition: 3.1

Let G = (V,E) be a graph with p vertices and q edges is *said to be a two modulo four sum graph if there is an injective function f from V(G) to { a: 0 ≤ a ≤ 4q-2 } and either a ≡ 0 (mod 4) or a ≡ 2(mod 4) where q is the number of edges of G and such that f induces a bijection f* from E(G) to { a : 2 ≤ a ≤ 4q-2} and a ≡ 2 (mod) given by f*(w) = f(u) + f(u₁)* and the function f is called two modulo four sum labelling of G.

PATH

Path in a graph is a finite or infinite sequence of edges which joins a sequence of vertices

which by most definition are all distinct since the vertices are distinct so the edges are distinct .paths are fundamental concept of graph theory, described in the introduction sections of Bondy and Murty (1976),Gibbons (1985).A Path between two vertices u and v is called u-v path. The set of vertices and edges which go to make up a path from a subraph. This subraph itself is also referred to as a Path

Theorem:

4.1. AnypathP$_n$isatwomodulofoursumgraph**.**

Proof: Let G be a path P_n

Let Vertices V (G) = {Vi: $1 \leq i \leq n$ } and

Edges E (G) = {$e_i = V_i V_{i+1}$: $1 \leq i \leq$ n-1 }

Here G has n vertices and (n-1) edges.

Now,Vertices: Injective function (one to one).

Define f:V (G)→{a : $0 \leq a \leq$ 4q-2 } and either

a ≡ 0 (mod 4) or a ≡ 2 (mod 4)

f : V(G) →{0,2,4,6,8,……..,4n-6}

f (v_i) = 4(i-1) / 2 , if i is odd and $1 \leq i \leq$ n

(2i – 2) , if i is even and $2 \leq i \leq$ n

Clearly, the function f is injective thus f induces bijective function.

Define f*: E (G) → {a: $2 \leq a \leq$ 4q-2}and also a ≡ 2 (mod 4)

f* : E(G) → {2,6,10,14,16,……..,4n-6}

And now,

f* (e_i) = 4i – 2 , $1 \leq i \leq$ n-1

Clearly, f* is a Bijective. Thus, f and f* satisfies the conditionand also it satisfies the condition

f*(w) = f (u) + f (u_1) is satisfies for all the values from 1 to n.

Thus, The Path Pn is a two modulo four sum graph.

Hence the proof.

STAR

Star graph which is known as bipartiategraph .Abipartiate graph or bigraph is a graph whose vertices can be divided into two disjoint and independent sets U and V such that every edge connects a vertex in U to one in V .Vertex sets U and V are usually called the parts of the graph. Equivalently , a bipartiate graph is a graph that does not contain any odd length cycles.

Theorem: 5.1. Any star $K_{1 , n}$ is a two modulo four sum graph .

Proof: Let G be a star K_1, n.

Let V (G) = {v, v_i: $1 \leq i \leq$ n} and

E (G) = {ei = v v_i: $1 \leq i \leq$ n}

Here G has n+ 1 vertex and n edges.
Define:
f: $V(G) \rightarrow \{0,2,4,6,8\ldots\ldots 4n-2\}$ as follows ,
$f(v) = 0$ and $f(vi) = 4i-2, 1 \leq i \leq n$
It satisfies an injective function thus f induces a bijective function
$f^* : \in (G) \rightarrow \{ 2,6,10,\ldots ..4n-2 \}$
$f^* (ei) = 4i – 2, 1 \leq i \leq n$
Hence, the edge labels are 2, 6, 10, 14……4n-2
$\therefore G = K_{1, n}$ is a two modulo four sum graph.

Complete Bipartiate Graph

A Complete bipartiate graph is a graph whose vertices can be partitioned into two subsets V_1 and V_2 such that no edge has both endpoints in the same subset, and every possible edge that could connect vertices in different subsets is part of the graph. A complete bipartiate graph or biclique is a special kind of bipartiate graph where every vertex of the second set.

Theorem 6.1: Any complete bipartite graph $K_{n, m}$ is a modulo four sum graph.

Proof: Let G be complete bipartite graph $K_{n,m}$
Let $V(G) = \{ v_i\ v_j : 1 \leq i \leq n$ and $1 \leq j \leq m \}$
$E(G) = \{v_1 u_j, v_2 u_j\ldots .. v_n u_j : 1 \leq j \leq m\}$
Hence G has m+n vertices and mn edges.
f: $V(G)$ $\{0,2,4,6\ldots ...4mn-2\}$
$f(v_i) = 4(i-1): 1 \leq i \leq n$
$f(u_j) = 4j-2: 1 \leq j \leq m$
$\therefore$ f is injective function thus f induces a bijective function.
$f^*: E(G)$ $\{2, 6,10,14\ldots ...4mn-2\}$
$f^* (e_i) = 4i-2: 1 \leq i \leq n$
Hence edge labels are 2,6....4mn-2.
Thus f is a two modulo four sum labeling of graph.
$\therefore$ $G = K_{n, m}$ is a two modulo four sum graph.

Conclusion

In this paper, we have proved the twomodulo four sum labeling for some path,star,complete bipartiate graph.

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QUEST FOR SURVIVAL IN THE ROAD BY CORMAC MCCARTHY

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Introduction

The Road (2006), written by *Cormac McCarthy* is a post-apocalyptic novel, a dystopian story, which takes place at the end of civilization. Post-apocalyptic novels present the struggles of human kind for survival at the destructive environment. This story revolves around a father and his son, travelling in road to coast, coming up through all the obstacles like scavenging food, clothing, shelter, landscape and loss of humanity. The protagonists are represented as victims of destructed world. Throughout the novel they long for familial love. The aim of the project is to analyze the pain and struggles of the protagonists in the run of survival and their longing for love. It also throws lights on the selfish nature of people and how they loss humanity in the run of survival. It also signifies the father's love and his son and his enduring hope in life.

American literature is consisted of works produced in the English language in the United States. The American writings were published in the pamphlets in the early periods. American literature is divided into five parts. The colonial period, Revolutionary period, Romanticism, Realism and Naturalism and Modernism. John Smith's *A True Relation of Virginia* (1608) was the first work produced in American Literature. During the 17th and 18th period. America received Independence in the Revolutionary period. The revolutionary period contained political writers like Benjamin Franklin and Thomas Pain. In post-war period, Thomas Jefferson's *Unites States declaration of independence* (1776) solidified his status as a key to American writer.

It was in the late eighteenth century and early nineteenth century Nations first novel were published and America got its uniqueness, culture, identity, religious, renaissance and reformation into the enlightenment. New literary figures emerged during this period, perhaps most prominently Washington Irving and Edgar Allen Poe. During eighteenth century, the Romanticism era was followed by Emerson, Thoreau and Whitman. After independence, in 1836, Ralph Waldo Emerson started a new movement called as transcendentalism theory. The first American novels are *Adventures of Alonso* by Thomas Attwood Digges in 1775 and William Hill Brown's *The Power of Sympathy* in 1791.

These efforts were supported by the continuation of the slave narrative autobiography, of which the best known example from this period was Frederick Douglass' *Narrative of the life of Frederick Douglass, an American slave* (1845) is a memoir. America reached a great height in the early mid-of twentieth century. American drama came to a height during early 1930s and was dominated by Tennessee and Miller. Female writers aroused during the twentieth century. Susanna Rowson is notable for her work *Charlotte: A Tale of Truth* (1791). Willa Cather (1837-1947) is notable for her first publication *April Twilights* (1903), a book of poetry.

Cormac McCarthy is considered as one of the greatest writer in American Literature. He is a living writer, born in Rhode Island, on July 20, 1933. He was the third of six children to Charles Joseph and Gladys Christiana McGrail McCarthy. His original name was Charles due to trickling he changed it into McCarthy. McCarthy joined the U.S. Air Force in 1953, and he served for four years. He spent two years in radio show. He is known for his sparse use or punctuation. In one of the interview with Oprah Winfrey Cormac McCarthy shared that he does not use quotation mark for dialogue and tells that no need to blot the page up by little marks. *The Road*, his dark tale of a post-apocalyptic father son journey which won Pulitzer Prize for fiction, and McCarthy said he had no idea where it was going as he wrote it. He said the inspiration came a few years ago

when he was in a hotel room in El Paso, Texas, with his young son who was asleep. McCarthy said that the message readers might take away from *The Road* one should simply care about things and people and be more appreciative. His works talks about American immigration and violence. McCarthy's genres are post-apocalyptic, Western and Southern Gothic. In 2003, literary critic, Harold Bloom and McCarthy are considered as one of the four major living American novelists. McCarthy wrote ten novels and many short stories, screen plays and plays. His notable works are *The Orchard Keeper* (1965), *No Country forOldMen* (2005) and *The Road* (2006). In addition, McCarthy had published two short stories – *Wake ofSusan* (1959) and *A Drowning Incident* (1960).

He won the Ingram Merrill Award for creative writing in 1959 and 1960. For the work All the Pretty Horses (1992) he received National Book Award and National Critics Circle Award. At present McCarthy is working with Santa Fe Institute, in multidisciplinary research centre. In SFI he published his essay, The Kekule Problem (2017). Also elected in American Philosophical Society in 2012. Cormac McCarthy's first novel Orchard Keeper(1966), revolves around the relationship between father and son. The same way his The Road (2006) is the journey of father and son overcoming the apocalyptic landscape. The Road won the Pulitzer Prize for fiction and James Tait Black Memorial Prize for fiction in 2006. It is the most critically acclaimed novel, though there is a departure from his usual western setting and themes.

The Road is considered as a masterpiece of McCarthy. The Road has is a story filled with enormous tragedy, need of survival and diaspora. It demonstrates the relationship of a father and a son and the problems faced due to the destruction. McCarthy reveals the journey taken by an unnamed man and a boy, the Father will take his son from North Coast to South Coast without any shelter. Daily morning they will start to walk miles and miles, only after long journey they will find a house. When they reach the house, the father will instruct the boy to stand out and he goes inside the house in search of food, clothing and shelter. When the story opens, the world was

completely destructed by a bomb blast and most of the people were burned alive. Even their bodies were scattered all over the country, there was nobody even to clear the bodies. Only few people like the protagonists were left alive in the country, even those people are struggling for the life in that post apocalyptic world.

The air is polluted with the ashes from the dead bodies. Whenever the people breathe they inhale this ash polluted air and their lungs are affected. Even though they undergo lot of struggles, they still had the hope of living and having a peaceful life like their past. Apart from this polluted environment they also had other obstacles like homelessness, cold weather and starvation. Atlas after all the hardships the love of the father is successful. The father has kept his last breathe till finding a safe place to live for his son. At the end of the novel the father hands over the son to a new family, which he believed to be the safe place for his son and he dies out of his lungs problem.

Cormac McCarthy's *The Road* is a novel that addresses the fundamental rights of the man and the need of a human. McCarthy tries to reveal the insurmountable pains of humans and their everlasting thirst for surviving. This novel tells the story of thirst for survival and the constant relationship between the father and son in the post apocalyptic novel. The real world has also become merely like apocalyptic with the pandemic COVID – 19. Many people have lost their life, their loved one and their source of income. As shows in the post apocalyptic novel, in the real life too people were in search of food, clothing, shelter and they were ready to do everything to safeguard their life. Many people living on road sides and platforms, their sufferings are priceless. At present the evolution of society is in struggle for survival. The whole world is affected with destruction and surviving plays an important role. Shelter of many people is in platform and their survival is always a question mark. The thirst of living becomes a big issues in the present society.

During fourteenth century, Europe was attacked by an ancient disease, Black Death which devastated one-third of the population. About five thousand years ago Pre-historic village in China is wiped off due to Circa.

America underwent Plague disease in sixteenth century, yellow fever epidemic and flu epidemic. In Chinmay Tumbe's, *The Age of Pandemics*, reveals all the pandemics occurred during ancient times. Destruction of the world is a slow poison. Wide spread of disease, made people to think whether survival is applicable. Nowadays time spent towards the family is in exploitation. In William Golding's, *Lord of the Flies* (1954), notifies the importance of survival.

The world portrayed in the present novel is cold and scavenging for food. Along with Human beings, plants and animals has become extinct. The ashen landscape being robbed by the men is the disagreement between father and son whether to help the survivors or not. The extinction shows the dystopian culture is immoral. The situation lead the protagonist to be afraid and moves him towards the end of survival. Cormac McCarthy's latest novel, *The Road 2006*, tells the journey of a father and son, as they make their journey towards the South Coast coming across the burned wasteland of a post-apocalyptic America. When the man woke in the woods in the dark and cold of the night he would have reached out to touch the child beside him. "Night's dark beyond darkness and the days more gray each one than what had gone before. He pushed away the plastic tarpaulin and raised himself in the stinky robes and blankets and looked towards the east for any light but there was none" (1).

They drag themselves pushing a cart using ropes, and living on the meager supplies of canned food and water they come across. They had no calendar and thought the month was October but not sure. "The segments of road down there among the dead trees" (3). "The gray shape of the city vanished in the night onset like an apparition and he lit the little lamp and set it back out of the wind" (8) hope of being change that one wants to see world. The boy is very concerned with making sure that they are good guys and opposed to bad guys.

The narrator narrates the stories of justice and courage from the old world hoping that such stories will make the boy alive. The man hopes for a better future, survival, and humanity. As they walk they keep track of their location on a tattered map that they use it. On their way they come across a man being struck by lightning. They pass a burnt man and the boy wants to help him, but his father won't allow, because they had nothing with them. The boy cries showing his kind heart and difficulties faced by him, feels that others should not face it. Human beings are the products of the world. The world is filled with full of colours and arouse with them. "Mostly he worried about their shoes. That and food. Always food. In an old batboard smokehouse they found a ham gambreled up in a high corner" (16). The man is always in search of food, he fought a lot to live in that destruction world. Unfortunately, the essence of human survival is being lost in our blackish history and the darkness was slowly penetrating our fragile world. The world depicted in the novel is ashen and in need of food. They follow the melted interstate roads east and south hoping that they find a warmer climate near the sea, and convinced that another winter in the north a decade after a nuclear explosion will bring them to their end. The father is incurably ill, due to the ashen land, affects with breathing the ashen smoke, for so long, and without a shelter, they use to sleep in mountain hills and intake ashy oxygen. The story focuses on the relationship between the father and son and the story of their survival. Father was conscious in saving themselves from the cannibals. He showed his power of human, divine and most importantly being a father. The readers are likely to be captivated by the strength and the trust they face to sustain oneself in this civilized world.

Cormac McCarthy's *The Road*, contained a few original elements that made it more resemblance of the present day reality. The elements of disruption with regard to the Western tradition are much more conspicuous in the novel. Obviously, he is not the first writer who have ventured into this genre, there are many post-apocalyptic novels even before McCarthy's *The Road* but he has presented it in a clear and realistic manner. *The Road*, on the other hand, presents a different treatment of nature, since the landscape has been burned by the disaster and there are practically no landmarks to indicate what region of the country the pair is travelling in.

The landscape of the novel is unbearably silent and motionless no plant or animal, except for a dog, seems to have survived the nuclear explosion.They passed two hundred feet away, the ground shuttering lightly and trampling. McCarthy himself struggled to keep him alive in this devastation, having a warmer confidence. The man started to cough and it became hard for him to breathe. He wiped the blood from his face and held him. He held his boy close to him and said, "It is okay, he said." (69). They passed towards the east coming across the dead tress. Besides, they crossed an old frame house and came across a dirt road. The man found no home on the roadside, the boy was shivering due to chillness, and boy wears a blanket and sat on the mountain. No piece of clothing occurred, shoe was torn, dark was coming, lamped the firewood and father knelt his son.After consuming the food man took the boy under the bridge and he pushed away the boy's face and his hair. The water is so chill and the boy started crying, made the boy look good, wrapped him and carried him to fire. They opened their tarpaulin, mountain, slept and father was unable to breathe, woke up in the night and he was shattering with cold, scavenging for food, here fatherhood plays an important role. The man gave all his food to his son, feeling that his son should be alive and to tackle from this ungenerous world. Again they woke started their journey in the road, in search of shelter, clothing. They saw a hardware store, far apart miles, and the man making the boy to stand out, searched for food, bed sheets, came out with a hope that this day will end in taking dinner. The boy asked his father that what he would do if he was killed by the bad man. "It may happen. My job is to take care of you. I was appointed to that by God. I will kill anyone who touches you. Do you understand? Yes "(80).

The man in the novel struggles to protect his little boy from the predations of other men, while at the same time struggling to maintain his sense of morality and bequeath good values to his son. He carries a gun for his protection but has only two bullets, one of which he is saving to kill his own son if circumstance should require it. The boy is too young to comprehend the atrocities that will be inflicted on him if he is caught by the bad guys but the man is well aware. Though he devotes his life to his son, the fact is he will kill the boy. The father and son meet some of the ravagers, marauders, and deranged refugees that have survived the disaster. The father finds his power go build stories constantly diminished and upset, it is only storytelling that can provide their journey with some sense and significance. They are taking part in a grand journey in which the forces of good and evil are staking claims on their souls they would have most likely given up their efforts to make it through in this brutal and inhospitable world long ago. *The Road* can only be viewed as a triumph of the father whose main mission has been to keep his child alive and bring him to safety. McCarthy changes the odds that are habitual in his fiction in order to favour the man and the boy, thanks to their confidence, patience and endurance. They manage to survive to death and ice, in constant starvation and the threat of marching thugs who ambush people on the road to store them alive as provisions. Father and son came through many nights which were embarrassing and boy shaking

It was as long a night as he could remember out of a great plenty of such nights. They lay on the wet ground by the side of the road under the blankets with the rain rattling on the tarp and he held the boy and after a while the boy stopped shaking, and then he slept. The thunder trundled away to the north, ceased just raining. The man slept and woke up, the rain slackened, after a while it stopped. Father wondered it was mid - night, cough arose with blood, unable to breathe and had a hope to survive for his son. Next day morning they ate apples and drank water. The ground where they slept was dry and started to walk miles and miles. Father's relationship with his son is priceless. It is no wonder, therefore, that the protagonists fear should increase exponentially when he sees his son's life in danger. Finally, the man and the boy, came to an end, but, unfortunately due to his lungs problem the father passed away. Father felt very happy when he handed over his boy to another family. The other family is ready to accept him and the boy got a livelihood, motherhood and a family for his living. Though his past is very filthy at present his life became precious.

When the women saw him, she was overwhelmed and embraced him. Earlier in the novel, the ten year old boy predictably misses her mother sometimes. However, he and his father never refer to her in their exchanges and, if anything, she just remains the ghost of somebody who never showed the confidence and strength of character necessary to survive in this environment.

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HYBRID MULTILEVEL INVERTER FOR PV APPLICATION WITH IOT SYSTEM

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ABSTRACT

The wind farm basis of Internet of Things (IoT) is built in wind turbines with wireless connection. This paper proposes an integrated power quality conditioner to improve the power quality of wind energy frameworks. The cluster computer can be monitored with a limited reorganization effort over a variety of downwind distances (between turbines).Far away, information gathered for an evaluation of the offline design of the wind turbines is supplied with an IoT base for each turbine on the farm. This company offers a power age sun-based framework consisting of a dc/dc controller and a multilevel inverter with decreased switches. It contains an AC - DC drive converter that converts the output voltage from the solar control panel to three autonomous voltage sources. Condenser decision architecture associated with the course has been used in construction of the suggested nine-level inverter, as well as a full-interface control converter. As the controller specification changes, two unidirectional DC voltage converters are output, one unidirectional ac voltage converter and a three output DC voltage converter. To arrange with the used power, this new daylight-based power period approach generates and energizes a pure sine wave output current. Nine semiconductor switches are used for the striking elements of the new nine-stage converter and a solitary semiconductor switch is changed at every point repeatedly. A module is created to confirm the performance of the proposed sun-organized power system.

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Keywords: Solar Cell, maximum power point tracking, Selector circuit, multilevel inverter

Introduction

Multilevel inverter (nine-level) is balanced and is connected to a powerful stream through a capacitor selection circuit and a fully interface control converter. Thus capacitor confirmation circuit converts the three capitulary voltage source booster into a four stages dc voltage, and this four stages dc voltage is converted into a proposed MLI ventilation voltage. As a result, the designed sunlight based control mechanism generates a Sinusoidal current that is organized by the Source Value then passed to the device application. A new aspect of the given MLI is that it includes seven discrete semiconductor switches (power electronics MOSFET) and only one single MOSFET switch is turned high at any point in time. A model is expanded and the implementation of this new solar energy structure is tested. The piece chart for the nine level inverter is shown as Fig.2.
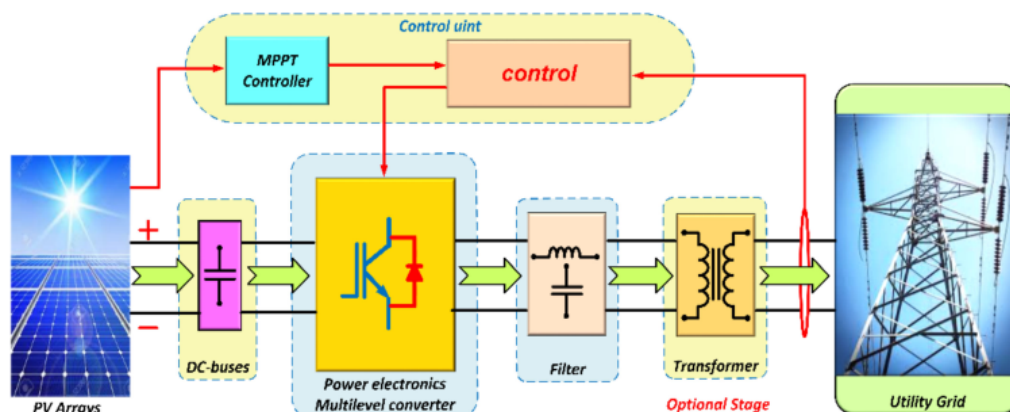

Figure 1. Block Diagram of Network Control System

1.1. Multilevel Inveter (MLI)

The new sun based power System time structure including a nine level converter dc to dc control. The suggested MLI and mode activities are defined by a decisional condenser

design with a full-screen controller connected via a course, as shown in Fig. 2.

The nine level inverter consists just a seven set of electronic power switches as it breaks the circuit control. Since there is only a solitary power electronic switch that balance at high speed next to any point to aid increase the MLI output voltage, the exchange power disaster is reduced and the impact efficiency is increased to an increased level. For high capacity, multi-level inverter is utilized to reduce the loss of switching and switches. In this study 4 switches were used, while more than four switches were used in the preceding paper. The existing approach involves additional switches and greater losses and strains on switches, resulting in low efficiency. The induction is also a channel inductor, as there is a nine level yield voltage source.
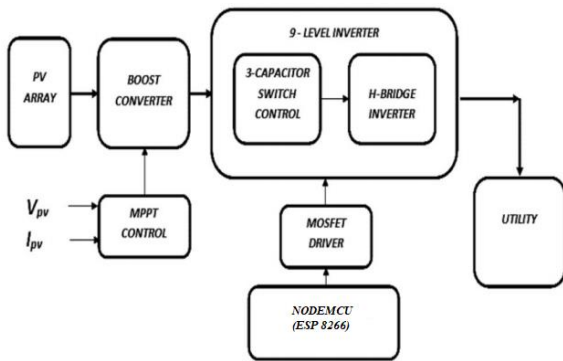

Fig.2 Block diagram of NODUMCU Based nine lelvel inverter

1.2 Proposed IoT Based System

The proposed IoT-based smart controlled inverter is built by connecting a Solar PV panel, charge controller, inverter, battery, Wi-Fi Module, and current sensor to various types of loads via a four-channel relay unit.

The functional architecture of the proposed IoT-based smart controlled inverter is depicted in Fig.1. The PV panel serves as a source of voltage stored in the battery via the inverter. The battery's voltage is applied to one of the microcontroller's ADC pins after it has reduced using a voltage divider circuit. This digital value of the source voltage used to perform the calculations required to display the loads can run. The ESP8266 is linked to the microcontroller to send and receive messages via the controller's Transmit and Receive pins.

