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ASSISTANT PROFESSOR

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ANAND INSTITUTE OF HIGHER TECHNOLOGY
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RECENT TRENDS AND INNOVATION
IN SCIENCE AND MANAGEMENT



RTISM – 2021

On 10th APRIL 2021

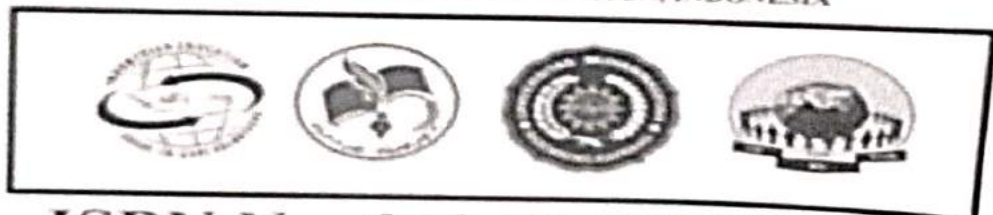
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Financial Analysis of Indian Railway Catering Tourism Corporation

¹Mr. S.SELVANATHAN AND ²Dr.V.MANOJAR

¹Assistant Professor, Department of Commerce (SF), VHNSN College (Autonomous), Virudhunagar

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ABSTRACT: Indian Railway Catering and Tourism Corporation as a public sector undertaking under the Ministry of Railways was setup in 1999 with the objective of professionalizing catering services and promoting domestic and international tourism. It has since then grown manifold and diversified its objectives beyond catering and tourism services. IRCTC has launched various tourism products and services for promotion of tourism industry in India. It is best known for changing the face of railway ticketing in India. Indian Railway Catering and Tourism Corporation Ltd. (IRCTC) is a Public Sector Enterprise under Ministry of Railways. IRCTC was incorporated on 27th September, 1999 as an extended arm of the Indian Railways to upgrade, professionalize and manage the catering and hospitality services at stations, on trains and other locations and to promote domestic and international tourism through development of budget hotels, special tour packages, information & commercial publicity and global reservation systems. While discharging its mandate, the Company has made a significant mark in its passenger-services oriented business lines like setting up of Food Plazas on Railway premises, 'Railneer', Rail Tour Packages and Internet 'Ticketing' bringing great deal of professionalism into the operations. In addition to above, IRCTC is managing on Board Catering Services in Rajdhani / Shatabdi / Duronto and Mail / Express Trains and Static Catering Units such as Refreshment Rooms, AVMS, Book Stalls, Milk Stalls, Ice Cream Stalls, Petha & Peda Stalls etc. across the Indian Railway Network.¹

Keywords: Capital, Employees, Income.

1. INTRODUCTION

Indian Railway Catering and Tourism Corporation as a public sector undertaking under the Ministry of Railways was setup in 1999 with the objective of professionalizing catering services and promoting domestic and international tourism. It has since then grown manifold and diversified its objectives beyond catering and tourism services. IRCTC has launched various tourism products and services for promotion of tourism industry in India. It is best known for changing the face of railway ticketing in India. Indian Railway Catering and Tourism Corporation Ltd. (IRCTC) is a Public Sector Enterprise under Ministry of Railways. IRCTC was incorporated on 27th September, 1999 as an extended arm of the Indian Railways to upgrade, professionalize and manage the catering and hospitality services at stations, on trains and other locations and to promote domestic and international tourism through development of budget hotels, special tour packages, information & commercial publicity and global reservation systems. While discharging its mandate, the Company has made a significant mark in its passenger-services oriented business lines like setting up of Food Plazas on Railway premises, 'Railneer', Rail Tour Packages and Internet 'Ticketing' bringing great deal of professionalism into the operations. In addition to above, IRCTC is managing on Board Catering Services in Rajdhani /

¹<https://www.quora.com/What-is-the-function-of-IRCTC>

பேரிடர் மேலாண்மையும் முதலுதவிகளும்

முனைவர் பா.சுந்தர பாண்டியன்
முனைவர். சு.பிரகாஷ்



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1. புயல்

இந்தியாவின் கிழக்கு கடற்கரைப் பகுதியும், மேற்குக் கடற்கரைப் பகுதியும் ஆண்டுதோறும் புயல் காற்றினால் கடுமையாகப் பாதிக்கப்பட்டு யிர்ச்சேதமும் பொருட்சேதமும் ஏற்படுகின்றன.

இந்தியாவில் புயல் காற்றினால் மிகவும் எளிதில் பாதிப்படையக் கூடிய குதிகளாகக் கிழக்கு கடற்கரைப் பகுதியில் தமிழ்நாடு, ஆந்திரப்பிரதேசம், ரிசா