When a user sends a message to the ESP8266 Wi-Fi module, it is routed to the controller, which is programmed to accept the message

and compare it to a pre-defined string.the proposed IoT-based smart controlled inverter is depicted in Fig.3.

Fig:3 The Proposed IoT Based Smart Controlled

1.3 Steps in Implementing IoT based Smart Controlled Inverter:

Step 1: A photovoltaic (PV) panel converts green solar energy into electrical energy.

Step 2: The received energy will stored in the inverter's battery via the Charge Controller

Step 3: The inverter will convert the DC to AC and supply power to the various loads via the four channel relay circuit.

Step 4: The current sensor ACS712 continuously senses the load current and sends the information to the user's mobile device via the Wi-Fi module.

Step 5:If the load current level exceeds the threshold, the user can disconnect and control the unwanted loads using an Android app and Wi-Fi communication.

Step 6:When the load current level falls below the threshold value and the entire load / required loads will be connected via Node MCU Wi-Fi communication using the Android app / mobile URL site ON-OFF control.
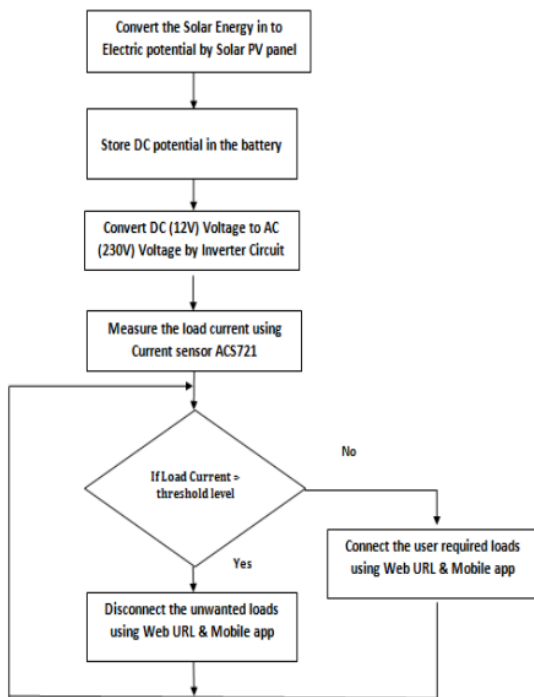
Fig:4 Flow chart of Proposed IoT Based Smart Multilevle Inverter System

The Flow chart in Fig. 4 explains theprinciple of operation of proposed IoT based Smart Controlled Inverter.

Methodology

The proposed work circuit diagrammatic representation is presented in figure 1 using two dc sources as inputs.
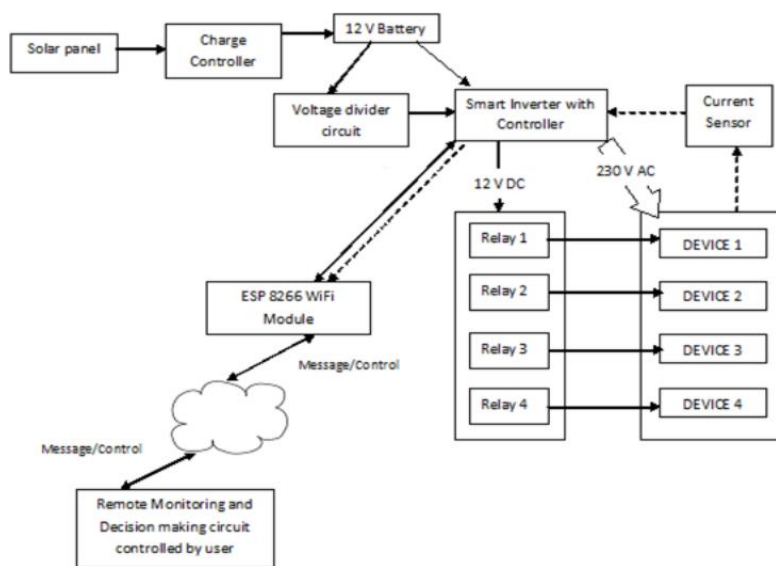
Fig:5 Block Diagram of Proposed IoT Based Smart Multilevel Inveter System

Across AB, the multilayer output positive half cycle voltage generated and supported by the standard H bridge, which is interpreted by the switches T1 through T4 and generates output in both positive andnegative half cycles before being sent to the load.

The circuit depicted in Figure 5 can generate the output at nine distinct states, four positive, four negative, and one zero.

Distant switching states and analogous outputs for each switching state across AB summarized in table 1, where 1 represents the ON state and 0 represents the OFF state of the switching equipment. When dc sources have the same amplitude, the output voltage level is attenuated; therefore, asymmetric arrangement voltage sources increase the voltage levels. When fed a H bridge, all possible voltagemeasurements across AB listed in table 1 generatepositive and negative outputs at V0.

Fig: 6 Recommanded Basic DC Source unit

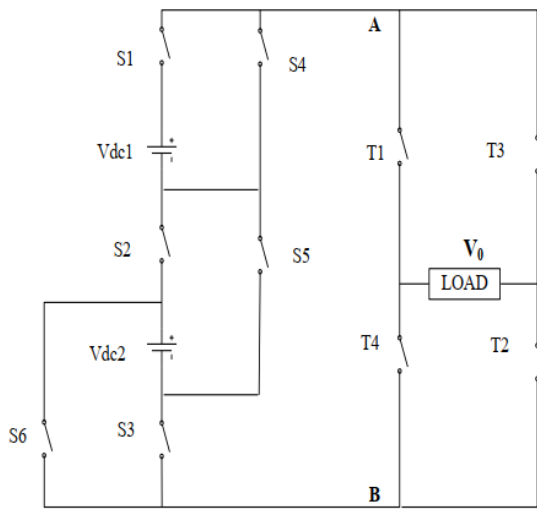| Mode	S_1	S_2	S_3	S_4	S_5	S_6	V_0
1	0	0	1	1	1	0	0
	0	1	0	1	0	1	
2	1	0	0	0	1	1	V_1-V_2
3	0	1	1	1	0	0	V_2
4	1	0	1	0	1	0	V_1
5	1	1	1	0	0	0	V_1+V_2

Table Shows the State of DC Voltage Sources

The varied proportions of switches summaries the output voltage of the MLI's suggested configuration, where 1 and 0 represent the ON and OFF states of the switching equipment's, respectively. The number of output voltage levels is minimized when identical amplitude dc voltage sources are used (symmetric configuration). When unequal amplitude dc voltage sources are used (asymmetric configuration), the number of output voltage levels increases. The table 1 illustrates possible positive voltage levels over AB.

Voltages are supplied to the H- Bridge in order to achieve output levels that are viable in both positive and negative directions at Vo.

Nine levels of positive output voltage are obtained using these equations. Except for the zero output voltage, the similar positive voltage can be obtained by enabling the switches T1 and T2 of the H bridge. The 13 outputs with similar amplitudes can chosen by energizing T3 and T4. The output voltage of the recommended design is shown in Table 1 while working with symmetric and asymmetric approaches. Output measures may be determined for n distinct dc sources, symmetric and asymmetric MLI, and binary and tertiary relationships .

1.5 IoT data control system:

The primary aim of the device design is to let the user determine the life cycle and operational levels of the inverter. Photovoltaic cells are used to capture solar energy and change it into an alternating current via switching equipment.

The first system has 3 H-bridges that allow the inverter to have different levels in a cascaded connection. The inverter level is determined by the formula "2N+1,".

N- stands no. of the use of H-bridges.

NoduMCU is Connected to the circuit, which delivers time control signals to enable or deactivate the switching device.

The system can deliver waveforms for 5-level, 7-level and a 9-level inverter as a result of the prototype consisting of 3 H-bridges. This would also be less complex and less expensive. The setup contains a NodeMCU to give instant Internet access instead of an Arduino UNO. NodeMCU is connected to the ThingsBoard (Open IoT platform), which works on MQTT protocols using ESP8266 firmware. NodeMCU is also connected to LDR and dht11 (temperature and humidity sensor) to monitor inverter DC shift situations. It also sends data for the Cloud platform for 7 levels and 9 level inverters, where the user can view the waveforms remotely.The whole setup is shown in the Fig.3

The given Prototype needed,

    a) Mains AC toDC converter.
    b) Solar PV module.
    c) Battery.

While,The prototype switches its DC source to a specific source with sensors only when the conditions are not adequate.

Simulation and results

The recurrent power interchange of semiconductor shafts employed for this part of the condenser section circuits, support converters and extension inverters is 100 Hz, 10 KHz and 20 KHz independent. The entire time it takes for sham is 1 s. The PV display is re-enacted by the sun-controlled cell . Fig. 4 shows The nine-stage inverter boost converter circuit with Nodemcu. The inverter simulation

circuit at nine levels is shown in Fig. 5. Sun-oriented cells are put into a voltage arrangement combined with the choice to compare the current .

Power GUI square is used for running simpler frame components. Its extension is used to display the graphic view yield. The resistive load is used as a part of the return as the X pivot and Y hub of the underlying information and the yield waveform, which talk separately for time and adequacy.

The PV bunch generates photovoltaic effect dc voltage. A PV frame generates 90 V dc as per Fig. 6.The diagram above refers to four stage dc voltage, as four different voltage springs of boost converters use four condensers, besides electronic systems.Table 1 shows the switching configurations of the MLI.The four-stage dc voltage is converted to nine-stage ac voltage using the voltage source inverter. The degree of this ac tension is 300 V and is shown in Fig. 7. Fig 8 displays The latest ac current of nine level inverter. The inverter converts to an alternating current at full voltage. The inconceivable value of AC is 0.35 A.
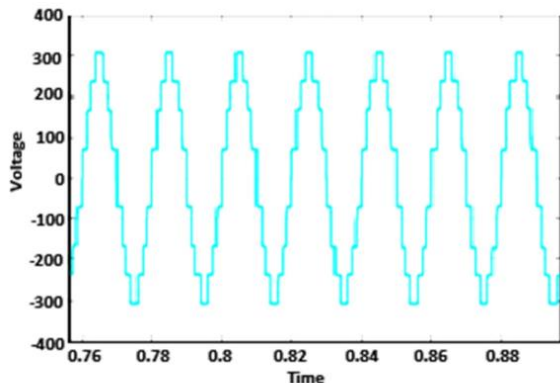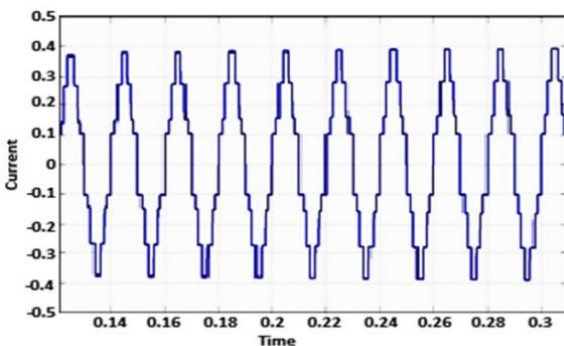

Fig.7 Output Voltage of nine level inverter

Fig.8 Output Current of nine level inverter

Conclusion

This research shows a photovoltaic (PV) framework. The changes in dc vitality that a sun-focused cell exhibits are combined into an ac vitality supported explicitly in the appropriate network .The 9-level inverter is made up of eight transistor switches. Furthermore, when the nine-level ac output tension is formed, The metal oxide transistor shock switch must be changed with a high recurring. It lessens the misfortune of switching power and increases influence. The three dc condenser voltages are contained within the proposed nine-level inverter. The control circuit is configured along these lines.Recreation demonstrates that the recommended PV Framework provides a nine-level voltage and a sinusoidal current that is a non-different phase of the utility voltage.

The given prototyped were controlled by NodeMCU microcontroller. The output was checked on an oscilloscope for nine level inverter

The following conclusions have been taken into account:

a) Remote monitoring using a proper IoT platform is able to monitor inverter control signals and other characteristics such as temperature, humidity or even the intensity of light.

b) The given system is suitable for low to medium power outputs and only bit difficulty is to construct and Need to learn a new language and IDE.

A drawback of the given system is a slight delay due to network latency, which occurs when data is being transmitted to the IoT platform.This would lead to a lower frequency than the other system of sinusoidal output. Template sample format, The content of the conclusion comes here. The given system is Low cost Integrated, support for WIFI network ,Reduced size of the board, Low energy consumption.

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AN ADAPTABLE APPROACH FOR DATA DISSEMINATION IN URBAN VEHICULAR AD-HOC NETWORK (U-VANET)

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ABSTRACT

Data dissemination is amid the vital elements of Vehicular Ad-Hoc Networks (VANETs), and it has drawn in much consideration in the previous period. VANET has become a functioning space of exploration to work on the security of vehicle and street, traffic effectiveness, and furthermore to build the consolation to the drivers and travelers.For VANETs applications, it is important to disseminate data from data source vehicle to numerous objective vehicles out and about. The main challenging task is broadcasting the messages to the intermittent nodes to final destination due to high movement and dynamic path. The above issues have been settled by utilizing clustering mechanisms. Clustering is a mechanism of grouping of vehicles based upon some predefined metrics such as density, speed, and topographicalpositions of the vehicles. The main aim of our proposed work is selecting the cluster head based on Random Search Algorithm (RSA) by applying the parameter as acceleration and distance. The performance evaluation concentrates on minimizing the Overload, and implications to reduce the CO2emission from vehicles.

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Keywords: Random Search Algorithm (RSA), Cluster, Data dissemination

Introduction

Over the two decades before, governments' efforts to improve traffic safety were concentrated on developing more efficient and safer highways. Over time, these efforts turned to concentrate on mechanical and automotive engineering in order to create quicker cars that could cover larger distances. After then, electronics technology had a significant impact on car manufacture, and sensors and Electronic Control Units (ECUs) were installed on vehicles to make them more sensitive and intelligent, and hence safer to drive on. Innovations in networking technology, notably wireless mobile communications, are now being integrated into automobiles and highways. This effect will have a significant impact on how people drive in the future and how transportation systems are regarded. A revolution is expected during the next decade, with huge social, economic, and geopolitical implications.

Because of people's constant mobility, the growing number of vehicles on the road, and the necessity for infrastructure-free communication technology for intelligent transportation systems (ITS), vehicular ad hoc networks (VANETs) are a hot topic in vehicular and wireless research. Improvements in ITS have been focused on reducing traffic congestion to reduce toxic emissions and fuel consumption, improving traffic safety, and providing mobile infotainment to passengers by improving on-road communication and making vehicles aware of their surroundings over the last few years [1].

A VANET is a type of mobile ad hoc network (MANET) in which vehicles connect with one another as well as with fixed roadside equipment nearby. Vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) are two types of VANET connections (V2I). V2I communications can be utilized to access location services or collect traffic statistics in a VANET setting. V2V could be used to send out emergency alerts or to communicate with nodes outside of the service area using multihop communication. This is depicted in Figure 1.
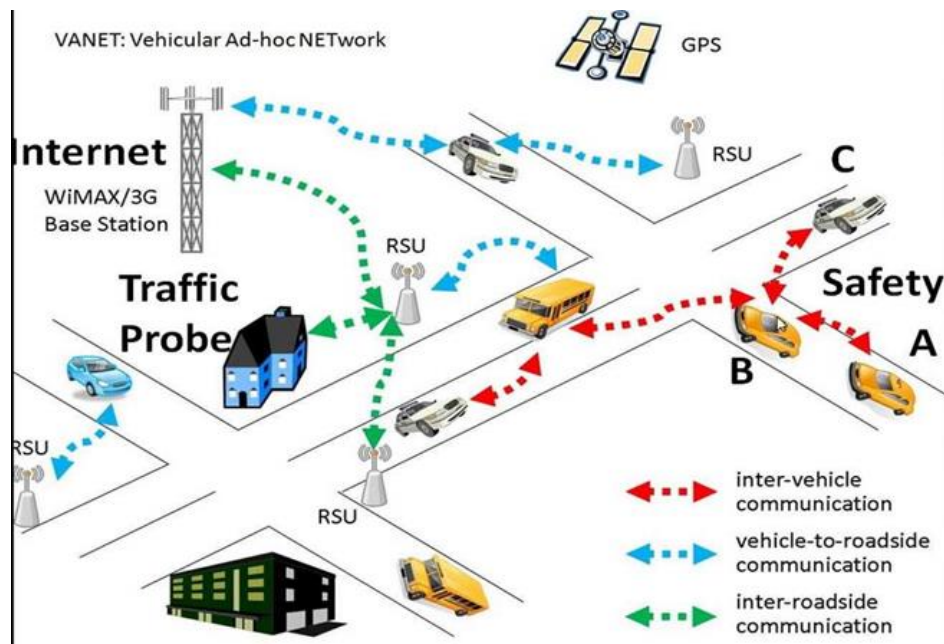
Fig. 1. VANET COMMUNICATION

The wide range of solutions and open challenges that vehicle networks offer are a big part of the appeal. There are a number of significant technical problems to address, including vehicle distribution, data transmission, high mobility and communication vehicle speeds, and real-time requirements. Carmakers, governments, businesses, and academia are all becoming more interested in vehicular networks as a result of these issues and prospects [2].

Vehicles in modern Intelligent Transportation Systems will be capable of automatically detecting dangerous situations, that is, their On-Board Units (OBUs) will be able to determine whether an accident has occurred using data gathered by accelerometers and the rest of the sensors available in the vehicle [3]. When an accident is detected, the vehicles immediately send warning messages to their neighbours, which are then replayed by receiving vehicles to warn other vehicles, preventing additional dangers. After a collision is detected, the OBU will create a warning message based on the information acquired by the vehicle's sensors. All of this data will be important in determining the severity of the accident [4] and the people and material resources required to optimize the rescue process, hence enhancing the quality of aid [5]. As a result, an effective warning message dissemination protocol should account for the most appropriate forwarding node for each message, maximizing the number of vehicles alerted to the dangerous situation while reducing the time it takes to alert them and the amount of traffic generated on the wireless channel.

1. Related Works

Data dissemination is a difficult problem since, due to limited bandwidth, the maximum amount of data must be disseminated over the vehicle network. Data-dissemination algorithms in VANETs are designed to transmit information to drivers, passengers, and vehicles in emergency situations. As a result, it's critical to remember that information must be disseminated to all cars in the interest area. Many scholars have proposed various methods for disseminating data so that it can be accessible more quickly. Some of them are:

Using the 802.11p standard, Xu et al. [6] provided a paradigm for establishing Quality-of-Service (QoS) for safety messages. In terms of cars within direct communication range, this method supports a high receipt probability for warning signals. A time slot is defined by the delivery time of a single message, and a time frame is defined by numerous slots. Because their range is limited to one-hop neighbours, messages must be repeated numerous times over their lifetime to maximise the chances of successful reception. [7] Uses a similar approach in which cars deliver small, brief

messages that must be repeated quickly in order to achieve high reliability and low delay. Synchronous Fixed Retransmission, Synchronous p- Persistent Retransmission, and Optical Orthogonal Codes were all examined by Farnoud and Valaee [8] for one-hop safety message retransmission. They demonstrated that the latter can boost success probability while reducing delay. The simulation findings were obtained on a three-lane straight road, thus they are not entirely applicable to metropolitan environments where wireless signals are frequently blocked by barriers (e.g., buildings).

The Urban Vehicular broadcast (UV-CAST) protocol, introduced by Viriyasitavat et al. [9], focuses on data dissemination for both dense and sparse VANET environments. Each vehicle in UV-CAST can be set to one of two modes: broadcast suppression or store-carry-forward (SCF). When a vehicle receives a message for the first time, it determines whether it is an edge vehicle, or one that is located on the edge of a linked component. UV-CAST predicts that these vehicles are more likely to encounter new neighbors, so they store and carry the message until they find one. UV-CAST, on the other hand, has a significant overhead because each vehicle must broadcast the packet at each contact with neighbouring vehicles that have not yet received it.

The Acknowledged Broadcast from Static to Highly Mobile (ABSM) protocol was proposed by Ros et al. [10]. It disseminates data messages using the Connected Dominating Set (CDS), which is a set of ideal vehicles for message forwarding. If a car is not connected to the CDS, it is immediately connected to another vehicle that is. As a result, if every car on the CDS retransmits the message, the entire network is covered. When a vehicle receives a message, it waits for its neighbours to recognize it before computing the delay before forwarding the message. The latency is determined by the frequency with which beacons are exchanged.

The Autonomous Algorithm for Dissemination of Information in Vehicular Networks was introduced by Meneguette et al. [11]. (ALADDIN). It examines forwarding zones to alleviate the broadcast storm problem, which is an area where the vehicles inside are thought to be better suited for dispersing the message and reaching out to more neighbours. ALADDIN also uses autonomic computing to determine whether to resend a data message, which is calculated using a propagation efficiency based on the number of messages delivered and beacons received in each vehicle. When a vehicle identifies a partition on the network and discovers another vehicle capable of continuing the dissemination process, ALADDIN adds unnecessary expense for holding duplicate messages.

Shah et al. [12] presented a transmission approach that uses a time-barrier method to eliminate messages that could disrupt the network. The proposed solution was based on the idea of using a super node to quickly disseminate the message. To avoid unwanted propagation, which could lead to the transmission hurricane issue, the time barrier approaches have been updated to solve the problem. While I. T. Abdel-Halim, et al., [13] proposed a modern, efficient clustering simulation versatility (MPECS) system. The primary idea behind MPECS was to use a Voronoi graph to divide the entire region into different sections, allowing each vehicle to estimate its lifetime and cost of becoming the cluster leader at its current location. Finally, in [14], the suggested technique demonstrated that strong MPECS capabilities improve clustering design dependability while reducing overhead. This research proposed a contemporary data distribution strategy based on clustering and CBD.

2. Proposed Work

2.1. System Model

A VANET incorporates three sorts of elements: vehicles, roadside units (RSUs), and servers. Vehicles are foremost adherents of the VANET which consists of 1 …. N number of vehicles. To consider that each vehicle is furnished with an OnBoard Unit (OBU), which is capable to transmit and obtain messages via wireless communication [17]. The communication mainly comprises Vehicle to-Vehicle (V2V) communication and the Vehicle-to Infrastructure (V2I) communication. The RSU is a remote correspondence foundation installed along the roadside. It is an

intermediator between vehicles and servers. The third category of units is servers, which manage the vehicles and applications in VANET.

Consider a highway scenario where multiple vehicles are moving with dynamic speed and dynamic direction. Let us assume thatindividual vehicle as active with respect to each other. This assumption corresponds well with the argument that vehicle are running with a dynamic speed with respect to each other. The obvious qualities of VANET, including the high portability and the vehicles have been distributed roughly; lead to visit changes in the geographies and detachments of the organization. To take care of these issues, we propose a grouping of vehicles together in such a way that to make a reliable connection on it. Each group contains a cluster head which is liable for overseeing data about the cluster member for information transmission.

In this paper, the vehicle-to-vehicle (V2V) communication has been considered for our proposed cluster based data transmission method. We expect that every vehicle has a distinctive character and is furnished with an On Board Unit (OBU). The provision of GPS is accessible for getting essential data which includes vehicle's present area, speed, and direction of vehicle. Vehicles are interchanging their data with each other through beacon messages. The beacon messages are communicated and gathered at each interval of beaconing, which includes vehicle's identifier, current position, current speed, direction, vehicle's present status, and Identification of cluster head.Azzaoui et al[20] proposed dynamic clustering strategy which minimizes collision and broadcasting problems. They improved the latency, data throughput and packet delivery ratio but does not deals with the CO_2 emission .We will exploit IEEE 802.11 convention in our proposed framework to carry out the avoidance of network collision and implications to minimize the CO_2 emission.

2.2.Cluster Head Identification using RSA Clustering Method:

Clustering can be utilized in VANETs to segment the system into smaller groups of moving vehicles installed with figuring and network gadgets. Cluster techniques has been quick and productive correspondence. Inside the cluster, there is cluster head (CH) which coordinates the activities of cluster. There are non-cluster nodes which is used to access the information from cluster head (CH) through intermittent node (IM). [17]
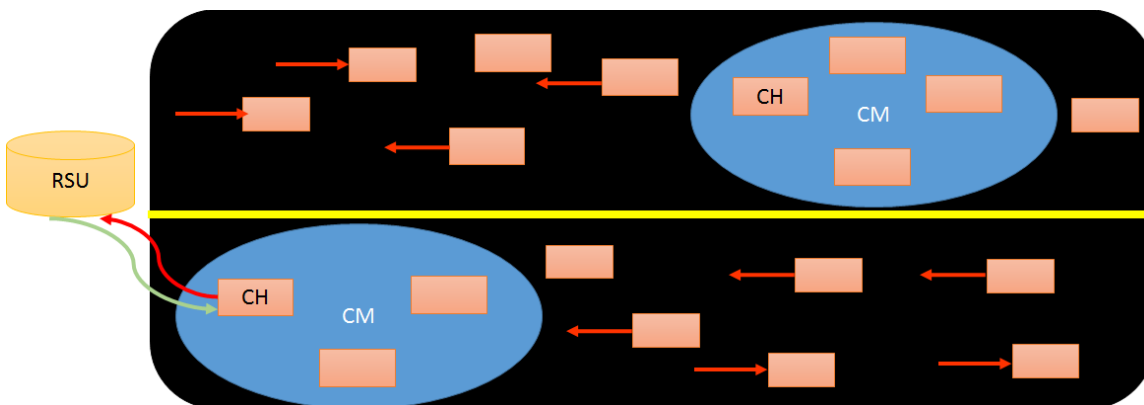
Fig. 2. Clustering Method

In the proposed system, to select the cluster head using Random Search Algorithm (RSA).The working of RSA is as: Random Search includes producing and assessing arbitrary contributions to the goal work. It is powerful on the grounds that it does not expect anything about the construction of the objective function. This can be useful for issues where there is a lot of area mastery that might impact or inclination the optimization methodology, permitting non-intuitive results for be found. [18]

In RSA, initially choose the vehicle as node randomly based on the position, direction and velocity for selecting the cluster Head (CH). Based on the distance calculation of the vehicles, initialize the iteration, generate the new value of the vehicle by means of

probability distribution given below the equation:

$$If\ f(n_{new}(i+1))< f(n_i),$$
$$Set\ n_{(i+1)} = n_{new}(i+1),$$
$$Else\ n_{(i+1)} = n_i$$

With reference to the calculation of the above equation, identify the nearest value as Cluster Head (CH) and neighbouring vehicles has to be considered as the cluster member (CM).

Pseudo code for random Search Algorithm for choosing Cluster Head (CH)
Randomly choose an initial vehicle (n_0), $n_0\ \epsilon\ N$ where based on the position, direction and velocity. Calculate $f(n_0)$ Calculate the distance of each vehicle with others. Set i=0 Generate a new value $n_{new}(i+1)\ \epsilon\ N$ based on probability distribution Choose the cluster head (CH) based on the below equation If $f(n_{new}(i+1))< f(n_i)$ Set $n_{(i+1)} = n_{new}(i+1)$ Else $n_{(i+1)} = n_i$ Stop if the extreme number of iterations has been reached; Otherwise go to step 1 based on the new i set to the past i+1

Now the RSU as the controller that beacons the transmission of data to the CH and thus CH acknowledges to the RSU. Similarly Cluster Head (CH) beacons the transmission of data to the cluster member (CM) and also to the nearest non cluster member (NCM) based on the same position of vehicle. All the cluster member and non-cluster member (NCM) have been acknowledging to the CH. Thus the broadcasting of data transmission, the cluster member and other intermittent vehicles have been changed their pathway.

Results & Disclosure

Simulation Environment

Test model have been accomplished by utilizing the system Veins 5.1 of the OMNeT++ 5.6.2 [15]. Veins give the convention heap of the IEEE 802.11p norm for V2V correspondence and an obstruction model for signal constriction. For the test of vehicle

traffic and motion, we thought about SUMO (Simulation of Urban MObility) [16], which is an open source traffic test system to demonstrate and to control objects in the street situation. This permits us to recreate the ideal vehicle developments with arbitrary journey speed and V2V communications as indicated by exact information. We considered an area of 3 km^2 from the Saravanampatti to Kalapatti of Coimbatore city, Tamilnadu which was acquired through the OpenStreetMap and imported by SUMO to produce the move records of vehicles.

Properties of Parameters
Table 1 Properties of Parameters

Parameter	**Value of Parameter**
Environment	Omnetpp 5.6.2,Veins5.1 and Sumo
Channel required	Wireless
Algorithm Used	RSA for identification of Cluster Head
Size of Networks	Dynamics
Type of Road	Highway with Multiple Lanes
Road Length	8 km
Vehicle Density	15 ~50 vehicles/km.Lane
Features Used	Throughput, CO_2Emission, Overhead Delay
Simulation Area	3Km^2
Simulation Time	500 sec
No. of Nodes	3000 Nodes

Evaluation Metrics
Throughput:

It needs the fundamentalelement as packet relationship and its size, data transmission rate, and total time taken between transmitted area/nodes. [19]

$$Throughput = \frac{size * amt.of\ Data}{time\ taken}$$

CO_2 Emission:

It alludes to the measure of CO2 getting out from vehicles and influencing the atmosphere.In fact, a definitive objective of any traffic data framework, and particularly any accumulation convention, is to lessen the absolute CO2 discharge by searching for limiting however much as could reasonably be

expected gridlocks and diminishing the dynamic holding up season of vehicles in go across streets and on roadways.[19]

The average CO_2 emission is defined as follows:

$$CO2\ Emission = \frac{\sum Vehicle\ CO2\ Emission}{\sum Vehicle}$$

Overload:

It represents the whole number of sent packets. The main objective is to evade from the overload issue by searching for limiting the quantity of messages traded in the network. [19]

The averageoverload is defined as follows:

$$Avg.\ Overload = \frac{\sum sent\ packet}{\sum vehicle}$$

Results
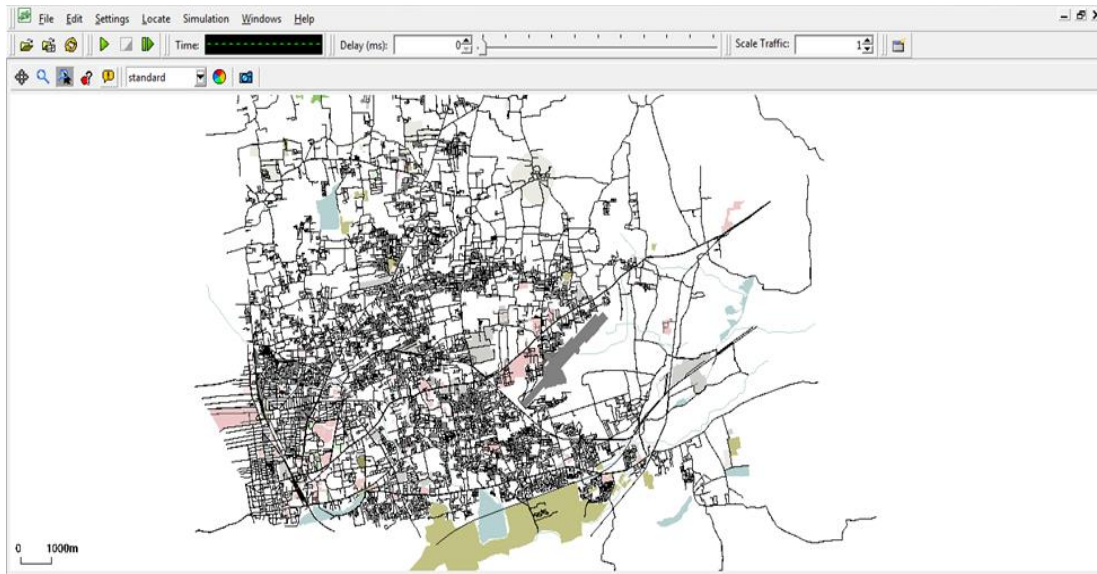
Fig.3. A realistic Scenario of Saravanampatti to Kalapatti in Coimbatore city
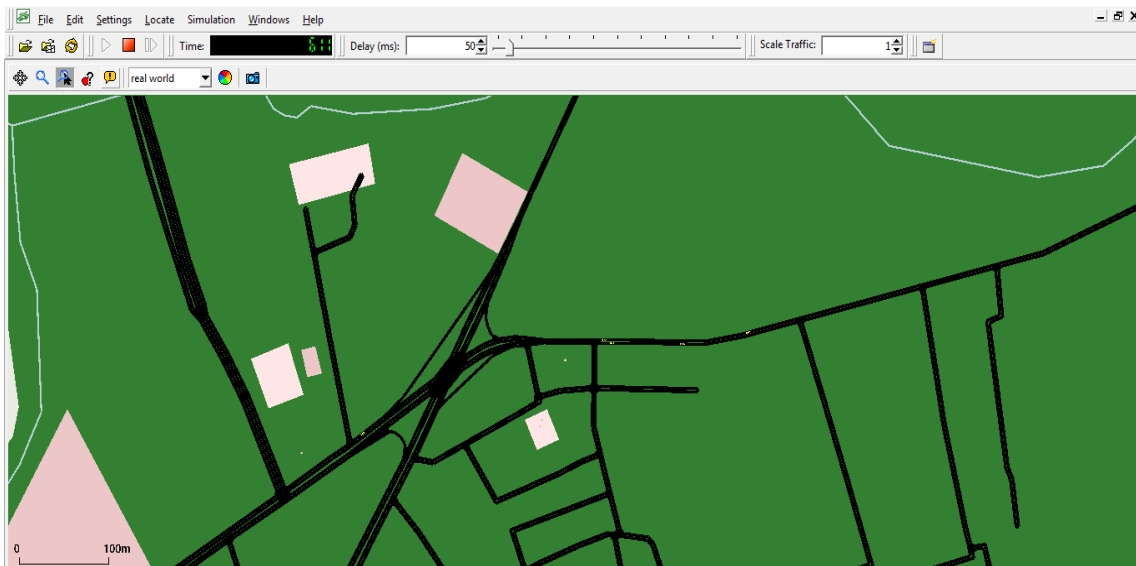
Fig.4. A multiple lanes scenario generated in SUMO

Throughput:
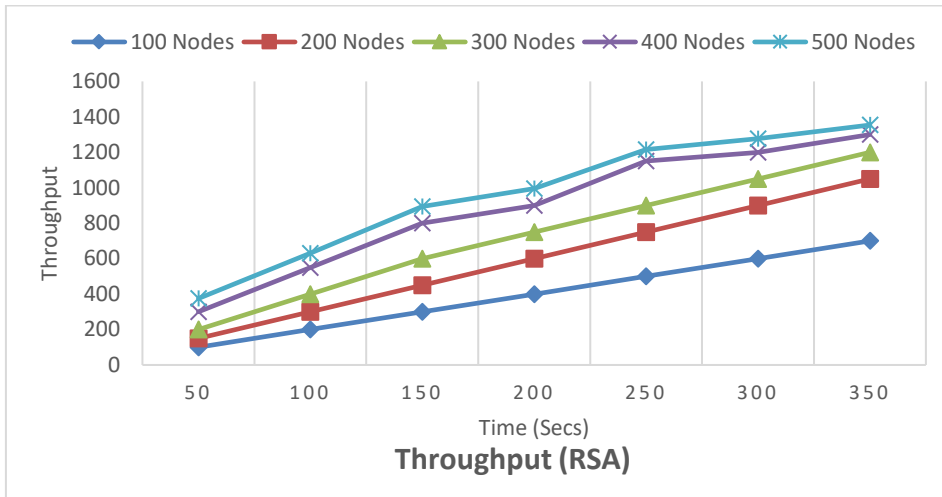
Fig.5.a. Throughput Calculation using RSA
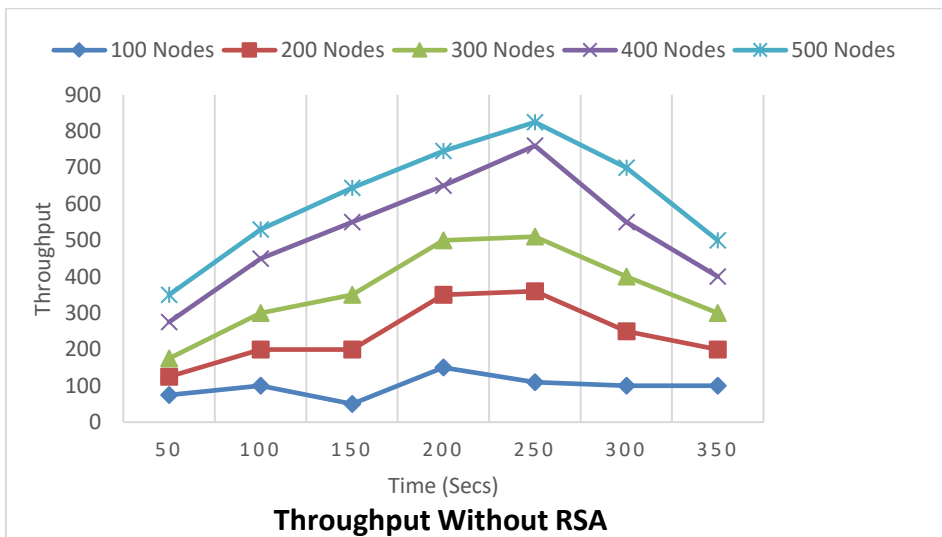
Fig.5.b. Throughput Calculation without using RSA
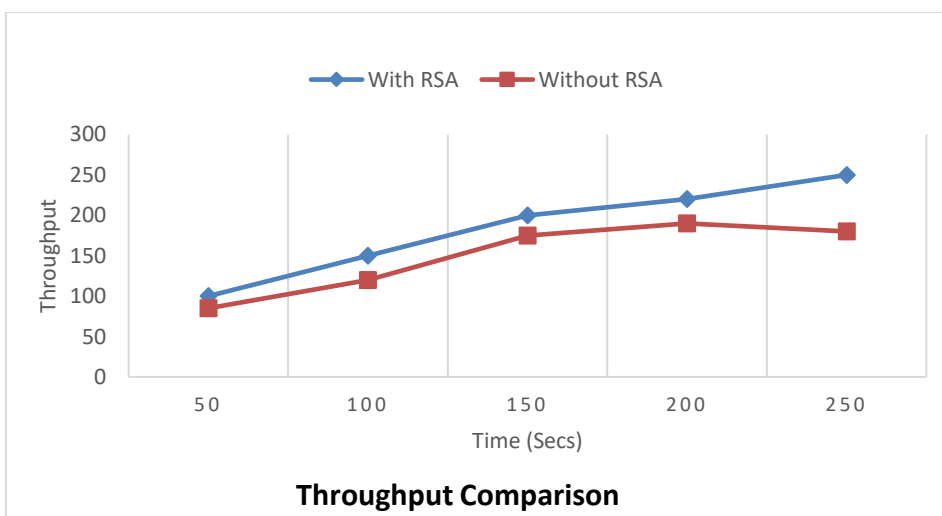
Fig.5.c. Comparison chart for Throughput Calculation

Fig.5.Throughput Calculation

CO2 Emission
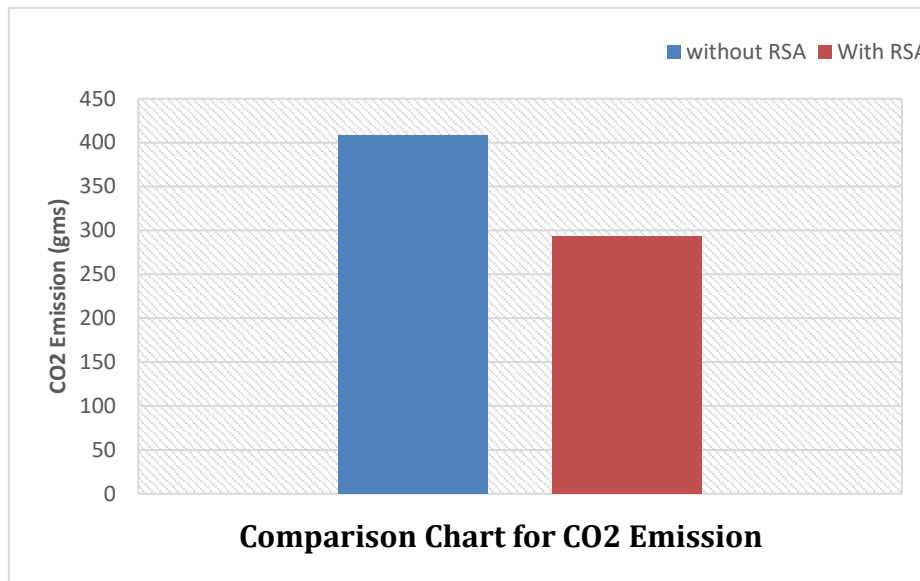
Fig.6.Comparison Chart for CO_2 Emission

Average Overload
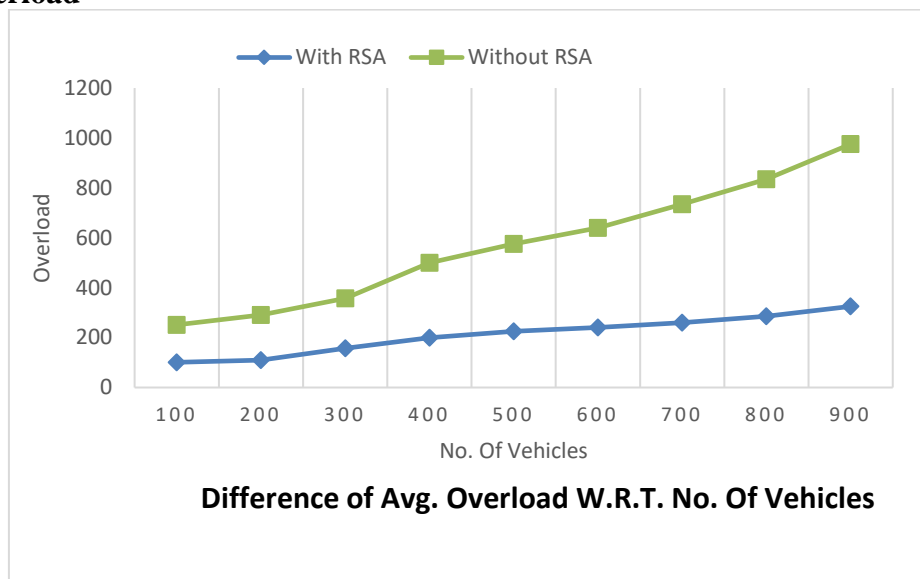
Fig.7.Overload Calculation

Figure 3 and 4 describes the realistic scenario of Saravanampatti to Kalapatti in Coimbatore city. This map has been selected Openstreetmaps (OSM) by manual coordination. Then, this has been exported as OSM file which is been input to SUMO simulator to produce the traffic simulation by incorporating the Vein tool.

Figure 5 addresses throughput regarding time. Figure 5(a) ascertains the throughput without utilizing RSA, Figure 5(b) assigns for RSA and Figure 5(c) is correlation of both the above

circumstances. The enactment is additionally determined for various number for nodes in similar situation for substantiation of our outcomes. In any case, throughput is more if there should be an occurrence of RSA when contrasted with without utilizing RSA.

Figure 6 shows that the comparison chart for CO_2emission based on the vehicles. This comparison assesses the effect of vehicle switching in order to elude the bottleneck of traffic flow. Figure 6 depicts that the CO_2 emission is comparatively decreased by

utilizing the RSA for selecting of cluster head to disseminate the data very fast.

Figure 7 shows the comparison of Overload calculation which delivers to diminish the quantity of message broadcasts in the network. In this comparison, our proposed RSA algorithm is used to reduce the network overload thereby reducing the collisions.

Conclusion

In this paper, main contribution is to identify the cluster head of the vehicles in multiple lanes in order to disseminate the data over the network rapidly. A real location based simulation scenario has been built to assess the concert of various data dissemination evaluation measurements such as network throughput, CO_2 emission and average overload. In this, our proposed method as Cluster selection using RSA outperforms than the traditional Vanets. In future, we will propose the novel algorithm for selecting the cluster head and also compare this to various scenario in the real environment.

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THE THEME OF FELLOWSHIP IN HERMANN HESSE'S DEMIAN

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ABSTRACT

Hermann Hesse as a fiction writer who has new dimension in German writings. Hesse's novels deal the theme like the alienation of man from man, the alienation of man from environment and the desire for self knowledge. This paper mainly focuses the fellowship which means a person need someone to comfort, console, and to lead a good path. Hesse's Demian is a great novel which shows writer's fictional imagination. Itportray how the protagonist Sinclair struggled from a bad fellowship that made his childhood as hell. The novel describe the childhood of Emil Sinclair, how he overcame his hard time and how he had find his way to light up his path to walk on a bright path. From a childhood stage to adult stage a person will learn from their experience to grow up in the society.

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Keywords: Alienation, Fellowship, Desire, Comfort and Console.

The Theme of Fellowship in Hermann Hesse's Demian.

The novel *Demian* is a story starts with a past memories of a boy Emil Sinclair, he bring back his childhood days one by one. Like the novel contains deep relationship about friendship, how he finds his true friendship and understand what meant to be a friend. The fellowship is a word fellow + ship, it means companions. It also meant as friendliness and comradeship. Where friendship is about trust, partnership, fellow mate, dear one, soulmate, brotherhood, kindliness, etc... from this *Demian*, Hesse explained how a young boy suffered due to a bad fellowship and found a precious friend after hard ships.

A person will experience lots of struggles and by that they will learn the circle around them and the can also break the circle to overcome their struggles through a friend, partner, parents, or else by someone. When they break the circle and meet a new people, eventually they will get close to them. People can change their present, so that they can change their future. A single person can change their struggles to nothing but a past and they will stress out and hate their way. So if they have someone to rely on, someone to make them relieve pain it will make their life at ease.

In *Demian*, Emil Sinclair was the protagonist of the novel. Sinclair had suffered from a bad friendship then he found a good friend by god grace when he finds his doing were wrong and split about his hard times to his good friend Max Demian and after his puzzled sentence Demian spoke to the bad friend Kromer. When this happened Kromer stopped approaching Sinclair and then Demian and Sinclair became official friends. By following this progress this novel revolves around the statement fellowship.

The novel starts as a narrative story of Sinclair, when he was young he had a great belief in god. His father were in every week once narrate a bible and tell a myth story from the bible, so naturally Sinclair were Devoted to god. He thought himself that he had belonged to bright world and world had to sides like dark and bright. The dark side contains bribe, murder, robbery, sin, misfortune, lies, and violence and the bright world contains peace, happiness and truth.

Before Kromer appeared, Sinclair had been living a peaceful life. When Kromer appeared Sinclair became numb to his feelings, he never stepped to open up with anyone even he hidden from his parents, Demian was the only person who know about his secrete and helped him to overcome.

He had been spending his life with peace and happiness, but didn't lasted forever when he met Kromer, he had dragged to the other side of the world, he pressured to choose dark path and forgotten to walk on bright path. For nothing he had suffered a life threats from Kromer, when he was at school he made up a story of stealing apples from a similar place and Kromer taken that as advantage to threaten Sinclair to bring him money to hide his wrong

doing and Sinclair also felt for his trap and followed his instructions that made him mentally unstable he can't sleep, eat, he had been thrown up at night and had been suffered from nightmares and even dreamt of killing his own father, he had became exhausted from Kromer's torture.

After a long sufferings he had met a good friend Max Demian, Sinclair opened up his sufferings to him and Max Demian putted fullstop to Sinclair's struggle. Then they became close friends and as time pass by they became classmates. Demian thought Sinclair about the bible myth story were had different side and that made Sinclair think lot. After his schooling he separated form Demian and went on vacation, then they became like stranger. Sinclair had a great desire to meet Demian and during their separation he met lots of fellow mates like Alfon, Pitorious, Knauer. Alfons a person who was his first drink partner and Pitorious was a person who was Sinclair's admirable person and Knauer who was a person thought Sinclair as a Spirit controller, but no one had fullfilled the space of Demian in his heart.

Once he went to the park and have seen his dream girl. He himself named her as Beatrice, but never intended to stand in front of her. After that he painted a portrait of his dream girl but it came out as a different and familiar face but he can't recognize whom it seems like. Then time passes he became friendly to the portrait and it became alive he spent his time by sharing his thoughts with the portrait. Then one day he had a chance to meet Demian and that made him realize that the portrait resembles a lot like Demian.

When he met Demian after a long time they chatted about their memories and present life. Then Demian left. Sinclair painted a portrait of his dream of a sparrow hawk and mailed that to Demian and got a reply as to satisfy Sinclair. Sinclair had spent his life with the longing for Demian and for his dream lady to come alive. At last he met Demian during his travel, and after the reunited and Sinclair got a moment to stick to Demian never intended to leave any regrets. Then Sinclair went to Demian's home and met his mother, that moment he startled by Demian's mother cause she totally resemble his dream lady who he was longing to meet.

Then he became close to her and her name Lady Eve, she so much like Demain and she figured out Sinclair's love for her and when Sinclair wanted to meet her he got a news that Russian war broken in Germany so they have to move to war, after that for to say goodbye he went to escort her then he got a kiss from her. Then Sinclair went to war and then he got injured and have to be safe nut he lost his consciousness. But someone moved him to cave like place and he was with a blood and wound he closed his eyes and thought about Lady Eve and suddenly he opened his eyes lightly but he can't move and speak he became paranoid and there he say Demian who was leaned on wall and staring at him he got to see him like that then he came close to Sinclair and spoke about something and gave him a light kiss and said that it was from Eve.

A young boy from his childhood to adulthood he had met lots of people who was close and friendly towards him but the one and only person who got his attention and want him to keep that person close and treasure him so that he can live his life as peace and sound. That one person can be a fellow mate, a friend or else a good partner.

He had a person who will help him to rise bright, he swallowed by a nightmare a childhood trauma which was haunted him for years and he began to live his life on hold with a friend and when he reached to find Demian and finally found him at a train then they began to not separate from each other. Sinclair found his path and moved on from his past to start a new life with his fellow mate. This was the one of emotional novel and a search for self discovery with a help of a fellowship.

No one can live a lonely life they need some one to console and comfort them. At a verge of life they can't live by their own, they need someone to take care of and to make them feel relieved. That someone can be a partner, lover, Fellow mate, etc... like that Sinclair found a precious person Max Demian as forever friend.

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THE RELATIONSHIP BETWEEN ORGANISATIONAL CLIMATE AND ORGANISATIONAL TRUST

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ABSTRACT

The need of organisational trust in the workplace is a key element of any organisation, and it is so essential that trust issues have the potential to create or break a company's culture. Yet, despite the importance of encouraging and developing it, trust is a difficult attribute to measure and a delicate dynamic to maintain. This paper analyse the effect of organisational climate on organisational trust in IT industry. Descriptive research design was used to this study and simple random sampling method is used to collect the data. The sample for the present study will consist of approximately 347 employees. the descriptive statistics, ANOVA, regression and correlation is to measure the level of relationship between the independent and dependent variables. It is found that the organisational climate dimensions are significantly influenced on the Organisational trust of the IT companies employees.

Introduction

Organizations are facing many forces in their environments such as global competition, the impact of information technology and the re-engineering of business processes. Those organizations which are succeeding in the competition and being profitable are doing so by shifting their business strategy from high volume to high value. They create high value by serving the unique needs of particular customers.

Organizations need to be able to learn and adapt to the demands of a rapidly changing business environment. They succeed by instantly producing products or services, customized according to customer demand. Being flexible and responsive like this, organizations cannot simply improve the existing processes. They must strive to eliminate bureaucracy and must evolve or they will not be able to compete. As a result, many organizations are adopting more fluid and dynamic organizational structures and work roles. Managers are restructuring organizations to permit greater innovation and responsiveness to change. Hierarchies are becoming flatter and the use of cross-functional teams is more frequent. Routine work is now outsourced, contracted, or given to part-time or temporary employees, as needed. The full-time employees that remain create a core workforce with the requisite competencies to fulfill the ever broadening, ever-increasing demands of customers.

Trust has been intensively investigated as a concept in and of itself, as well as factor of relationship quality. In psychology and interpersonal communication, trust has been one of several dimensions identified in relationships. It has also been thoroughly studied in the fields of business management and organisational communication-sometimes as a separate idea, but more often as a component of relationships. Interpersonal relationships among spouses, friends, relatives, and others have received attention in the aspects of psychology and communication. The emphasis had been on relationship among managers and between managers and other employees in corporate management and organisational communication.

Public relations researchers have just recently begun to apply comparable notions to the study on organizational public relations. Both the IABC publication Measuring Organizational Trust and the Institute for Public Relations Guidelines for Measuring Relationships have extensive bibliographies that will be helpful to any organisation looking to build a trust measurement programme.

A key issue discussed in the present paper is to draw employee's attention to the importance of developing adequate level of organisational trust is must to when managing people. Every organisation should compile a

report demonstrating a sufficient degree of organisational trust for each profession/occupation, if not each position/job. Employees with insufficient trust have an impact on a company's financial outcomes. It can also produce ethnic conflicts and, as a result, a lot of labour turnover, professional burnout, and capable people leaving an organisation or a profession.

Kavitha Singh (2006) focused on some of the emerging issues in organizational culture such as innovation, empowerment, total quality management; team based management, the learning organization and information technology which need immediate focus and attention. The study pointed out that the cultural transformation was due to Information Technology (IT) invasion, by paying attention to three points: firstly, leaders and change agents understood that the benefits of IT invasion had the potential to increase the operational efficiency and organization's performance. Second, cultural reform will only be effective if senior executives dedicate the time, money, and energy required to modify the intellectual foundations of the organization's culture. Thirdly, ideologies that lead to successful performance in different contexts and mechanisms of change that are successful in organizations with different ideologies were needed.

Peter (2009) investigated the work practices and outcomes of 13,729 workers from 1,279 business units representing almost 1,000 companies and identified seven higher-order factors: purpose, property, participation, people, peace, progress, and passion. The study concluded that the continuous use of the tool and further expansion of the associated database will enable a more rapid development of understanding of the link between management practices and organizational outcomes.

Pavan Kumar and Vijay N.Giri (2007) discovered from 380 respondents at junior, middle and senior management levels in different organizations across the country that where the employees had a high level of job satisfaction, they were more committed towards their organization and when the employees got a high rate of job satisfaction along with a better organizational climate, their

commitment towards organization also improved. It was concluded that improving organizational climate would enhance their commitment towards their organization and increase the job satisfaction of employees. At the beginning of literature review, we present organisational climate and its importance for organisation. The article continues with description about organisational trust and benefits of trust for organisation.

In this research paper, we presented the literature review about impact of organisational climate on organisational trust of employees. Employees' shared perceptions and the meaning they attribute to the policies, processes, and procedures they encounter in the organisation, as well as the behaviours they observe being rewarded, supported, and expected in relation to the organization's human resources, are referred to as organizational climate(Ahmad et al., 2018; Cygler et al., 2018; Schneider et al., 2013, 2016). Kumar-Bamel et al. (2013) investigated that the term "organisational climate" is used to describe the structure and operations of an organisation, as well as interpersonal interactions, employee behaviour, performance expectations, and possibilities for growth. Furthermore, organisational climate has significant effects on individuals, groups, and organisations (Ghanbari & Eskandari, 2016).

Research Methodology

The purpose of this paper is to analyse the effect of organisational climate on organisational trust in IT industry. This study will focus on primary and secondary date. The primary data has been collected from IT (Information Technology) employees in different IT companies in Chennai city with the help of a structured questionnaire. Descriptive research design was used to this study and simple random sampling method is used to collect the data. The sample for the present study will consist of approximately 347 employees. It will be given questionnaires on organisation climate base on the variables of consistency, adaptability, involvement, mission and responsibility with job satisfaction to fill. The data were uploaded and analyzed by using the SPSS techniques which are are the descriptive statistics, ANOVA, regression and

correlation is to measure the level of relationship between the independent and dependent variables.

Analysis and Interpretation

Table 1 Opinion towards Organisational trust

Statements	Mean	S.D
This organization treats people equally	4.55	1.69
I feel very confident about this organization's skills	4.66	1.67
This organization does not mislead people	4.08	1.74
this organization is trying to maintain a long-term commitment to people	4.94	1.57
I feel a sense of loyalty to this organization	4.39	1.54

Source: Primary data computed

Table 1 portrays the respondent's opinion towards empathy of the banks. Empathy has been measured with the four statements. Respondents are asked to rate their opinion for each statements. Mean and standard deviation values are calculated for each statement. Mean values are ranged from 4.08 to 4.94. It is noted that the respondents are highly rated towards the organization is trying to maintain a long-term commitment to people (4.94), followed by i feel very confident about this organization's skills (4.66), the organization treats people equally (4.55), I feel a sense of loyalty to this organization (4.39), and This organization does not mislead people (4.08). It is found that the organisation mostly try to maintain long term relationship with their employees and the employees are very confident about the organisational trust.

Table 2 Organisational climate and Organisational trust

Organisational Climate	Organisational trust	
	r-value	p-value
Consistency	0.248	0.001*
Adaptability	0.445	0.001*
Involvement	0.467	0.001*
Mission	0.379	0.001*
Responsibility	0.555	0.001*

Primary data computed, *significant at one percent level

Table-2 explains the relationship between organisational climate dimensions and Organisational trust in IT companies.

Ho: There is no relationship between organisational climate dimensions and Organisational trust.

In order to test the above stated hypothesis, Pearson correlation analysis is carried out. The calculated p-values are significant. Hence, the stated hypothesis is rejected. The r-values are having positive value. Hence, organisational climate dimensions such as consistency, adaptability, involvement, mission and responsibility are positively related with customer Organisational trust. The r-value is ranged from 0.55 to 0.248. Responsibility, Involvement and Adaptability lead higher level of Organisational trust towards the IT companies. Whereas, Consistency and Mission leads have lower level of Organisational trust.

Table 3 Effect of organisational climate dimension on organisational trust

R-Value	R-Square Value	Adjusted R Square Value	F-Value	P-Value
0.589	0.348	0.399	43.49	0.001

Organisational Climate	B	Std. Error	Beta	t- Value	P-Value
Content	8.277	1.601	-	5.145	0.001
Consistency	0.016	0.069	0.018	0.227	0.821(NS)
Adaptability	0.224	0.056	0.198	3.998	0.001*
Involvement	0.079	0.071	0.069	1.118	0.244(NS)
Mission	0.029	0.070	0.021	0.410	0.682(NS)
Responsibility	0.385	0.060	0.390	6.370	0.001*

Source: Primary data computed* Significant at one percent level; Ns - Non - significant

The researcher has been measured organisational climate of IT companies with five dimension namely consistency, adaptability, involvement, mission and responsibility. Further Organisational trust is measured with five statements then the total score of the five statements is considered as overall Organisational trust of the employees with the IT companies. The objective of the research is to measure the effect of organisational climate dimension on Organisational trust with IT companies. For that multiple regressions has been applied. The regression result is displayed in the table 3.

Ho: There is no effect on organisational climate dimension on Organisational trust.

From the model summary, it has been stated that the hypothesis is rejected because the calculated F-value is 43.49 which is significant at one percent level (P-value = 0.001). Here, the R-square value indicates that the percentage level of effect among the independent variables on the dependent variable. Here, consistency, adaptability, involvement, mission and responsibility are treated as independent variables and Organisational trust is considered as a dependent variable. The R-square value is found to be 0.39, it is inferred that independent variables are significantly influenced on dependent variable at 39.9 percent level. Further the standardized co-efficient beta value indicates the relative importance of the independent variables on dependent variable. It is expressed by the equation.

Organisational trust= 8.277 + 0.385 (Responsibility) + 0.224 (Adaptability)

The equation is explained that the responsibility and adaptability are having positive effect on Organisational trust. To have one unit increases in organisational trust, the responsibility of the IT companies is likely to be increased at 0.385 levels while other factors remain constant. And like, if adaptability increases by 0.224 levels, Organisational trust is increased by one unit, while other factors remain constant. From above discussion it is found that the organisational climate dimensions are significantly influenced on the Organisational trust of the IT companies employees. However, responsibility and adaptability are the dimensions having more impact on Organisational trust. Hence, the IT companies should give more importance to responsibility and also adaptability aspect.

Table No-4 Organisational trust based on association with IT companies

Association with IT companies	Organizational trust		ANOVA result	
	Mean	S.D	F-value	p- value
below 5 year	26.76	4.98		
6-10 year	24.22	5.69	16.149	0.001*
Above 10 year	22.46	5.81		

Source: Primary data computed *Significant at one percent level

Table 4 Explains the respondents opinion towards Organisational trust of the IT companies based on their years of association with the IT companies.

The mean and standard deviation value for Organisational trust is calculated. The mean value is ranged between 26.76 to 22.46. While observing the mean score, those who are having less than 5 years of association with the IT companies, they are secured higher amount of mean score (26.76) followed by 6 to 10 years experienced customer (24.22) and above 10 years experienced customer (22.46)

Ho: There is no difference of opinion towards Organisational trust of the IT companies based on year of association with IT companies

One-way ANOVA is applied to examine the above stated hypothesis. From the ANOVA result, the F-value is found to be 16.149 and the P-value 0.001. It is significant at one percent level. Hence, the stated hypothesis is rejected. So, the Organisational trust is significantly varied based on their years of association with the IT companies. It is found that the respondent who are having less than five years of association with the IT companies, they are having more level of Organisational trust than other group of people.

Conclusion

The evidences that are focussed in the present study reveal that the organisational climate improves Job Satisfaction, Commitment and Organisational Behaviour and also reduces the turnover intentions. It is concluded that the organisational climate influence the organisational trust. The good organisational climate support can predict the impact of it on turn over intentions and organisational behaviour. In today's globalised environment, organisations need to equip themselves with recession, huge competition, meeting the customer's requirement, retaining the talented employees and so on. In such situation the level of organisational support, organisational climate and organisational trust is expected to play a greater role in achieving the extra-role behaviour from the employees and in reducing the turnover rate of the employees. It helps the organisation in the effective attainment of its objectives.

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INFLUENCE OF SHOPPING WEB PORTALS ON ONLINE IMPULSIVE BUYING WITH THE MEDIATING EFFECT OF SHOPPING ENJOYMENT

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ABSTRACT

The advancement of internet technology has completely changed the shopping pattern of the customers. There are a lot of people who experience impulsive buying online. The purpose of the present research is that to examine the influence of shopping website portals and online impulsive buying. The study also proves the mediating factor of shopping enjoyment towards online impulsive buying. The questionnaire was circulated to the respondents, where 400 respondents responded to the survey. Andrew Hayes's process was administered to check the moderating and mediating effect of thisresearch study variables. The conclusion of the research study is the website factors play a vivacious role in the shopping behavior of the customer. With the combination of the marketing strategy and online shopping websites, several new thoughts are offered to enrich the understanding of the factors of online impulsive buying and also tell how properly the websites can be altered to attract the customers to shop online many times.

Keywords: Impulsive buying, marketing strategy, Online Impulsive Buying,Shopping enjoyment, Website Factors

Introduction

The Internet has changed the planet inside which we tend to sell the product to the customers to attract them. It is a web channel to advertise the product but it captures the mind of the people to buy the product impulsively.The whole extent of selling is capable on the web – products and administrations are situated and advanced, bought, circulated, and kept up. The online furnishes clients with extra w product and administrations to sell, and new business sectors to that they'll sell Purchaser conduct assumes an exceptionally compelling part in incautious purchasing.

The customers are well aware of the marketing strategies used by the marketers to attract the customers, but the advanced online web portals have turned the mindset of the consumers. The consumers are got vast knowledge of the product which helps the consumers to view the product, how many of them have bought the product, how many have liked the product, the reviews of the customers makes the customer make steady decisions before buying the product.

While online shopping is rapidly increasing its trend in this new technological world [Hanson,2007], Web-based shopping furnishes purchasers with more data and freedoms to think about items and costs, with more prominent item choice, without hardly lifting a finger of discovering wanted items on the web (T.Yu&G.Wu, 2007). It has been fought that online trade offers more noteworthy fulfillment to momentum clients who look for accommodation and speed. In online correspondence, when a customer sees a pennant advancement or online movement, it can endure a trip for them and vivify their advantage for these particular things from takes notes. Prior to picking obtaining, the client may look for extra data for help (K.C.Laudon, 2009). On the off chance that there isn't satisfactory data, they will examine for them through online channels, for example utilizing on the web records, areas, or web search instruments.

Goswami, Baruah, and Borah, (2013), assumed that online customers are satisfied by alternate points of view like Value, Quality of things, and Ease of use in versatile stage, and Timely Delivery at inaccessible zones. The examination showed that the worth factor and after bargains factor are the two factors on which the online promoter should emphasize to grow their business similarly as customer satisfaction.

As Dhevika, Latasri and Karmugil, (2014) have analyzed that the security is one of the significant elements impacting web-based shopping alongside trust commendable

shopping and web composition/highlights. The method of shopping by bartering is the most un-significant factor affecting web-based shopping. Then again, security and site configuration/highlights have no huge affiliation and sway between the respondents and they're generally on the web purchasing conduct (Hyde,2017).

As expressed by Pant, (2014), the effect of a fruitful web store isn't restricted to simply attractive website architecture yet in addition to building long haul relationship of trust and the need of the client alongside business development in terms of cash. Also, notoriety, brand picture, straightforward tasks strategy

alongside client relationship influence the development of e-trailer organizations in the world.

Objectives of the Study

1. To study the influence of Shopping Web portals on Online Impulsive Buying.
2. To investigate the mediating effect of Shopping enjoyment between shopping website portals on Online Impulsive Buying
3. To examine the moderating effect of Income towards Shopping websites and online impulsive buying.

Conceptual Model:
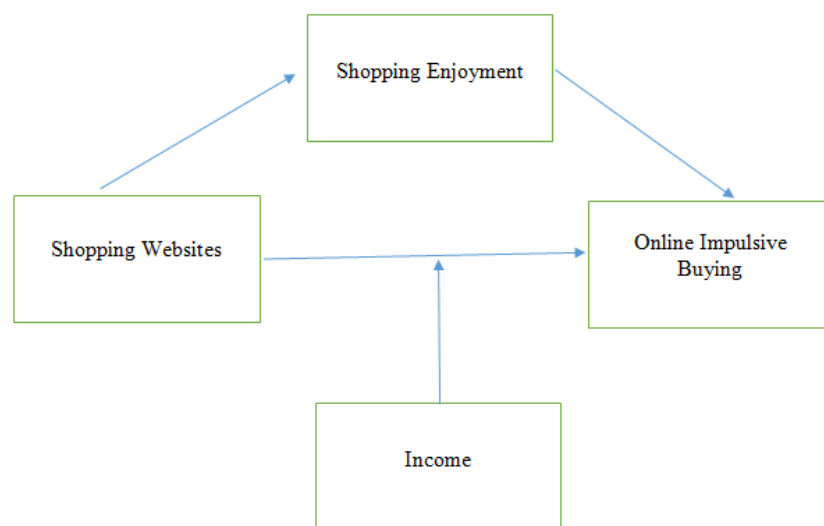
Review Of Literature

Shopping enjoyment:
The writing demonstrates that deals may add to the shopping happiness regarding urgent purchasers. A decent deal regularly furnishes them with a pardon to purchase, and simultaneously mitigates sensations of blame related with purchasing , as the item is gotten at a scaled down cost . Besides, getting a deal cost on an ideal item might be a wellspring of extra energy and pleasure for these purchasers, prompting higher libertine advantages(Yue-Teng Wong,2019). In accordance with this, tracked down that urgent purchasers get more noteworthy exchange esteem from value advancements and are more value cognizant and deal inclined than non-habitual purchasers are (Feray,2018). Besides, tracked down a

positive connection between's impulsive purchasing and coupon size when exploring the inspirations for urgent purchasers to shop on the web.

The shopping Enjoyment alludes to the degree to whichthe shopping experience with a web store is seen to be charming by its own doing, aside from any exhibition results that might be expected (Riadh Ladhari,2019). Nonetheless, by shopping happiness, we don't mean a synchronous measure of the mental condition of an individual during the shopping measure, but instead the agreeableness of a store. Sung 2019 found joy to be a consistent and strong pointer of air toward on the web shopping. If purchasers take advantage of their web shopping experience, they have a seriously elevating attitude toward electronic shopping and will undoubtedly get the Internet as a

shopping medium. Electronic shopping joy strongly affected either disposition toward purchasing or mean to purchase or both (Kim,2002).

Online Impulsive Buying

Online Impulsive Buying or Unplanned purchase called a spontaneous buy. Online Impulsive buying can be understood as a feature of a condition called "spontaneous buy" (Purwa and Yasa, 2015). As per (Zhang,2012) Online Impulsive buying is identified with the demonstration of purchasing that isn't deliberately perceived thus of thought, or buy expectation that is framed before entering a store.

A few purchasers in settling on choices to purchase are normally considered as reasonableness, customers right off the bat distinguish and see administration or item, at that point they analyze and assess the benefit or misfortune, and they at last pick the item/administration that is generally appropriate. This online incautious conduct is driven by the spread of online stages/channels so that purchasers' admittance to items/administrations increments and makes installment and buying measures simpler (Akram, Hui, Khan, Yan, and Akram, 2018)

Research Methodology

The researchers have designed the questionnaire for examining "Influence Of Shopping Web Portals On Online Impulsive Buying With The Mediating Effect Of Shopping Enjoyment". The descriptive research design was adopted and convenience sampling was used by the research for conducting the survey. The questionnaire was circulated to respondents who use online shopping to buy their desired products. The random sampling technique was administered to circulate the questionnaire among 300 respondents for collecting the primary data.

Table 5.1 Table 1: Number of items considered from various sources for the variables used in the research study

S.no	Variable Name	Number of Item	Sources
1	Website Shopping Portals	6	Lepkowska-White 2004
2	Shopping Enjoyment	6	Beatty and Ferreal,1998
3	Online Impulsive Buying	6	Mattila&Wirtz, 2008

Data Analysis

SPSS (Statistical Package for Social Sciences) has been used to analyze the descriptive statistics of the respondents who make an online purchase using online shopping websites. TO examine the mediating effect of shopping enjoyment between the shopping portals and Online impulsive buying the

Andrews Hayes Process was conducted and to analyze the moderating effect of Income between website portals and online Impulsive Buying was conducted. The Cronbach Alpha Value was calculated to check the reliability, where the croanbah Value is:0.732

Table 6.1 **Demographic Profile of the Respondents**

Demographic Variables	Frequency	Percentage
Gender		
• **Male**	153	51
• **Female**	147	49
Age (In Years)		
• **20-30**	167	58
• **31-40**	94	31
• **41-50**	31	10
• **Above 50**	8	3
Occupation		
• **Students**	127	42
• **Professionals**	96	33
	9	3

• **Own Business**	56	19
• **Employed in Pvt/Public/Govt**	12	4
• **Homemakers**		
Income Monthly		
• **Pocket money servers**	126	42
• **Less than Rs.20,000/-**	53	18
• **Rs.20,001 – Rs.40,000/-**		
• **Rs.40,001 – Rs.60,000/-**	76	25
• **Rs.60,001 and above**	15	3
	30	10
Frequency Of Browsing Online		
• **Once Or Twice Daily**	50	17
• **Several Times Daily**	52	17
• **Weekly Once**	47	16
• **Twice In A Week**	40	13
• **Once In A Month**	111	37
Educational Qualification		
• **HSC**	7	2
• **Diploma**	2	1
• **UG**	108	36
• **PG**	139	46
• **Others**	44	15
Frequent Online Purchase		
• **Once in a month**	96	33
• **Twice a month**	28	9
• **Once in three months**	135	45
• **Once in 15 days**	41	16
Spend Monthly Through the Online Shopping		
• **Less than Rs 1000**	139	46
• **Rs 1001- Rs 2000**	100	33
• **Rs 2001-Rs 3000**	30	10
• **More than Rs 3001**	31	10

6.1 Hypothesis Formulated for the Research Study

Mediating Effect of Shopping enjoyment on online impulsive buying:

Hypothesis:

H_o: *There is no mediation effect between shopping enjoyment and online impulsive buying*

Table 2: Direct Effect of Shopping Enjoyment to Online Impulsive Buying

	R	R-sq	MSE	F	df1	df2	p
	.5230	.2735	21.1211	112.1836	1.0000	298.0000	0.0000
	coeff	se	T	p	LLCI	ULCI	
constant	15.4158	.9493	16.2387	0.0000	13.5476	17.2840	
OIB	.6024	.0569	10.5917	0.0000	.4905	.7143	

The direct effect of Shopping enjoyment (SHE) onOnline Impulsive Buying was positively and statistically significant the values are b=0.6024, se=0.0569, P = 0.000

Table:3 Direct Effect of Shopping enjoyment to Online Impulsive Buying

	R	R-sq	MSE	F	df1	df2	p
	.3071	.0943	16.2795	15.4590	2.0000	297.0000	.0000
	Coeff	Se	T	p	LLCI	ULCI	
constant	8.0675	1.1442	7.0505	.0000	5.8157	10.3194	
OIB	.2199	.0586	3.7538	.0002	.1046	.3352	
SHE	.0780	.0509	1.5332	.1263	-.0221	.1781	

The path (direct effect) from Shopping Enjoyment (SHE) to Online Impulsive Buying (OIB) is statistically significant (b=0.2199, se=0.0586, P = 0. 0000)

Table 4: Direct and Indirect effect X (Shopping Enjoyment)on Y (Online Impulsive Buying)

	Effect	Se	T	P	LLCI	ULCI
Direct effect of X on Y	.2199	.0586	3.7538	.0002	.1046	.3352
Indirect effect(s) of X on Y	Effect	BootSE	BootLLCI	BootULCI		
SHE	.0470	.0305	-.0105	.1083		

Table 4 highlights give the direct effect of Shopping Enjoyment on online impulsive buying are significant the values obtained are b=0.2199, se=0.0586, P = 0. 0000and correspondingly, in the instance of Shopping enjoyment as the mediator, the indirect effect values are Indirect Effect = 0.470 which is statistically significant and the shortfall of zero an incentive between the bootstrapped LLCI (-0.0105) and ULCI (0.1083) which considers the confidence spans (CI) at 95% affirmed the mediation impact.

Moderating Effect of Income on Favorite Website and Online Impulsive Buying:
Hypothesis:

H0: There is no significant moderating effect of Income between Favorite

Websites and Online Impulsive Buying.
Andrew F Hayes Process
Model = 1
Y = Online Impulsive Buying
M = Income
X = Favorite Shopping Portals
Result: Online Impulsive Buying

Table 2 Model Summary

R	R-sq	MSE	F	df1	df2	p
.3369	.1135	15.9877	12.6342	3.0000	296.000	.000

Source: Primary data* 1% level of significance

	Coefficient	SE	t	p	LLCI	ULCI
Constant	9.5688	1.6756	5.7108	.0000	6.2713	12.8663
Favorite Shopping Portals	.3200	.0995	3.2149	.0014	.1241	.5160
Income	.0065	.5868	.0110	.9912	-1.1483	1.1612
Int_1	-.0336	.0367	-.9162	.3603	-.1058	.0386

Source: Primary data
Int_1   : OIB x Income

Table 3 R-square increase due to interaction(s)

R2-change	F	df1	df2	P

| .0025	.8394	1.0000	296.0000	.3603

Source: Primary data

The above analysis derived from the Hayes processgives the moderating effect of Income between Shopping Enjoyment and Online Impulsive Buying. To check the moderating effect the Hayes Model No: 1 was used to run the process using the SPSShaving asample size of 300. This model signifies that,there is no moderating effect of income between Favorite Shopping portals and Online Impulsive buying. The outcomes can be summed up, as referenced underneath.

The regression analysis illustrates that the model fit rundown shows the impact of every factor on the result variable. The observational examination inferred demonstrates that the outcomes show that the p-esteem isn't exceptionally huge appearance a p-worth of .3603 which is <0.05. Consequently, the invalid speculation is acknowledged, and the elective theory H is dismissed.

The confident interval given for the interaction term for the given model (LLCI = -.1058and ULCI = .0386) includes zero; hence it is been derived that there is no moderating effect of income between Favorite Shopping portals and Online Impulsive buying.
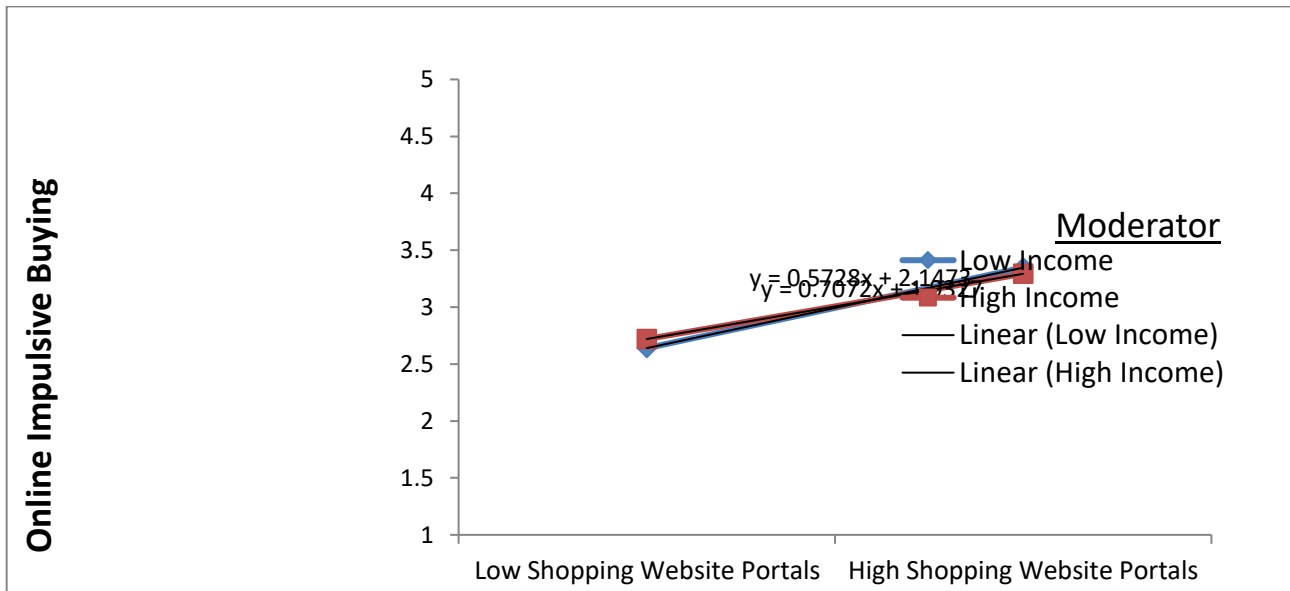
From the above graphical representation, it is marked that for the planned values, the value of Online Impulsive Buying for a given amount of Shopping Website portals. The graph gives a clear picture Income dampens the positive relationship between Shopping Website Portals and Online Impulsive Buying.

Findings and Discussion

- **Demographic Statistics of the Respondents:**

Table 6.1 shows that the female respondents are 67% than the male respondents 33%. Based on age groups, respondents aged over 31-40 years have the highest percentage, which is 57 percent. Seen from the occupation level of the respondents, college-going students are frequently involved in online purchases with the help of social media with a percentage of 43 percent. Based on the Monthly income earned the respondents who are earning Rs 20000-40000 are highly involved in social media marketing.

- **Relationship Between the Variables**

The research has concluded that there is a positive relation between shopping website portals and online impulsive buying. The research finding has coincided with the study of Umair Akram,2018. It is been found that there is significant moderation between the shopping website portals and online impulsive buying. The customers enjoy their shopping online using the shopping website portals which influence the customers to make an unplanned purchase. The website atmosphere plays a vital role in driving the mindset of the

people to enjoy their shopping. The customers receive a lot of the information in regards to the products through the social environments, where they are more likely to make a online impulsive purchase. This finding of the research concurs with the research of Chung.N 2017.The role of Online impulsive buying in an e-commerce environment acts as a stimulator that brings shopping enjoyment.This study is similar to the study of Song H.G 2015 which concludes telling that there is an association between shopping enjoyment and online impulsive buying.

As stated in the literature reviews, Akram,2017 has confirmed that website shopping portals have a significant influence over online impulsive buying. The Current research study found out that income significantly plays a moderating role between the Website shopping portals and online impulsive buying.

Implication

The current research study has practical and conceptual implications. This study has focused on the shopping website portals and online impulsive buying the e-commerce environment((Shin 2013).The study also states the cognitive minds of the respondents which influence them to make the shopping an enjoyable moment. Much research has been conducted on impulsive buying with regards to the retail market but there are limited studies on online impulsive buying in the e-commerce environment. This study acts as the bridge to fill the research gap between the previous research studies (Hair 2013).The variables of online impulsive buying and the shopping website portals are found to be significant. The findings of the study suggest that customers'

intensity of using the online shopping portals and the time spent in shopping brings fun and entertainment and also influences the customer to make an impulsive buying.

The current study brings out the insights of the study where the authors suggested that the online shopping websites need to have a good shopping environment such as enhancing the quality characteristics of the websites, which would help the marketers to target the buying behavior of the customers and drive them to make an unplanned purchase. so the marketers need to spend their strategy to build their shopping website with a good atmosphere, good reviews, and all the aesthetics to attract the customers.

Conclusions

The study proves the influence of shopping websites on online impulsive buying. The study illustrates the importance and fame of online impulsive buying in the online shopping environment. The customers also enjoy their shopping enjoyment which in return gives them fun and entertainment. Online marketers should keenly watch the online updates so that online retailers can retain their customers. The online atmosphere should enable the customers to have free navigation over the products and also think about the categories of the customers and design the website accordingly. The internet has changed the shopping pattern of the customer where the design, atmosphere, website security attracts the customers and increase their satisfaction level. This assurance will enable customers to make a second purchase and also induce them to make a online impulsive buying.

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AN EMPIRICAL STUDY OF FINTECH REVOLUTION AND ITS IMPACT IN TRANSFORMING FINANCIAL SERVICES INDUSTRY

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ABSTRACT

There has been tremendous growth in the financial sector and the industry has evidently gone through various transformational processes. Fintech companies are searching for new ways to create path breaking business models. Their focus is on enhancing the satisfaction level of customers and finding innovative methods to transform service delivery (Yeh, 2020). This approach is more like a revolution which seeks to improve efficiency in the whole system by making it customer centric and loaded with useful information. The companies which are still not on the way to connect to the approaches of Fintech Revolution would be hanging far behind in the race while others would definitely ace it. This study talks about the key changes that Fintech revolution shall bring about. The extent to which the financial service industry has moved ahead is also a pertinent topic to understand. Thus, this paper aims at visualizing such concepts so that one understands the influence of Fintech innovations in the industry. A sample of 179 respondents was surveyed to know fintech revolution and its impact in transforming financial services. Mean and t-test was applied to get the results. The study concludes that fintech is playing number of vital roles in transforming financial services and there is a significant impact of fintech revolution in transforming financial service industry.

Keywords: Fintech revolution, Financial Services, Adoption of technologies, Digital Connectivity

Introduction

The Fintech has become a buzz word in the current scenario in industries. This study describes different perspectives on the impact of Financial technology. There is an immense scope of Fintech to be explored and divided into various themes such as definition or the actual meaning, attributes, regulation, competition and the adoption of technologies. The digital innovation and technological advancements are transforming the financial services. Financial technology has seen much developments, such as marketplace lending, insurance technology, mobile money and so on (Gomber et al., 2018). Switching to Financial Technology users have found it much easier than the conventional methods. Digital transformations such as Robotic Process Automation, Artificial Intelligence, Machine Learning and Cloud Services etc. have made it more convenient for the retail consumers. Digital tools give a competitive edge to the companies nowadays therefore it has become a priority to meet the needs of the customers. The financial institutions or banks are using customized software for its operations and they are eventually trying to bridge the gap between internal processes using digitization (Warner & Wäger, 2019). This way they are attempting to compete with the ever rising Fintech firms.

These new innovative methods have the ability to create diversity within markets and make it more competitive. The concept of Fintech thrived specifically in areas where there are less developed financial systems. However, there is an underlying chance that the combination of intermediation and the new technologies might consolidate the conventional and new providers of financial services. Several monopolistic behaviors portrayed by large technology firms are being monitored. Financial services enterprises are shifting towards same kind of configurations driven by technology and are loaded with questions as to the need and process of regulating the external environment surrounded by new business models (Liu et al., 2015). There are challenges associated to financial stability, fair competition and also protection of the consumers especially related to data privacy.

During the covid-19 the need for digital tools and techniques have increased. Since Digital Connectivity has reached heights it is definitely going to replace the existing physical communication between various stakeholders and this process would entail producing financial services in the meantime. This would be pertinent because the providers of financial services, individuals and businesses would still get along after the pandemic is over. Since the

pandemic has brought in many changes such as the drift towards e commerce, digital payments and so on. These activities would intensify the usage of Fintech as well. The covid-19 outbreak also saw transformations in several places where mobility was restricted. More number of people downloaded financial apps during this time (Kakderi et al., 2021). Rise of digital currencies were witnessed in Central Bank. This study seeks to analyze the implications of Fintech around the world as technology is driving the industry in its own way and eventually speeding up the level of competition among firms.

Review of Literature

The term "Fintech" refers to new technology that focuses on improvingand automating the usage and delivery of financial services. Fintech, at its most basic level, is used to assist theorganizations, owners of the company, and individuals to manage the financial operations in a much better way, through the perusal of specializedalgorithms and software which runs on computers and, mostly on the smartphones. The term "Fintech" is a mix of "financial technology" and "financial innovation."(Legowo et al., 2020).

In order to leverage the services provided by Fintech companies one just needs to have a mobile device or a computer. The services offered are customized and offer its usage in a remarkable few seconds. Financial bodies and several banks are trying to get rid of the century old techniques and following technologically sound tools. The banking services are offered to the public with the help of excessively smooth and easy to use interfaces (Dapuez, 2016). At first, the government banks were prejudiced about the usage of digital tools but lately they have understood the pace of working of banks using such methods and therefore the traditional banks are shifting to these methods as well. Fast-paced and efficient banks are attracting more number of customers. Privately owned banks are well versed with the technological advancements. Thus, they do not have to worry about the same and witnessing this public sector banks are now understanding the poignancy of getting at par with them. The banking sector is just one example of how Fintech has impacted the industry. Apart from banking there are other sectors such as payments, insurance, lending and borrowing, investment and so on (Varga, 2017). These activities have largely seen the effect of technology. The population has the most number of millennials and they are the ones who look for easy and smart techniques rather than age old methods such as standing in the queue for simple things like paying bills. This generation is smart therefore, Fintech start-ups for that matter have come up with innovative solutions to insurance schemes which have now become so seamless. There is a simple procedure of filling up an online form, customer assistance, filing claims and so on. Minimal documentation is required and there isn't a need to queue up in the insurer's office.

The Technological advancements in the industries have played a major role in transforming macroeconomics (Gomber et al., 2018). The initial definition of Fintech is an emerging area of the economy which is created out of upcoming businesses that tend to improve the financial market's services and products. The second definition of this Fintech refers to a group of new businesses withholding technology that are carving its way to designing and introducing novel technologies into the traditional financial sector of the economy using their own funds. The third way of interpreting Fintech is that it is a practical activity which focuses on the use of software to meet the need for financial market products (Zavolokina et al., 2016).

Fintech is no longer a banker's lingo. Instead of a so called jargon, it has now become a very common phrase in the field of technology as a whole. Global Fintech venture investments have more than doubled amount of $112 billion, up from $51 billion in the previous year (Cumming et al., 2019). This is more than just a proof that the financial services industry is on the verge of undergoing a digital transformation. This transformation has had a significant impact on all financial bodies and banks, all around the world.

Fintech is a technological innovation which seems quite difficult and challenging because it mainly focuses on supply and demand of goods and services as witnessed from the perspective of neoclassical economics (Khraisha & Arthur,

2018). However, digital innovation is the key driving force in the industries. Therefore, policymakers would be in a better position to understand the important aspects which drive such changes around. The literature would enable them to analyze the factors which would be required to maximize the benefits of Fintech while simultaneously minimizing the hazardous effects or risks such as market structure, competition and consumer protection. Technological tools and knowledge are different from other resources in much peculiar ways. The advent of Fintech has removed the middlemen from the process and provide any product directly to customers without the need of any 3rd party. It is the best technique for start-ups to reduce costs for the intermediaries and they could suffice with minimum capital investments that is connected to the conventional and old banking services available.

The advent of ML, AI, cloud etc. has changed the way of data processing and analysis. This has significantly reduced the search cost as well. Gomber defines Fintech as a combination of "Finance and Technology" and is linked to the technologies found on the internet and the businesses associated to the banking industry (Gomber et al., 2018). There are five channels which could diverge the dynamics of the Fintech services market, namely, added value, players, tactics, rules and scope. Fintech has been defined as a purely functional method which provides certain changes in different terms of any topic or subject. There have been certain innovations which are disruptive in nature and are creating new business models, services, products, firms, systems and procedures because of IT developments. Fintech poses a challenge for the all the existing firms by bringing about new technological disruptions. Fintech is classified into four different categories namely, "peer-to-peer load and deposit platforms", "robo-advisors" proficient payment process and crowdfunding. Thereafter, Fintech has five specific elements associated to its ecosystem such as technology developers, financial customers of the government, start-ups, and old financial bodies. Fintech entails two important scopes. Firstly, technology has a major role to play and the other is that Fintech includes the rules and regulations of the government.

Conventionally, banks have always been in the frontline to use information technology. However, the present circumstances are forcing banks and financial bodies to increase their level of expertise in the IT domain. The situation calls for a cooperation and competition at the same time. This would help to create a niche for players and make it profitable for everyone in the market. Government has a say in the emergence of start-ups constituting of Financial Technology. The policies formulated by government has a part in the shaping of industries and its development (Wright et al., 2017). To introduce Fintech there has to be a systematic way led by caution. If Fintech start-ups are allowed to enter the market, many shortcomings or limitations could probably pop up and many requirements would not be fulfilled.

In some of the countries which are developed, government bodies might favor the Fintech start-ups whereas government bodies in other countries might favor protectionism more than development. For instance, Taiwan's regulatory body inspires old banks to invest in companies promoting financial technologies for cooperation instead of giving small funds to these entrepreneurs of start-up firms in order to develop new goods and services. Indonesia also has restrictions related to Fintech start-ups and brings forth various complexities with respect to Fintech revolution (Muthukannan et al., 2021). There are two focal points of Fintech, i.e., product development and innovation factors. It happens to be complex and rich and could only be adopted with caution. However, the results can turn out to be really worthy in terms of development and convenience. Some bodies are hanging on to the fact that Fintech could have a wider impact on technological front whereas some are worried about the compliance and regulations.

If information is asymmetric there exists economic frictions and such economic forces could lead to intermediaries and also shapes the structure of markets eventually. Technological developments have been a part of Finance for a long time now. However, major changes or improvements have evolved in system

connectivity and computing costs and power. The reason for increased transactional costs and new start-up entrants is definitely the improvements in Fintech (Imerman & Fabozzi, 2020). Customization is a new aspect which financial service providers have taken into account. They are allowing customers to choose their own personalized products. Customer attraction, financing, along with compliance activities, all these aspects of financial services involve classical economic scale (Mehdiabadi et al., 2020). Costs associated to assembly and consumer search are still intact in spite of so many technical advancements.

Consumers these days, are scarcely interested in age-old, traditional financial services in today's digital environment. People are preferring speedy and secure services. This is why Fintech and its start-ups are gaining more traffic and causing major transformations in the banking services industries.

Fintech revolution has entered the industry and made remarkable impact on various other platforms apart from banking, such as biometric sensors, online monetary transactions, technology consisting of smart chips, branchless-financing, chat bots for customer assistance, AI and many others.

Financial institutions and public owned banks have embraced Fintech due to the development of path-breaking technologies as well as the customer's demand for a secure and user-friendly interface to carry out banking transactions and other experiences related to it. Fintech encompasses everything that is mentioned in the literature so far. It is a cutting-edge technology which is now becoming more important than ever. Financial intrinsic banking software, Retail banking software, and a lots of other mechanisms will be added over the next few years, causing it to grow even more in the coming years. Only time shallnotify us the impact financial technology that is yet to come on our globe.

Objective of the study

1. To study Fintech Revolution in financial services industry.
2. To study the Impact of Fintech Revolution in Transforming Financial Services Industry

Research Methodology

The present study was conducted with the help of survey method in which a sample of 179 people were surveyed through a structured questionnaire. Respondents from India and from financial sector were considered to know fintech revolution and its impact in transforming financial services industry. The study is empirical in nature and primary data was collected by random sampling. Mean and t-test were applied to reach the results.

Findings of the study

Table 1: General details of the respondents

Variables	No. of respondents	Percentage
Gender		
Male	107	59.8
Female	72	40.2
Total	**179**	**100%**
Age		
29-32 yrs	39	21.8
32-36 yrs	45	25.1
36-42 yrs	49	27.4
Above 42 yrs	46	25.7
Total	**179**	**100%**
Working Sectors		
Banking	39	21.8
Insurance	24	13.4
Retail market	31	17.3
Business	38	21.2
Others	47	26.3
Total	**179**	**100%**
Work experience		
1-3 years	57	31.8
3-6 years	63	35.2
More than 6 years	59	33.0
Total	**179**	**100%**

Table 1 is demonstrating the general details of the respondents where 179 people were surveyed to conduct the study. In them 59.8 percent are male and 40.2 percent are female and 21.8 percent are from the age group 29-32 yrs, 25.1 percent belongs to age group 32-36 yrs, 27.4 percent are 36-42 yrs of age and rest 25.7 percent are above 42 yrs of age. It is found from the table that 21.8 percent of the

respondents are working in Banking industry, 13.4 percent works in Insurance sector, 17.3 percent are from the Retail market, 21.2 percent are doing their Business and rest 26.3 percent are from some others financial sectors. 31.8 percent of the respondents are working

from 1-3 years in financial sector, 35.2 percent are there from 3-6 years and 33.0 percent of them are having an experience of more than 6 years in the financial sector.

Table 2: Role and Impact of Fintech Revolution in financial services industry

SI. No.	Role and impact of Fintech Revolution in financial services industry	Mean score	t value	Sig
1.	Fintech companies are exploring different ways to create path breaking business models	3.63	9.16	0.00
2.	Fintech revolution has enhanced the satisfaction level of customers	3.79	9.52	0.00
3.	Fintech Revolution have found innovative methods to transform service delivery	3.91	12.39	0.00
4.	Fintech has encouraged the users to switch to Financial Technology for better services	3.94	12.19	0.00
5.	Fintech is helping financial services through digital transformations such as Robotic Process Automation, Artificial Intelligence, Machine Learning and Cloud Services	3.87	10.20	0.00
6.	Fintech was helpful for providers of financial services, individuals and businesses to get along during pandemic	3.70	10.18	0.00
7.	Due to Fintech, banking services are offering excessively smooth and easy to use interfaces services	3.81	9.77	0.00
8.	Fintech start-ups have come up with innovative solutions to insurance schemes	3.99	13.48	0.00
9.	Fintech had created upcoming businesses that tend to improve the financial market services and products	3.84	10.89	0.00
10	Fintech is helping businesses to withhold new technology that are carving its way to design and introduce novel technologies	4.00	11.73	0.00

Table 2 is showing the role and impact of fintech revolution in financial service industries. It is found from the table that Fintech is helping businesses to withhold new technology that are carving its way to design and introduce novel technologies with the mean score 4.00 and Fintech start-ups have come up with innovative solutions to insurance schemes with the mean score 3.99. Respondents also agree that Fintech has encouraged the users to switch to Financial Technology for better services with the mean score 3.94 and Fintech Revolution have found innovative methods to transform service delivery with the mean score 3.91. It is also believed that Fintech is helping financial services through digital transformations such as Robotic Process Automation, Artificial Intelligence, Machine Learning and Cloud Services with the mean score 3.87 and Fintech

had created upcoming businesses that tend to improve the financial market services and products with the mean score 3.84. The respondents also say that due to Fintech, banking services are offering excessively smooth and easy to use interfaces services with the mean score 3.81 and Fintech revolution has enhanced the satisfaction level of customers with the mean score 3.79. Fintech was helpful for providers of financial services, individuals and businesses to get along during pandemic with the mean score 3.70 and Fintech companies are exploring different ways to create path breaking business models with the mean score 3.63. Further, t-test was applied to check the significance of all the statements where it is found that the value in the significance column for all the statements is below 0.05 (0.00).

Conclusion

Fintech has elevated the financial services sector and made financial transactions more accessible and user-friendly. It facilitates the smooth usage of both customers and enterprises and helps them operate seamlessly. It saves time and effort by providing financial entrepreneurs with creative solutions for remaining competitive in this contested market. Fintech companies have made a tremendous impact in the KYC documentation process, and made the job of investors much easy. Financial inclusion has been aided by the entrance of Fintech firms. The introduction of applications such as BHIM and UPI have enticed millions of Indians to conduct business online (Panda&Joy, 2020).

The existing literature analysis has helped by providing us with important insights into the dynamics of Fintech, which are considerably and significantly different from those of technological start-ups. However, both the expanding presence in the global market and the apparent lack in some areas offer chances for the literature to be strengthened and possibly reshaped. There is an abundance of Fintech opportunities that could shape the future in a more realistic way, by making the processes smooth and easier for consumer's usage.

The study concludes that fintech is playing number of vital roles in transforming financial services by exploring different ways to create path breaking business models, enhancing the satisfaction level of customers, helping financial services through digital transformations, it is helpful for providers of financial services, individuals and businesses, providing smooth and easy banking services and offering innovative solutions to insurance schemes. It is also found that there is a significant impact of fintech revolution in transforming financial service industry.

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TRADITIONAL ARABIC GRAMMAR AND SCIENTIFIC STUDIES OF EUROPEAN LINGUISTS

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ABSTRACT

This article is devoted to a chronological analysis of studies of issues of Arabic philology of a traditionally Arab and European direction. In the process of analysis, the scientific activity of scientists in the field of Arabic grammar, literature, the history of Arabic linguistics and dialectology is noted.
Studies on the Arabic language are currently being conducted in Cairo, Damascus, Beirut, Baghdad, Algeria and Tunisia, where most of the studies in these linguistic centers are based on the traditions of Arabic schools. Scientists from the universities of Leiden, Paris, Oxford, Cambridge, Halle, Prague and Rome are more committed to studying Arabic grammar, adhering to European linguistic traditions. This tradition is also observed in the activities of scientists working on the Arab grammar system in the institutes of Russia, Azerbaijan, Armenia, Uzbekistan and Tajikistan.

Introduction

Currently, research in Arabic studies is conducted at universities such as Cairo, Damascus, Beirut, Baghdad, Algeria, Tunisia. Most of the research in these schools of linguistics is based on the traditions of Arabic linguistics.

Scholars from the universities of Leiden, Paris, Oxford, Cambridge, Galle, Prague, and Rome are more committed to the traditions of European linguistics. We observe this tradition in the research of institutes in Russia, Azerbaijan, Armenia, Uzbekistan and Tajikistan.

In the study of Arabic linguistics, it is observed that European researchers conduct research based on the traditions of Arabic linguistics, and in Arabic schools using theories specific to European languages.

To describe these two traditions, we have studied the research of Russian scholars who have modeled on Arabic, European, and European studies and have made significant contributions to the development of Arabic studies.

The study of Arabic manuscripts played an important role in the formation and development of Arabic philology. The department of Oriental Studies, which studies Arabic literary language and manuscript monuments in this language, was first formed in Europe. Later, this tradition entered Russia. Russian Arab scholars have made a number of achievements in this area. In particular, the study of manuscripts kept in library funds and personal funds became the task of scientific research at that time. Along with Europe and Russia, the study of Arabic manuscripts began in Uzbekistan, especially in Bukhara, Samarkand and Khorezm. But in these areas the study of manuscripts was seen more as a religious field. It should be noted that, in contrast to Russia and Europe, large-scale theoretical research on the Arabic language was conducted in Uzbekistan until the XIV century. This indicates the early development of Arabic studies in Uzbekistan. The reason for the subsequent decline of this sector in Uzbekistan was the end of the Arab influence after the Mongol invasion, and during the reign of Amir Temur, much attention was paid to the development of the old Uzbek language. During this period, the neglected Arabic language was studied as a direction of religious fields. The study of Arabic as one of the Sami languages in Europe from the point of view of special linguistics began in the 16th century. The Arabic grammar of Pedro de Alcal (1505) and then Guillemma Postellus (1538) was born first. In the XVII-XIX centuries T. Erpenius, I. Representatives of several Dutch schools of Arabic studies, such as Ludolf, laid the foundations for the grammatical theory and

lexicology of the Arabic language. In these theories, the traditions of Arabic linguistics were reflected.

Material and Methods

In the early nineteenth century, great strides were made in the linguistic direction of Arabic studies, i.e., A.D. I. Sylvester de Sasi's grammar, which reflected most theories of the Arabic linguistic tradition, was compiled.

In the nineteenth century, when the question of language norms was relevant, G. Evald (1831-33), K. P. Kaspari (1848), E.G. Palmer (1885), U. Wright (1896-98), G. Feysher, T. Nyoldeke's generalization research has emerged. Research has also been conducted on specific sections of grammar. From the 19th century onwards, the problem of morphology began to be studied from the point of view of comparative semitology. K. Brockalman's "Fundamentals of Comparative Grammar of the Sami Languages" (1-2 vols. 1908-37), "Arabic Grammar" (14 editions 1960) were published. G. Rekendof's (1898 and 1921) syntactic works on syntax emerged. Phonetics (1925) U. X. Gerdner's monograph on the phonetics of literary language and the phonetic features of the Egyptian spoken language, 1941 J. Cantino wrote a fundamental work on phonetics. Major works on the subject of modern Arabic dialects appeared in the second half of the XIX century. By the twentieth century, much attention had been paid to the study of dialects, and during this period the study of the traditions of Arabic linguistics continued.

Research on the history of Arabic linguistics was conducted in the mid-twentieth century. As an example, Y. One can mention Fukka's "Arabia".

J. from the representatives of the field of general linguistics. Vandries, E. Kurilovich and semitology researchers L. Gray, P. Dorm, M. Cohen, M. The Godfrua-Demonbins devoted their scientific work to the development of the theory of the Arabic language.

In Russia, Arabic studies as an independent science was formed in the early nineteenth century. The first research in this field was conducted in 1872 by A. V. Boldirev's "Short Arabic Grammar in Tables" was published. In 1867, M. T. Navrotsky's "Experiment on the Grammar of the Arabic Language" is a description of the first Arabic literary language system in Russia. M., who gave impetus to the development of the Moscow School of Arabic Studies. O. Atay's Grammar (1884) and A. F. Hashab's "Grammar of the Arabic Language" (1910), V.F. Girgas's Essay on the Grammatical System of the Arabs (1873) is a study of the traditions of Arabic linguistics. V. F. Girgas was the first scholar to study the concept of Arabic linguistics, its theory and methodological foundations in Russian Arabic studies.

During this period, the teachings of Arabic were propagated in cities such as St. Petersburg, Moscow, Kazan, Kiev, Kharkov, and Baku. In the form of practice in these schools A. Burakov, M. Skibenevskiy, N. A. Mednikov's textbooks, A. V. Boldirev, I.F. Gotwald, V.F. Girgas, V. R. Rozen, F. I. Kelz, A. E.. Krestsky's Chrestomathy and Dictionaries, P.K. Juze's "Russian-Arabic complete birth" ("Full Russian-Arabic Dictionary", 1903) was used.

The main object of study of Russian Arabic studies was the Arabic literary language, and gradually Arabic dialects also began to be studied and introduced into the educational process. As an example, M. A. Tantavi's treatise on the Arabic spoken language (Traktat ob arabskom razgovornom yazyke, 1848), G. A. We can cite Vallin's monograph "Sounds and meanings of the Arabic language" ("On the sounds of the Arabic language and their recognition", 1855). In this monograph, sounds were first described scientifically not only in literary but also in their use in dialects. A. on dialects. E.. Krimskiy, I.Yu. The Krachkovskys also conducted research. I.Yu. Krachkovsky was the first linguist to apply dialectology to the educational process (1915-16). In the 1930s, when dialectology was developing, previously unknown dialects of Central Asian, Bukhara and Kashkadarya Arabs were discovered. Egyptian, Iraqi, Tunisian, and Western, Moroccan, and Algerian dialects were also studied in the mid-20th century.

In Russia, N. V. Yushmanov laid the foundation for the study of the analysis of the Arabic literary language using modern methods in linguistics. His Grammar of the Arabic Literary Language (1928) is a clear example of

this. He analyzed the issues of phonology, morphology, syntax separately, but using the traditions of Arabic linguistics, and formed the linguistic basis of education.

In the field of phonology, the representation of elongated vowels in the combination of two organized two-phoneme sounds has been studied. E.. N. According to Trubetsky's concept, the unit of phoneme with such signs of harmony is the mora.

Russian scientists have done a lot of research on morphology. They tried to explain and describe word formation on the basis of affixation, not internal inflection. It was pointed out that the reason they were not associated with the phenomenon of internal inflection was that the word unit was the core and that the core consisted of consonants. However, the concept of dividing the Arabic word into syllables was put forward. In this approach, the "interdependence of the consonant and the vowel that follows" is presented as a syllable-sound model of Sami languages. Opinions were expressed against the possibility of applying such a model to the Sami languages, as the fact that the word is based on such a model does not correspond to its morphological structure. The phenomenon of internal inflection, based on Arabic traditions, was also put forward, in which the letter-speech segment, which is combined to form a word, serves as a consonant and forms a moran consisting of a short vowel. Such a model does not promote division into sounds and morphs. The core is taken as a unit, the core is formed by a morpheme content and an internal inflection phenomenon. Affixes that do not affect the core are involved in word formation. It was denied that a core consisting only of consonants had a lexical meaning, and that a vowel had only a grammatical meaning.

The grammatical category of precision, inclination, and negation phenomena were studied in relation to syntax. In 1941, D.V. Semyonov described the Arabic literary language syntactically and structurally. G. M. Gabuchan's monograph "Theory of Articles and Problems of Arabic Syntax" (1972) ("Article Theory and Problems of Arabic Syntax") analyzed the main issues of Arabic language syntax. V. X. Auxiliary verbs are described in detail in Khrakovsky's Essays on Community and Arabic Syntax (1973). The play deals with theoretical issues related to the semantic and syntactic aspects of the sentence. Problems related to the syntax of the text of written monuments A. G. Belova's "Syntax of written texts of the Arabic language" (1985) ("Syntax of written texts in Arabic").

The traditions of Arabic linguistics play an important role in Russian Arabic studies. V.A. Zvyagintsev, Yu.V. Rojdenstvenskiy, V.G. Axvlediani grammar, V.M. Belgin, A.A. Sanches and D.V. Frolov's research is an example of this. Terminology, phraseology Yu.P. Gubanov, I.S. Danilov, N.V. Kiladze, V.M. Mamedaliev, V.D. Ushakov, G. An example is the research of Sh. Sharbatov. H.K. on Lexicology and Lexicography. Baranov, V. M. Belkin, V.M. Barisov, G.Sh. Sharbatov's scientific work deserves recognition. B., which describes in detail the norms of Arabic grammar studied on the basis of the historical-comparative method. M. Grand's work "Course in Arabic grammar in comparative and historical development" (1963) is particularly noteworthy.

From the 19th century, Russian branches of Arabic studies were opened in Tashkent and Baku. In these branches, the tradition of Russian Arabic studies of that time, such as the study of manuscripts, cataloging, was carried out. During the former Soviet era, more manuscripts were studied and cataloged in the field of Arabic studies. After independence, the scientific heritage of these regions began to be studied in terms of content.

From the 19th century onwards, at a time when a number of other branches of Arabic philology, such as rhetoric and modern literature, were developing, the study of manuscripts still retained its status.

The formation of Uzbek and Russian Arabic studies is mainly connected with the collection and study of Arabic manuscripts.

Academician V.R., who focused on the study of manuscripts. Rozen (1849-1908) V.V. Bartold, A.E. Schmidt, I.Yu. The Krachkovskys continued their research. In the 20-30s of the XX century, manuscript collection and storage centers were established in Tashkent, Samarkand, Bukhara, Baku, Tbilisi, Makhachkala, Dushanbe.

Details were given when it came to the above medieval research on the traditions of Arabic linguistics.

Result and discussion

Even in modern Arab countries, the study of literary language is based more on the traditions of Arabic linguistics. In the XVI-XVIII centuries on the basis of pamphlets on ancient grammar textbooks on grammar and stylistics were compiled and a lot of work on lexicography was carried out. Feruzabadi's dictionary "Qomus" of the XIV-XV centuries dates back to the XVIII century. Farhadi reworked. During this period, Muhammad al-Zabidi compiled a 10-volume annotated dictionary, Toju-l-arus, which was widely used in European Arabic studies as a source of Arabic lexicography. The nineteenth century was a period of cultural upsurge for the Arab people, during which Arabic literature flourished in the social and economic spheres. These factors, in turn, contributed to the further development of Arabic studies in these countries and were reflected in the field of education. Nassif Yazij, Ahmad Foris's commentaries on textbooks, dictionaries, and medieval grammar treatises are proof of this. In the second half of the 19th century, new dictionaries were published, which also expressed post-classical Arabic lexicon. Such a lexicon can be found in Peter Bostani's dictionary Muhitu-l-environment (1867-70). In the twentieth century, research on lexicography continued. It should be noted that in this century, dictionaries were created on the basis of non-Arabic principles used in European lexicography. These dictionaries used the European system of alphabetical order, not the order of words based on the Arabic tradition according to the core system.

In the second half of the twentieth century, the range of issues in Arabic linguistics expanded, and new research methods emerged. Scholars such as Ibrahim Samarrai, Abdurrahman Ayub, Ahmad Mukhtar Amar, Kamal Muhammad Bishr, Hasan Zaz began to study the history of language and its comparative-historical. Scholars such as Ibrahim Anis, Muhammad Mubarak, Subhi Salih, Ibrahim Samarrai, Murad Kamil, Mahdi Mahzumi took part in the analysis in the field of general linguistics, and the study of Arabic dialects was started. During this period, one of the main problems was the detailed development of perfect and unique terminology and views on assimilation.

Academic and educational institutions of Egypt, Syria, Lebanon, Jordan, Kuwait, Tunisia, Morocco, and Algeria have played an important role in the study of current problems of Arabic studies.

In modern research, the study of Arabic syntax follows two major principles based on Arabic and European traditions. These two principles are absolutely different from each other. But this does not mean that the views peculiar to the first school and the achievements they have made cannot be applied in enriching the theories of the representatives of the second school. On the contrary, the application of such experiments is effective, revealing new facets of the Arabic language system. The exchange of ideas also intensified, while retaining the originality of the theoretical system of Arabic grammar. Of course, this practice requires great care and attention. The study of syntax based on European traditions forms certain rules, concepts and develops new views in the theory of Arabic grammar. This situation requires a perfect knowledge of the grammar written in the Arabic tradition, not to go beyond the original theoretical system of the Arabic language. Otherwise, the generation of new ideas will create obstacles in knowing the true nature of the Arabic language.

It is known that the syntax in Arabic was given by European researchers under the term nahv, morphology consumption. In our opinion, the term syntax does not fully reflect the field of grammar, and the term morphology does not fully reflect the science of consumption.

If we look at the works where the topics of grammar and expenditure are given together, they are given first nahv, then nahv and expenditure issues, then rules of expenditure. It can be seen that some grammatical issues are covered in the general field of grammar and spending, and they apply to both aspects. Therefore, some of the categories studied in morphology cannot be found in consumption.

Conclusion

The phonetics section is also studied after the description of grammar topics, in which the most basic phenomena related to lexicon, morphology, syntax are studied. It also retains a sequence of phonetic issues related to syntax, morphology, and auxiliary words.

The main reason for studying spending topics in the syntax section of Arabic grammar occurs only in spending syntax. Because if there is no effect on the word due to any factor, the expenditure-specific function does not take place. The sum of the words under the influence of the factor is syntax. According to European tradition, the basic unit of syntax is a sentence, and it should be noted that this term does not appear in the first works of Arabic grammar, and there is no need for it. If the speaker fully expresses the intended point in his speech, he meant the same sentence. The peculiarity of the Arabic syntactic system is that it has such factors and auxiliary words that it is possible to continue the speech continuously at the discretion of the speaker, without sentences.

Sibavayhi applied the term speech (kalam) to a fully expressed syntactic phenomenon of thought. According to Ferstex, the term sentence meaning "speech" may have been introduced into linguistic terminology by al-Mubarrad. Zamakhshari argues that both the

sentence and the word term can be used for this phenomenon. Ibn Hisham acknowledges that the sentence represents this general concept, while the word can convey complete information.

Modern annotated dictionaries describe it as "a sentence - a word that gives any complete meaning." But the sentence does not explicitly express the term word. Because a sentence is a predicative compound and a word is a speech consisting of several predicative combinations. For example, in Uzbek, a unit of speech such as "If you hit me, I will be upset" is a word consisting of two sentences. In the Uzbek language, such sentences are one of the following compound sentences. In Arabic, such sentences are a word that fully expresses an idea.

Thus, if the term of a sentence used in Arabic corresponds to a simple sentence in the grammar of European and Uzbek languages, the term kalam is probably applied to the following conjunctions. We can call a word in Arabic, i.e. a model of speech structure, synthetic. In European research, the word is studied mainly as an analytical model. According to N. Hoski, the Arabs regard the matter of speech as an event formed by the speaker, and not as an object that has already been formed and then analyzed.

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WILLIAMS BLAKE′S RELATIONSHIP WITH JOHN MILTON IS ONE OF REBELLIOUSNESS MORE THAN ADMIRATION

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ABSTRACT

When it comes to becoming a great person, there is always someone to look up to. William Blake's writing was influenced by John Milton, as was Milton's influence on Blake. Moreover, Blake demonstrated Milton's work, Paradise Lost, more effectively than any other author. Blake is the only author who has done a better job illustrating John Milton's Paradise Lost than any other. Other works by Milton, such as Paradise Lost, were also a source of inspiration for Blake. Consequently, Blake's relationship with Milton is characterized more by respect than by admiration. In this research, Milton's Paradise Lost and Blake's "Proverbs of Hell" are compared to see any common themes.

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Keywords: Inspiration, Respect, Admiration, Rebelliousness, Illustrating.

Introduction

In the works of Milton and Blake, religion is the first commonality. Both of these poets had faith as a source of inspiration for their work. Many authors of Milton and Blake's era appear to have had a common theme of religion (Blake, 1974). The [Blake, W.] (1974). Apocalyptic sayings from the pits of hell In both the lost paradise and the hellish proverbs, faith is a common theme. To that end, Milton's Paradise Lost influenced Blake to write more religiously-themed material later in his career. Lost paradise and the classical epic: Blessington, Francis C. As of 2019, Routledge Milton and Blake wrote about the Bible's myths. "Extracts from John Milton's paradise lost." [Kennedy, Valerie, and Jonathan Williams.] (2019).

Joseph Viscomi, author. When William Blake's Large Color Prints Aren't Read. Wordsworth God and Satan are defined by several distinct characteristics in both of the authors' works. God's character is described in similar terms in both the lost paradise and the proverbs of hell. God is depicted as a loving and compassionate spirit. Heaven and creatures were created by the power of God's essence. Also, Satan is represented in both poems in a very similar way. Satan is depicted by Milton as a resentful and chaotic individual (Milton, 1859). The Poems of John Milton by Milton, J. (1859). (Vol. 1). C.H. Chapman and Company It seems that Satan is more concerned with

making trouble for those spirits he thinks are better off than him than he is with creating beauty and kindness. The religious themes in these two materials go beyond simply depicting the characters of God and Satan. A deeper meaning of faith suggests that people should treat each other with respect and create a happy and kind environment. This is why Satan was so concerned with causing as many problems as possible. Having been unable to embrace his fellow demons, God banished Satan from Paradise but gave him the authority to rule hell as punishment. Lost paradise and the classical epic: Blessington, Francis C. As of 2019, Routledge Milton, in turn, inspired Blake to write a poem centered on the theme of religion.

Imagery

Imagery is a standard stylistic device in both the lost paradise and the hellish proverbs. Milton's depiction of imagery in Blake's poem is similar to Blake's. In both of these poems, there are a lot of visuals (Blake, 1974). It is [Blake, W. (1974). Apocalyptic sayings from the pits of hell To make their points, the two authors used both beautiful and graphic imagery. Graphic and beautiful depictions of God's creatures like Adam and Eve, for example, are used. Some words and phrases are used to describe God's work. Nakedness is used as a metaphor for God's beautiful creation. Images of the Garden of Eden are also used to describe it. For the audience to

understand God's purpose in creating Eden, Eden is depicted in a visual medium.

It's also clear that the creatures' actions are beyond our comprehension. Among the behaviors of animals that are too large for the human eye are wolves' howling and lions' roaring. Stormy seas are yet another metaphor for God's intervention for humans to comprehend it.

Hell is also depicted in such a way that humans can't take it literally. The plowing of dead bones is a striking illustration of hell's true nature as a place of vengeance and torment. In addition to depicting suffering and Eden, imagery is also used to describe the acquisition of knowledge. There is a reason why the path of excess is necessary to get into wisdom.

Knowing what you're doing and being able to do it

Comparing the depiction of knowledge and control in Milton's Paradise Lost and Blake's proverbs of hell shows that Blake was influenced by Milton in his writings (Milton, 1859). The Poems of John Milton by Milton, J. (1859). (Vol. 1). C.H. Chapman and Company Writers like Blake and Milton used the concept of knowledge and control in their works. For the vast majority of people, religion serves as a source of power and knowledge. David A. Harper [Harper] "Paradise Lost Annotator and the Origins of English

Literary Criticism "No. 3 (2019) in Studies in English Literature 1500-1900: 507-530.] Eve's inability to eat the forbidden fruit symbolized her lack of control, while her ability to eat it symbolized her knowledge of the consequences of her actions (Blake, 1974). The Proverbs of Hell by Blake, W. After eating the fruit, Satan wanted Eve to understand her surroundings better. Due to her lack of understanding of what Satan was suggesting, Eve initially refrained from succumbing to temptation.

On the other hand, Satan was adamant that Eve be endowed with God's knowledge, which he claimed would be critical to her survival. Eve eventually caved into the devil's enticements, which led to her eating the cursed fruit. When she ate the fruit, she became more aware of her surroundings and her impact on the environment. The moment they finished the

fruit, Adam and Eve realized they were naked. In this context, the state of bare skin represents wisdom (Milton, 1859). Their future was bleak due to God's decision to remove them from the Garden of Eden. Not only were these people punished harshly, but they are still being punished even today. Trying to learn more had all of these adverse outcomes.

According to the apocryphal writings of the underworld, knowledge cost Satan his standing with God and his fellow Angels. As we can see in Blake's poem, Satan exhibits ambivalence. He can boast of his superior knowledge in some situations, but in others, Satan remains calm because he has been banished from heaven. Satan prefers to be knowledgeable than uninformed (Milton, 1859). J. Milton, Jr. (1859). Milton's works of poetry (Vol. 1). C.H. Chapman and Company Because he gained knowledge, Satan was also able to become more powerful. The fruit that God had forbidden to be eaten was made available to Eve through the use of her sway over him. With the knowledge and abilities that he had, Satan was content.

Blake was influenced by a mystical approach to religion and spirituality when it came to knowledge and control. He was more concerned about an individual's direct relationship with God while deviating from the established religious norms. Besides Milton, Blake responded to other authors who wrote about religion in their works.

It is worth noting that, for example, Blake replied to philosopher and theologian Emmanuel Swedenborg's writings. The Swedish theologian adopted a traditional Christian dualism conception of Heaven and Hell as dwelling places for the righteous and the damned, with hell being the last destination for the former. On the other hand, Blake strongly disagreed with this reductionist view of the cosmos. Blake, both passionate and rebellious, saw Angels and Demons as two facets of the same archetypal pendulum. Demons, in his view, represent the liberal, feminine, and creative energies that are at the core of greatness in human beings.

As an alternative, he said that angels symbolize masculine, conservative spirits that aim to restrain and stifle creativity for the sake of restoring order. Blake recognizes the need

for both forces, but he sympathizes with the bad one. Apart from the proverbs of hell, Blake learns that devils want freedom while angels are solely interested in limiting creativity via his many other works of literature and art. 12 In his book, he explains how the angels have a tendency to boast about their wisdom, despite their arrogance. Blake shows how angelic logic is put to use here on Earth to keep the people in line. As far as I can tell, he even believes that angels serve as humans, whereas devils are libertarian libertarians who aim to save mankind from tyranny and social order.

The author also demonstrates how society has been controlled via the employment of false structures. Swedenborg's religious vision of the cosmos, according to Blake, is unimportant. Even the Swedish author lacks innovative ideas that may help free mankind; instead, he repeats old tropes about good and bad people, Heaven and Hell. An Angel and a Demon got into a furious disagreement over the nature of God in Blake's conclusion to his discussion of Heaven and Hell. The devil's perspective of religion, he said, was exemplified in Christ, who was a renegade who resisted religious traditions throughout his earthly ministry. The Church did, in fact, resist Jesus' ideas and deeds. At one point, Jesus was so irritated by the activities taking on in the Church that he expelled individuals from it. Milton's effect on Blake's idea of knowledge and control may be observed in this context. Blake, like Milton, has a freeing set of ideas.

Blake and Milton seem to believe in the liberation of human beings from the shackles of society. In a similar way to Milton, Blake confronts the accepted norms of society (Milton, 1859). People in the community were bound by the standards and ideals of the group, and they felt powerless as a result. Individuals in society may use Blake's concepts to free themselves from such social structures. A novelist develops proverbs that are in direct opposition to the book of proverbs in that they present different and distinct concepts that may be considered together as themes.." Blake's anti-mental slavery views show that the freedom of self-expression is ensured for all individuals. An overabundance of anything, according to the author, provides space for further knowledge.

To become intelligent, he advises individuals to keep going and accomplish more. It still makes literal sense since it's essential to know as much as possible about a subject. When someone returns to the exact location often, they get a deeper awareness of the environment than someone who just goes there once. Blake claims that the path of excess leads to an abundance of insight. However, there are many paths to enlightenment, but they seldom show there. That being said, the way to wisdom must be aligned with the direction of excess. Without an action plan, ambitions are nothing more than dreams or nightmares. There is also a strong emphasis on self-discipline on the path to surplus.

Archetypes

Another method to see how Milton and Blake were impacted by one other is to look at the archetypes in their works. As a hero dedicated to advancing the education of animals, Satan has shown himself to be an inspiring role model (Milton, 1859). Because of his wisdom, he was expelled from heaven for plotting to undermine God's Kingdom. Satan may have a bad reputation, yet he cares so much about educating the world's animals. One of Eve's archetypes is the damsel in distress, a naive heroine who has no idea what she's doing. As a result, she has no one to shield her from Satanic influence and deception when confronted by him.

Blake's employment of Milton-like archetypes led to his being hailed as a master poet. Apocalyptic poet Blake was seen as a result of his capacity to employ models in his materials, which he received from Milton. Many of his contemporaries thought he was insane because he was able to decipher religious parables so quickly. It was said by several of his contemporaries that he painted and wrote in a hallucinatory state. This preoccupation with the lost paradise in Milton's mind ultimately led to the creation of such enthralling and outlandish poetry. As a result of this, archetypes may be found in both Milton and Blake's works.

"Spiritual" as a topic

Blake's poetry, like Milton's, was presented in a spiritual setting. It is possible to view

things spiritually when reading Blake's poetry. The occult is brought into focus via his works. A new outlook on life is what he urges others to do. For example, he exhorts his listeners to study during the planting season and pass on their knowledge during the harvest season. In addition, he urged the reader to take advantage of the winter months. This is by far the most enlightening spiritual journey you'll ever take. Blake's use of imagery aids in conveying the story of God and Satan in a spiritual context. Spiritualism is prevalent throughout Paradise Lost. Milton uses a dove to illustrate how God's spirit may be found in both the past and the present. In the exact translation of the Bible, Milton utilized the dove to depict God's heart.

Blake uses the concept of spirit to describe concepts such as good and evil, right and wrong, and knowledge and ignorance. On the other hand, Milton uses the notion of spiritualism to explain why Satan tempted Eve in Eden. Paradise lost uses mysticism to portray things that can't be seen by the naked eye. Milton and Blake's works are fascinating to study because of their emphasis on spiritualism. As a result, the readers are more eager to decipher the consequences of God's conflict with Satan. That being stated, spiritualism is the most excellent way to understand God and Satan's conflicts.

Innocence vs. Knowledge

Other notable similarities between Blake and Milton include their works' use of knowledge in place of innocence. In both paradise lost and the proverbs of hell, the storylines are similar.

Towards excellent and bad. Good and evil are described in the Bible in both stories. God and Satan are utilized as figures to represent good and evil, respectively, to show what is right and wrong. While Satan's nature is revealed as wicked, God's is depicted as good. When he was expelled from paradise for trying to destroy God, Satan was originally an angel. The characteristics of Satan are understood to be in opposition to those of God. He was sent to hell due to his endeavor to outdo God, where he remains to this day.

Satan is often depicted in the Bible and other religious texts as someone who seeks to obscure God's benevolent purposes to deceive people. Even though Adam and Eve were warned not to eat the forbidden fruit, God was pleased that they did not. In contrast, Satan persuaded Eve that eating the forbidden fruit was the most pleasing thing that God had denied her. As a result, God and Satan are seen as being on opposing sides of the spectrum. Furthermore, good and evil are considered to be in opposition to each other in this way.

On the other hand, Blake argues that these opposites are necessary for human advancement. Human nature dictates that we flourish in environments with conflicting forces. Life would be dull if it weren't for the presence of God and Satan. As a consequence of the characters' enthusiasm, mankind has been left yawning for more to advance.

When the natures of God and Satan are involved, the issue of knowledge vs. innocence is brought out clearly. The absence of sophistication is connected with simplicity. Since God created angels, including Satan, it is clear that he knows what he is doing. In the future, he produced the human race as well. When God finished making people, he gave them the ability to think and make decisions independently. Satan, on the other hand, believes that people are naive. Even though God gave them the capacity to think and decide, Eve could not make an educated choice when Satan challenged her to do so.

Satan, on the other hand, is much more intelligent than we are. Because of his cunning, he concocts the story that eating the forbidden fruit will make Eve smart. To understand why God forbids humanity from eating the forbidden fruit, he asked Eve to think about it.

When Satan aided her reasoning skills, she came to believe that God had actually buried wisdom in the fruit. A woman who had eaten the fruit said that eating it would make her husband, Adam, more intelligent. Following this calamity, Satan and mankind were shown to be both naive and incompetent. Satan may seem bright since he successfully persuaded Eve, yet God regards him as a fool. According to Milton, Satan had no idea why the forbidden tree was ever there in the first place. As Blake also noted, people are dumped this way; he claimed that what a wise man sees is unlike what the idiot sees. " In light of this, it is clear

that people lack God's understanding. Humans can't distinguish between good and evil.

On the other hand, Satan lacks God's wisdom and only has his own selfishness to blame for his desire to destroy him. Blake compares Satan to a bird that wishes the sky was dark, likening him to the devil. Satan desires to have all of mankind join him in hell as a method of retaliation for what God did to him. Satan's endeavors toward understanding bring him back to the pit from which he was exiled by God in the Garden of Eden. When it comes to combating the evil that Satan has brought to the world, God is on the side of humanity. Before Satan attempted to influence Eve, God warned Adam and Eve that they would be deceived by the temptation of the forbidden fruit. When Satan understood that he might use the forbidden tree to incite people against God, he saw a chance to strike back.

In his selfish deeds, he does not care whether the human-God connection is ruined. According to the ideal scenario, humans were seen by Satan as his money in his relationship with God. Throughout history, Satan has tried to convince people that the bond between God and humanity is shaky. Individuals may, however, use God's support in the battle against the devil. Satan, on the other hand, continues to try to ruin all that God has made. Milton's depiction of the connection between God, Satan, and humanity affected Blake's depiction of knowledge and innocence. In Milton's view, Satan lost his light and wisdom when he descended from heaven. Satan was able to sabotage humanity's connection with God because of human ignorance, according to Blake.

God. The devil, on the other hand, is not only foolish but also self-centered since all of his attention is focused on fighting back against

Thank you, God, for exiling him from paradise

Foreshadowing

The foreshadowing in the proverbs of hells is another impact of Milton on Blake. The audience was forewarned by both authors about what was to follow. Eve predicted the future when she saw herself in the river in the Paradise of Lost. In the beginning, she was woken when she encountered a black shadow

in the light. To understand what she was seeing, she went to the river and walked along with it. She regrets pursuing topics she was interested in because of her desire to learn more about them. Despite this, no one cautioned her about the destructive nature of her wants. It's possible she was hoping to hear the voice of God or Adam, but neither did. In the absence of notification, she pursued the path she believed would lead to her goals.

Nonetheless, her yearning for direction and the distance from God prompted her to ponder what the future could contain. In the absence of God's intervention, she was able to discover who she really was. Even realizing that she was descended from Adam, she contemplated becoming the mother of the human race. Blake, like Milton in Paradise Lost, makes use of foreshadowing in Proverbs of Hell. Blake asserts that the creation of time leads to tremendous accomplishments. Human eternity is a product of time. Sometimes, knowing that something will happen for the better makes life seem a little less uncertain.

Hell's Wisdom in Logic

The other resemblance between Milton and Blake in poetry is that both the writers portray the dialectic understanding of hell. Good and evil deeds serve as excellent metaphors for hell's features. The poem Proverbs of Hell demonstrates human intelligence about heaven and hell. Blake goes into great depth on the punishment of human wickedness in hell vs. the reward of virtue in paradise. The dialectic wisdom of hell is portrayed in Milton's lost paradise by his request to the Holy Spirit for counsel leading to understanding. When Blake says that no one can become a star if their face does not provide light, it clarifies that knowledge cannot come from Satan.

Put another way, it means that no matter how hard someone tries, they will never be able to achieve stardom in something they have never tried. When Satan attempted to dethrone God, he lacked intelligence from the start. Consequently, he was not really displaying God's wisdom to Eve. Hell's knowledge was limited to those who excelled in committing evil deeds like Satan.

Differences

However, despite the parallels between the lost paradise and proverbs of hell, both Blake and Milton express themselves differently. Readers may identify the author's style by comparing these two poems. The depiction of paradise and hell is the first distinction. Hell is characterized as the worst place to be in heaven lost. Using the proverbs of hell, Blake rewrites the power connection between Satan and God. While Satan is the voice of the revolution, Jesus is the voice of restraint, he claims in this passage. According to Blake, Satan is a spiritual being who aspires to educate humankind. Detailed illustrations depict the process by which Satan was expelled from heaven. Satan is ecstatic to be there as the only one who has access to the information that God has consigned to hell.

God has the right to chastise Satan, yet Satan occasionally appreciates God's decisions and acts since they spare him the misery of ignorance that would otherwise befall him and his fellow-creatures. When it comes to depicting Satan, one poem portrays him as a ruthless killer, while another shows him as an honest man who wants Eve to know what God has kept from her. To people, Satan reveals that their minds may be both paradise and hell. Scholars like Blake have a special place in their hearts for Satan because of this revelation. Despite God's efforts to hide the truth from us, Satan was opposed to it.

Conclusion

Milton's effect on Blake may be seen in the parallels between the lost paradise and the proverbs of hell. Furthermore, individuals may learn how Milton was a legend to Blake via the Proverbs of Hell and through various other works. On the other hand, Blake was more fascinated with the loss of paradise than Milton's poetry. As a result, it is possible to draw several conclusions from the examination of Milton and Blake. The first conclusion is that both writers had a strong religious foundation in their compositions. It's safe to assume that these two authors read the Bible to better understand God's and Satan's storylines. The second conclusion is that the story of heaven and hell and good and evil and the angels and demons are all held together by knowledge. In the same way that the writers were more interested in what was going on between God and Satan, everyone else is.

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THE SUBJUGATION OF PEOPLE OF COLOR IN LINE WITH BEAUTY STANDARDS IN TONI MORRISON'S "THE BLUEST EYE"

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ABSTRACT

The Bluest Eye is Toni Morrison's first novel and a book heralded for its richness of language and boldness of vision. Set in the author's girlhood hometown of Lorain, Ohio, it tells the story of black, eleven-year-old Pecola Breedlove. Pecola prays for her eyes to turn blue so that she will be as beautiful and beloved as all the blond, blue-eyed children in America. In the autumn of 1941, the year the marigolds in the Breed loves' garden do not bloom. Pecola's life does change- in painful, devastating ways. It is a vivid evocation of the fear and loneliness at the heart of a child's yearning and the tragedy of its fulfillment. The Bluest Eye remains one of Toni Morrison's most powerful, unforgettable novels-and a significant work of American fiction. This research shed light on how whites subjugate black people psychologically in line with beauty standards.

Keywords: Beauty, Subjugate, Standard, Black People, Pecola

Introduction

Toni Morrison was born in Lorain, Ohio, on February 18, 1931. Among her three siblings, Morrison was the second-oldest and lived in an integrated neighborhood. As a child, Morrison was unaware of racial segregation until she was in her adolescent years. Her parents were both employed, with her father taking on many jobs and her mother working as a housewife. They instilled a love of novels in her and helped her better understand what it means to be a person of color in today's world. Morrison told a reporter for The New York Times that she was the only one in her first-grade class who could read. Morrison has always been an excellent student. For her undergraduate degree, she attended Howard University.

For her master's degree, she chose Cornell University. She was dubbed "Toni" by her classmates after graduating from Cornell University. Chloe Wofford is her valid name, although Toni has been used in the publication of her works. As an African American woman novelist, she is most recognized for portraying powerful African American protagonists. Her first novel, 1970's "The Bluest Eye," was a critical and commercial failure. As a writer and university lecturer, Morrison has achieved a great deal despite the shortfalls of her debut novel. Pulitzer has been awarded the Nobel Prize for Literature.

Accolades and honorary degrees abound for this award-winning American author. Former President Barack Obama bestowed the Presidential Medal of Freedom on her in 2015.Obama.   In 1957, Morrison returned to Howard University, where she had previously taught English. Harold Morrison, an architect from Jamaica, was also met there. In 1961, they had their first child, and Morrison departed soon after.

After graduating from Howard University in 1963, she returned to Ohio to start a family with her second child. Morrison relocated to Syracuse, New York, in 1964 to work as a senior editor for a text novel publisher. It was not long before she became a publisher's editor at Random House.

Pecola Breedlove lives in Lorain, Ohio, a little African American girl in Toni Morrison's first novel, "The Bluest Eye." Pecola's two best friends, Claudia and Frieda MacTeer, can see the tragic events in her life through their eyes. Pecola confides in the MacTeer sisters about her insecurities while staying with them for a short period. In Pecola's mind, she is unattractive because of the hues of her complexion, eyes, and locks. Pecola feels that if she were white with blue eyes and blonde hair, she would be more popular and have a better life. Pecola appears to have a special place in Claudia's heart, but she resists both of their concerns since she was taught to be more self-aware. Pecola finally returns to live with

her parents and siblings. A drunken father, an obsessed mother, and a sibling who is always on the run characterize her family. As Claudia continues to read, more terrible things happen to her, including domestic violence, racism, and prostitution. Claudia is sympathetic to Pecola's plight and does her best to be a friend to her. Pecola is a victim of her family's circumstances, having been mistreated by her parents, raped and pregnant by her father, and left to deal with the fears of a young teenage girl by those she felt she could trust. Throughout the work, the harsh facts of life and the loss of youthful innocence are laid bare.

The novel's key topics include beauty standards, adolescent development, and the importance of family ties. Regardless of their age or ethnicity, all women are held to a high level of beauty by cultural norms. Pecola and Claudia's presence in the narrative is perceived as a source of uneasiness for them. Their ebony complexion, brown eyes, and dark hair are stigmatized by a culture that values fairness and fairness above everything else. This issue still exists in the real world, where young women are pushed to conventional beauty standards. Beauty standards are an issue in the real world, regardless of whether they are based on skin color, body form, or weight. As a woman of color, these beauty standards have a more significant impact.

In work, the subject of growing up too quickly or losing one's childlike innocence is a recurring one. As youngsters, Pecola and Claudia are exposed to life-altering events. While many young people wish they could grow up quicker, they often lack a grasp of the world's harsh realities. Although Pecola has little option but to grow up quickly, she encounters things she should not look at at such a young age. As they encounter and experience things they do not yet comprehend, these girls lose their innocence. It does not matter what it is, and they know it is not correct.

In most cases, growing up involves having one's family act as a mentor and provide moral support. It is hard to obtain love and direction from a healthy family from a broken one! Family ties are crucial to this tale because they may have protected these girls from having to

suffer the horrors they did had they stayed together. As a result of her upbringing in a dysfunctional household, Pecola ended up being a lost soul. Even though Claudia's family was too busy making ends meet, she was reared in a loving and nurturing environment.

When the going got difficult, she was strong enough not to let herself down.

Morrison's writing style is captivating, clear, and unabashed. She has no qualms about addressing the racial disparities that exist in our society. She depicts the horrific narrative of neglect, sexual assault, and bigotry through the eyes of a little child. As a result, readers consider Morrison's story problematic since a young girl narrates the graphic scenes. However, that is her point. This highlights the characters' loss of innocence throughout the narrative. "The Bluest Eye," one of her best-known works, deals with racism and the subjugation of people of color. Pecola is a "black little bitch" by a white lady in Morrison's novel. The tales she shares are uncensored. She spills the beans. There are three primary emblems in the novel: marigolds, marigolds, and marigolds.

A short story about a white picket fence home with a beautiful family is told at the novel's opening. After then, the heart-breaking tale of families torn apart by shattered homes is exposed. So that people of color who are less fortunate and who value family may see it, this is Morrison's method. As a result of her upbringing in a dysfunctional household, Pecola's outlook on life is clouded. Because she comes from a lovely family, Claudia has a more positive outlook on life. We see with our eyes. Pecola's parents wanted her to have blue eyes because they thought they would make her and the rest of the world more lovely. They had blue eyes, thanks to their well-off families and well-kept properties. Pecola's blue eyes set her apart from the others. Eventually, Claudia perceived Pecola's blue eyes as a threat and a hindrance to their relationship. Pecola is pregnant with her father's child after the story. Claudia and her sister plant marigolds for Pecola in light of her pregnancy since they symbolize safety and well-being. They felt that if the marigolds grew, Pecola's baby would be delivered without complications. Pecola had

anticipated a new beginning with the growing cycle of flowers.

Toni Morrison's "The Bluest Eye" has become one of her best-known and best-selling works. On Commonsense Media, her novel now ranks five out of five and four out of five on Goo dreads. Despite her work on behalf of people of color and the changing standards of beauty, Morrison has received acclaim and scorn for some of the subjects she has chosen to address in her novels. The story's themes have also sparked debate, making it a hot-button subject. Because of its "inappropriate" content, several schools and libraries have attempted to prohibit the novel. For discussing rape and prostitution, some have referred to her novel as "pornographic." Criticism of the novel's substance by members of the educational board is a common theme. According to Alabama State Senator Bill Holtzclaw, "the novel is simply absolutely unacceptable, from language to substance," he told Alabama Media Group in 2013. In the eyes of some, Morrison's work serves as a source of inspiration for young women and a window into the human condition. The Guardian says that the novel "...would not allow readers to leave the narrative without evaluating the hazards of societal norms and altering the way you look at how society functions." Morrison spoke out against "unyielding language satisfied to admire its own immobility" and language that "suppresses human potential" during her acceptance speech. Though she did not want to, she was often criticized for pushing political correctness in literature. "You know, the word "political correctness" has become a shorthand for disparaging ideas," she says in response to the critiques. In critics' opinion, strong, incisive, critical language is not reliant on hurtful words or curses, nor is it dependent on bloodshed or drama. By forcing individuals to be sensitive to the grief of others, are not erasing language."

Morrison demonstrates her commitment to her racial community by highlighting the plight of non-black people. However, she does not try to make readers feel sorry for people of color in her own words. She is only expressing her views on current societal issues.

Women in their early twenties will find this narrative interesting, dramatic, and relatable. When the novel ends, left contemplating how we might work together as a society to promote equality in the face of pressing social issues. Rape, beauty standards, and racism are just a few of the societal ills this narrative touches on. Being a Black woman with a college degree, she defies the racial stereotype while raising three children, receiving prestigious honors, and working full-time. It takes many guts to stand up and speak mind, especially if a woman of color. Morrison opposes the oppression of people of color and women, although it persists. Racism and beauty standards are issues that can identify with a woman of color. Being a woman in today's culture is difficult enough, but proving as an Asian woman is much more difficult. It is easy for young ladies to get caught up in social media and conceptions of beauty.

Critical Analysis

This is the first Morrison novel, and it does not get any easier. However, in this case, the first novel she wrote, the tricky thing was to read it without it devastating. There is this sense of impending doom even with the little bit of innocence that there is.

This one starts with a description of a family amid war and depression in the 1940s, and its way of narration reminded of this (which seems quite silly now) children's song in Hindi - Aao Milo Seelo Salo—used to clap animatedly after pairing up with another person, while reciting the rhyme in a complete sing-song voice. Of course, this is a story narrated by a nine-year-old child who at once drips with innocence while carrying a vat of pain. The beginning itself will numb because it is evident that this story will be full of agony. However, it is equally interesting to note how such a complex, 'grown-up' story was narrated in part by such a young child. Especially when we often refuse to believe them to be worldly-wise and aware, to the extent of having banned the novel then, in schools and libraries.

"Jealousy we understood and thought natural – a desire to have what somebody else had, but envy was a strange, new feeling for us."

What is beauty? In one way or another, most of us can be accused of defining beauty through unnatural standards. Share the blame for being harsh on not only others. Moreover, however much we speak about inner beauty is the only thing that matters. Some of us have tried the rub-de-dub once in a while for that glowing, fairer skin. An unnecessary legacy that resurfaces in almost all the dark-skinned Indian households every once in a while.

Was that magical realism when Pecola wished for herself to disappear? How sad felt for her, even before her major problems began. To be living with constantly feuding parents, to be wishing for death. Either for self or the others. Moreover, to feel such an inadequacy that she ended up wanting blue eyes was all so heart-breaking.

"All were engrossed in early-night reminiscences about dreams, figures, and premonitions. Their stuffed comfort was narcotic and had produced recollections and fabrications of hallucinations."

Pecola's experience with the White Mr. Yacobowski reminded of Untouchable by Mulk Raj Anand. Quite the same premise, where shame at being less than deserving morphs into anger for the inequality in the world. Astounded at the way Morrison wrote about Pecola's inferiority complex of being an African-American in a White community and inserted internalized racism in the form of a mixed-race girl and how a scale is brought out to measure who is lighter in the skin and prettier than whom.

The overbearing – will do what want to, others (especially women) be damned – men of this story need to be mentioned too. Pecola's father's childhood does not let him hate him, while his deeds do not make him like him! This was a female-dominated story, with a significant chunk of the female characters, especially the three prostitutes who constitute a significant part of the story even after not being one of the central characters. Nevertheless, will we call it a feminist story? Honestly do not know, since this is such a sad story where women do not seem to understand the plight of a young girl, where apart from men, women are also bringing down others of their kind, be it conditioning or judgment.

"He responded to his father's controlled violence by developing hard habits and a soft imagination."

"We looked for eyes creased with concern but saw only veil."

Conclusion

According to the critics, her work, "The Bluest Eye," shed light on society's ills and provided readers with food for thought. Morrison slammed the absurdity of society's expectations of beauty in her novel, which serves as a helpful lesson for young girls who read it. The novel's central message to readers is one of self-acceptance and self-love. Racism should not be omitted from the story since some people are still unaware of its presence.

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AN ECO-FEMINIST VIEWPOINT ON THE WRITINGS OF INDIAN WOMEN IN ENGLISH

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ABSTRACT

Ecofeminism is a term that refers to movements and ideologies that connect feminism with the environment. In her work, Le Feminism Ou la Mort, Françoise d'Eaubonne, a French writer, is credited with coining the word "feminism" (1974). According to Ecofeminism, the exploitation and dominance of women are linked with environmental degradation. It also asserts that there is a relationship between women and nature. Ecologists feel that the traditional female virtues of reciprocity, caring, and collaboration is shown by the fact that these traits are prevalent both among women and in nature, according to eco-feminists. Also included will be discussing the unique connection women have to the environment via their everyday interactions since this relationship has been often overlooked in society at large. Women in subsistence economies who make "wealth in conjunction with nature" have long been recognized as "experts in their own right" in terms of holistic and ecological understanding of the processes of nature. Novels by Kamala Markandya, Fire on the Mountain (1977) by Anita Desai and Gita Mehta, The God of Small Things (1997) by Arundhati Roy, and The Madwoman of an ogre (1998) by Sohaila Abdulali are among those being evaluated, which span the spectrum from early Ecofeminism to urban Ecofeminism. Women authors and their contributions to literature and the environment are highlighted in this essay, which establishes a case for their importance in an era of rapid and international technological growth.

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Keywords: Ecofeminism, environmental, degradation, spectrum, women and in nature

Introduction

Environmentalism, also known as environmental women's liberation, is a branch of feminist thought that examines the relationships between women and the natural world. Françoise d Eaubonne, a French women's rights campaigner, was the one who gave it its name in 1974. According to the Oxford Advanced Learner's Dictionary, "Ecofeminism is defined as a philosophical and political concept and development that consolidates environmental concerns with women's activism concerns, believing that both are the result of male dominance of society." [7] Webster's New World Encyclopedia defines Ecofeminism as a "development or idea that applies women's activism principles and views to biological difficulties" (Webster's New World Encyclopedia). According to [8, it is one of the sorts of women's liberation that has erupted via the fusion of women's rights and environmentalist principles.] Eaubonne coined the word Ecofeminism in 1974, and it was first used by her in a feminist context. She used it to "invite women to take the lead in an environmental insurgency to save the earth"

(Merchant 184). Environmental feminism is a trend that finds a connection between the misuse and debasement of the natural world and the subjugation and persecution of women. It gained prominence in the mid-1970s in the vicinity of second-wave women's rights and environmental development. Ecofeminism combines elements of the women's activism movement with environmental advancements while also serving as a litmus test for both. The green product incorporates a concern about the impact of human activities on the non-human environment, whereas woman's rights include a view on humanity as gendered in ways that subordinate, abuse, and mistreat women. Ecofeminism places a heavy emphasis on the environment and how women are treated by a male-centric society. In their opinion, it is beneficial to show how women and nature are being wrongly abused by the disproportionate principles of the general public in general. Eco-feminists are proliferating because they believe that the planet has been sanctified and should be respected and spared. In their work, eco-feminists limit the different levels of structure that reward the ability of males while also taking into consideration the mistreatment of

women and the environment. The eco-feminists regard the scrape of nature and the scrape of women to be one and seek to bring to the fore solutions for both. Following in the footsteps of intuition, a branch of Ecofeminism called radical Ecofeminism was created along similar lines. Currently, the academics who have confidence in both women and nature are being negatively commoditized, and the male-centered society is to blame for this. Social eco-feminists, on the other hand, re-energize the link between women and the environment. They argue that due to their sex occupations (e.g., family nurturer and provider of sustenance) and their scientific training, women are becoming more connected to nature (e.g., period, pregnancy, and lactation). As a result, social eco-feminists believe that such ties enable women to become more sensitive to the sanctity and debasement of nature. They urge that this affectability be cherished by society to the degree that it contributes to developing a more straightforward relationship with the stable environment in which individuals must coexist to survive. Social Ecofeminism has also gained traction among nature-based religions and goddess and nature worship to reclaim both the otherworldliness of nature and women's essential role in that otherworldliness, as well as the role of women in that otherworldliness. Eco criticism is a continuing abstract approach that examines "the relationship between writing and physical state" and provides solutions to questions such as "How is nature being addressed right now? "When it comes to the land, how do our similarities and differences influence the way we handle it? In what ways has humankind's interaction with the natural environment been shaped by proficiency itself? What are the many methods and extent to which natural disaster has permeated modern literature and mainstream life today? so forth and so on." [10]

Another branch of Ecofeminism, known as Postcolonial Ecofeminism, is a concept that has been accessible for usage for quite some time but is still in its early stages of development. Since their inception, the related fields of postcolonial Eco criticism and Ecofeminism have been dominated by a primarily Euro American perspective, and the two areas have failed to adequately address the issue of

postcolonial Ecofeminism, which requires the two fields to recognize the "twofold tie" of being female while also being colonized. If one takes a postcolonial eco-feminist perspective, it would include the integration of postcolonial Eco criticism and Ecofeminism into a single systematic center, where it is essential to recognize that the misuse of nature and the exploitation of women are intimately linked to ideas of class, station, race (including colonialism), expansionism, and neo-imperialism.

Postcolonial Eco criticism is centered on the nexus between postcolonial and natural concerns, which is where they meet. Many commentators, particularly those from the strain of deep environment, have said that postcolonialism is fundamentally human-centric and that environmental concerns are optional to many discussions that have demonstrably contributed to racial segregation in the United States.

Eco-feminist writing in Indian English literature is a growing trend.

Nature has been bestowed to India by the gods, and the appreciation of nature has been a way of life from ancient times. Individuals have been paying homage to everyday objects such as the sun, the moon, trees, rivers, and so forth for centuries. However, as the times have changed, so has the extent of mankind's hostility against the natural world. Since ancient times, the male-dominated society in Indian culture has devalued nature and women to meet their own requirements. The Chipko development has been a significant step in the direction of this parochial community since it has brought to the forefront the women who, in large numbers, took up clubs to oppose the destruction of trees. The origins of tree-embracing were obtained to regulate deforestation, ambling, and mining, among others. This development resulted from a severe disturbance spread across the neighborhood, particularly among the women who were the most adversely affected by state-level actions that culminated in ecological deterioration.

Medha Patkar, Mahasweta Devi, Arundhati Roy, and C.K. Janu are among the women who have dominated the field of genuine concerns.

In their works, many female authors, such as Anita Desai, talk to nature or make use of nature imagery, which is analogous to female characters, allowing the reader to perceive new and unusual realms of Ecofeminism that were previously mentioned unknown. Her novels, such as Cry, the Peacock, and Fire on the Mountain, are a perfect wrapper for the burning themes of nature and woman. The Peacock's Cry refers to the inextricable bond that exists between nature and woman in Cry. A significant piece of Fire on the Mountain is on three female characters, Nanda Kaul, Raka, and Ila Das. The mental consciousness of these individuals has been portrayed via the use of everyday images to represent their reactions to different situations in life. The story depicts the darkest aspects of nature through the eyes of a mishmash of darker side characters that are worried about their loved ones. This epic demonstrates that ecocriticism is not just concerned with physical difficulties but also with the standard symbols that contribute to a valid link between human and non-human interactions. The God of Small Things, Arundhati Roy's most celebrated novel, depicts the relationship between women and nature and how both are exploited by a male-centric cultural tradition. Throughout the epic, the demise of the mythical town of Ayemenm is decoded. To complete the job that drives the road to the link between physical abuse and sex discrimination, the pollution of the Meenachal canal and restoration of the History House to its former status as a vacationer port is required. Kiran Desai's Hullabaloo in the Guava Orchard portrays the troubles that arise from man's interference with the natural order of things, and it demonstrates that the affection shared by people and animals is more solid than the affection shared by men. [13

In India, the Chipko development has gained significant notoriety, and it is now seen as a genuinely beneficial instance of grassroots ecology in India, according to current thinking. This evolution is also substantial in terms of how it prepared females. Through this evolution, the concept of tree embracing was developed to end activities like deforestation, blundering, and mining. The development started in the Garhwal region of Uttaranchal, located in the Indian state of Uttar Pradesh.

Because of the state's increasing commercialization and underdevelopment of the Garhwal region, the conceptualization of this development was influenced by decisions made at the state level, such as granting private temporary workers rights to gather wood for cricket bats and granting remote temporary workers rights to gather wood for other purposes. Because of widespread deforestation, the year 1970 saw the most devastating floods in recorded history, as well as the most hazardous avalanches.

Medha Patkar, Mahasweta Devi, Arundhati Roy, and C.K. Janu are some of the notable women who have played a role in advancing natural causes and advances in the past. Medha Patkar is the leader of the Narmada Bachao Andolan, a social development movement that includes indigenous people, Adivasis, ranchers, tree huggers, and human rights activists who are protesting the construction of the Sardar Sarovar Dam across the Narmada canal in Gujarat, India. Mahasweta Devi, both a lobbyist and a well-known women's activist essayist, has committed a significant portion of her activism and writing to the cause of the advancement of inborn persons and their situation in India, among other things. Arundhati Roy, best known as the winner of the Booker Prize for her novel The God of Small Things, devotes her time and energy to a variety of causes, including the Narmada Bachao Andolan, nuclear testing in India, and the support of separatists seeking Azadi (independence) in Kashmir. C.K. Janu, an Adivasi woman who has been involved in the Muthanga forests in North Kerala since 2003, is the most recent lady to come under the limelight for her environmental activism. She was first brought to public attention in the year 2003.

After considering India's technological achievements, it is surprising that many of the ecocritical works and activities that originate in this country have been omitted from the natural abstract legislation. Ecocritical writers who are activists or who write postcolonial Indian literature in English have, for the most part, not received much attention within the ecocritical community. It is thus necessary to provide a

case for why female journalists are essential to this endeavor.

Many Indian female writers study female subjectivity to develop a personality not dictated by a male-centered society, but their work also retains value since they include societal concerns as a central theme in their works of fiction. Women's composition in India, especially in the twentieth century, is coming to be recognized as a remarkable style of invention and women's independence. Indian female authors who write in English, such as Kiran Desai and Arundhati Roy, have achieved international acclaim by receiving prestigious awards such as the Booker Prize. Their contributions to the English-speaking academic world cannot be disregarded or marginalized.

In the contemporary environment, Indian female artists have begun to express their concerns about globalization in India, including its impact on sexual orientation and family relationships, and nature in its broadest meaning.

We have now arrived at the females who are writing Indian literature in English and on the planet. This section will attempt to answer the question of why it is necessary to examine postcolonial Ecofeminism in the compositions of Indian ladies writers, as well as what it is that these scholars bring to the table in terms of the philosophy, hypothesis, and lived material truth of women in and of the earth.

A variety of books, ranging from early Ecofeminism to urban Ecofeminism, are being considered, including Nectar in a strainer (1954) by Kamala Markandya, Fire on the Mountain (1977) by Anita Desai, A Riversutra (1993) by Gita Mehta, The Lord of Small Things (1997) by Arundhati Roy, The Madwoman of Jogare (1998) by Sohaila Abdulali, An Atlas of I'm

In the contemporary environment, Indian female artists have begun to express their concerns about globalization in India, including its impact on sexual orientation and familial relationships and the world in its broadest meaning. As a result, although their compositions may seem reasonably assured and private, they really represent a firm assertion of civic duty.

The irresolute connection that women have with the planet brings to the fore the existential and material crises that women and the environment are experiencing at the same time. A similar emphasis is placed on the materiality of nature in that nature is not merely a passive presence that exists out of sight. There is widespread agreement in modern ecocriticism that the earth is made up of spirit, sceneries, and places, and that they are socially created to give it importance, and that the implications of this significance are controlled by power and discourse.

Except for Arundhati Roy, no other Indian female author has been mentioned in the context of postcolonial ecocriticism or Ecofeminism, except Arundhati Roy herself. When it comes to doing an ecocritical reading of Roy's epic, many commentators have forgotten about the gendered viewpoints throughout the work. The disintegration of the anecdotal village of Ayemenem, which begins with Roy at that moment, highlights and parallels the ethical debasement of the characters, notably of the Ipe family, in the larger narrative. The visually arresting themes of pollution of the stream Meenachal and the History House serve as focal points in the portrayal of natural mistreatment associated with Ammu and Velutha's sex and positional separation in the state of Kerala. If Ammu maintains her optimism for a better future, which is also the word on which the story concludes, Baby Kochamma, on the other hand, becomes the most stringent enforcer of love rules and societal norms. Baby Kochamma's mind has been mangled by the minister's admiration and subsequent loss, and she reacts in the most unpleasant manner possible to the between-rank connection. Essentially, she expresses her vocation as a decorative plant expert, and her nursery is completely destroyed when she decides to live vicariously via television for the rest of her life. Against this backdrop, kin inbreeding takes place, providing Roy with an unnerving image of the bizarre that he uses throughout the whole narrative.

Indeed, even before the tremendous success of Roy's work, women's activist academics such as Kamala Markandya and Anita Desai, among others, have written extensively on the subject of women and the environment. However, despite expounding on female characters' intimate and private lives, these

essayists provide deeply political comments regarding societal concerns and Indian culture in general. One of the reasons female students in this group are often overlooked and undervalued is the emphasis placed on the individual and the private. Nectar in a Sieve by Markandya and Fire on the Mountain by Desai both portray darker tones of nature and the synchronized conjunction of the darker elements of each female depicted in their works. During Markandya's narrative, Rukmini and her family are on the verge of starving to death because nature is chaotic and there is a dry period. While Rukmini recognizes the role assigned to her, her daughter Ira is forced into prostitution due to the family's dire financial situation. Ila Das's attack in Desai's story is made with a lot of heart amid the haziness of the fields that should still be producing life. The barbarities that the females in Desai's novel must suffer are finally brought to a stop by Raka, who sets the backwoods ablaze once and for all.

Books that are becoming more modern include Abdulali's The Madwoman of Jogare, Mehta's A River Sutra, Anuradha Roy's An Atlas of Impossible Longing, and Usha K.R's Monkey-Man, deal with the relationships that women have with urbanization, progress, and urban life. When the city offers women open doors, it mirrors the conversation about globalization, which advocates for equal access to opportunities for everyone. Such links do not fit well with the duality of nature/culture that is prevalent today. The shift from rural to urban settings demonstrates that postcolonial Ecofeminism is not a static notion restricted to wild or vast open places alone. Additionally, these writings include elements of urban skepticism and franticness and an appearance of adjusting to the demands of globalization and development, demonstrating how cities may be places of both creation and obliteration.

Conclusion

The corpus of hypotheses of improvement and Ecofeminism, which contains Indian women's literature on the connections between women and the planet at that time, is also included. Using particular references to the social ecofeminism movement and Vandana Shiva, the articles written by these female journalists challenge the notion that women and nature are both myopic and patriarchal in their outlook. In both good and bad aspects, these pieces portray the women as well as the environment. The unthinking acceptance of the lady nature connection, especially in the Indian context or in the Third World in general, does not stand up under closer examination. According to these researchers, the hypothesis that, since women are disproportionately affected by environmental degradation, they have "typically" inspired attitudes about nature is proved to be false.

Taking everything into consideration, I've said that it's critical to disrupting the nature/culture dichotomy that has unquestionably adapted women to their natural environments. Disturbing the dualism puts the women in an uneasy state of mind regarding their interaction with nature, as they find themselves straddling the murky space between the two doubles. A significant component of the eco-feminist concept and female-driven activity prevents such a state of irresoluteness from developing. Ladies who write Indian literature in English portray this ambiguous connection with nature, providing an essential counterpoint to both theory and activist claims about women and the environment. Specifically, this work is a mediation into an area where women's composing has received little attention, and Indian women's fiction resists and intervenes in dominant patterns of conversation and lives to understand.

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CHANGING THE WORLD THROUGH SOCIAL ENTREPRENEURS: A REVIEW

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ABSTRACT

"Social entrepreneurship is a buzzword in India and around the world. People find that this concept is a mixture of social services and entrepreneurship, and this combination makes it more attractive and a need for the moment. Globalization has strengthened economic activities on the one hand but has neglected social welfare on the other. As a concept, social entrepreneurship is on the rise in India and around the world, focusing on serving society in a more meaningful way than ever before. Social entrepreneurship is not a new concept, but the importance of this concept has risen to new heights in modern times. Many outstanding social entrepreneurs in India have recognized the importance of this term and accepted this way of doing business, which helps shape society in a very positive way. This research paper is a detailed study of conceptual clarity to help understand and analyze the challenges experienced by social entrepreneurs and finally derive the contribution of successful social entrepreneurs from an Indian perspective."

Introduction

Doing business for social purposes is referred to as social entrepreneurship. Altruistic entrepreneurship is another term for it.

Social entrepreneurs bring together business and social challenges to enhance the lives of those who work with them. They don't only assess their success in terms of profit; social entrepreneurs' success implies that they have changed the world in some way.

However, there are differing perspectives on the makeup of social entrepreneurship. Some argue that this definition only applies to businesses that generate money by selling things to customers while also attempting to solve specific problems. Others argue that social entrepreneurs are company owners who employ grants or government cash to tackle social problems.

Customers know that their purchases will assist support a certain cause, whether it's supplying soap to children in need to wash their hands, protect them from sickness, or many other things.

People are drawn to firms that employ social entrepreneurship models because they help solve social problems while spending money on what they want or desire. The rest of this article examines studies on social entrepreneurship in order to better understand how this notion has changed through time. We discussed how social entrepreneurship differs from standard business notions in the research.

We also discussed the problems that social entrepreneurship faces.

Methods

The research is based on secondary data collected from various sources, such as websites, video interviews, case studies, and magazines. This research can also be called explanatory research because it uses qualitative lenses to analyze, explain and explain the important role social entrepreneurs play in their experiences in real-time.

Meaning of Social Entrepreneurship

Individuals, groups, new enterprises, or business professionals use social entrepreneurship as a tool to design, reserve, and execute solutions for social, cultural, or environmental concerns. This concept might be extended to a broader range of organisations with varying sizes and convictions.

According to (Zahra et al., 2009), social entrepreneurship entails strategies and procedures for identifying, defining, and leveraging possibilities for maximising social capital through the creation of new ventures or the innovative management of existing organisations.

An organization can be viewed in the traditional capitalist economic system either as a profit-maximizing corporation whose main aim is to generate profits for its shareholders or as a non-profit organization that tackles and solves social problems. A social enterprise,

however, is a modern type of company that can be found anywhere between a profit-maximizing corporation and a non-profit. Unlike an NGO or CSR interference, a social enterprise is "not a charity" because it follows a business model absolutely (Yunus et al., 2010). Also, unlike conventional profit-optimizing companies, social business focuses on maximizing social gains and investigates ways to offer positive impacts to society or the community (Yunus et al., 2010). A social business is a modern type of profit-maximizing business from a structural, organizational perspective, but not a charity that seeks to achieve its social goal in a self-sustainable way (Yunus et al., 2010).

In a review of social entrepreneurship definitions, definitions concentrating on the factor that the primary or the main motive of a social entrepreneur is to create social wealth by solving social problems is the most promising in this field. (M. Tina Dacin, 2011)

Concept of Social Entrepreneurship

Definitions given by different authors explaining the meaning and concept, and characteristics of social entrepreneurship: (Abu-Saifan, 2012).

Table 1 Meaning and characteristics

S.No.	Researchers and Scholars / Year	Definition	Concept and Characteristics
1.	Leadbeater 1997	"Social entrepreneurs are entrepreneurial, innovative and transformative individuals who are also leaders, storytellers, people managers, visionary opportunists and alliance builders. They recognize a social problem and organize, create and manage a venture to make social change."	Leader
2.	Dees 1998	"Social entrepreneurs play the role of change agents in the social sector by: Adopting a mission to create and sustain social value Recognizing and relentlessly pursuing opportunities to serve that mission Engaging in the process of continuous innovation, adaption and learning Acting boldly without being limited by resources currently in hand Exhibiting a heightened sense of accountability to the constituencies served for the outcomes created ."	Change Agent
3.	Bomstein 1998	"A Social Entrepreneur is a path breaker with a powerful new idea which combines visionary and real-world problem-solving creativity, has a strong ethical fibre, and is totally possessed by his or her vision for change."	Persistent Mission Leader
4.	Thompson 2000	"Social entrepreneurs are people who realize where there is opportunity to satisfy some unmet needs that the state welfare system will not or cannot meet, and who gather together the necessary resources (generally people, often volunteers, money and premises) and use these to make a difference."	Emotional Social Value Creator
5.	Brinckerhoff 2009	"A Social entrepreneur is someone who takes reasonable risk on behalf of the people their organization serves."	Influencer

Social entrepreneurship and Traditional entrepreneurship: is there any difference?

Although there are distinctions between social and corporate entrepreneurship, some experts argue that the two are one and the same (Austin et al., 2006; Peredo & McLean, 2006). In other words, businesses can engage in either business or social entrepreneurship, or a combination of the two. In reality, several academics cite groups with commercial, social, and hybrid objectives (Davis, 1997). As a result, in a way,

these hybrid cars are pursuing two goals, one of profit and the other of social benefit. However, not everyone thinks that a person or organisation may follow two basic aims and be classified as a social entrepreneur.

It's worth noting, however, that not everyone thinks that a person or organisation may be a social entrepreneur if they follow two fundamental aims.

Challenges faced by social entrepreneur

From the literatures and research done in past, it is revealed that there are several challenges faced by the social entrepreneur. (Hynes, B., 2009) The business model chosen should be adaptable and aid in the accomplishment of the company's goals. This necessitates social entrepreneurs' judgments on how to effectively combine corporate efficiency while attaining social impact, resulting in a double bottom line. This may be a difficult task for social entrepreneurs: how to align their social business characteristics in a way that is sensitive to changing stakeholder requirements while still providing a cash stream for the company's management. Because they operate in commercial marketplaces yet frequently feel themselves on the edge or disagree with portions of the marketplace, social entrepreneurs may find themselves in a difficult position in fulfilling their aim of creating social value and improving the well-being of targeted communities. This makes it difficult to develop commercial goals that are consistent with the company's underlying social ideals and ethics (Shaw & Carter, 2007). The lack of financial resources, the absence of job stability, and the inability to provide better compensation make it difficult for the social entrepreneur to succeed (Bornstein, 2007). (Hynes, B., 2009) concluded in the research some challenges which are generally faced by the social entrepreneur in order to set and survive the firm. These were access to finance, pricing policies, challenges in recruiting staff and managing several personal issues.

Discussion and finding

Social entrepreneurship is a buzzword in India and around the world. People find that this concept is a mixture of social services and entrepreneurship, and this combination makes it more attractive and a need for the moment. Globalization has strengthened economic activities on the one hand but has neglected social welfare or social welfare on the other. As a concept, social entrepreneurship is on the rise in India and around the world, focusing on serving society in a more meaningful way than ever before. Although social entrepreneurship is not a new concept, its relevance has grown to unprecedented heights in recent years. Many outstanding social entrepreneurs in India have recognized the importance of this term and accepted this way of doing business, which helps shape society in a very positive way. In this paper, we study about the concept and definitions of social entrepreneurship. We conclude that social entrepreneurship and traditional entrepreneurship is different at the point of altruism and social welfare. Social entrepreneurship is a concept which deals with the welfare of the society, but the path is not so easy for a social entrepreneur to start and survive, hence deals with many challenges such as financing, fundings, lack of government support, lack of resources, retaining employees and much more is a detailed study of conceptual clarity to help understand and analyze the challenges experienced by social entrepreneurs, and finally derive the contribution of successful social entrepreneurs from an Indian perspective.

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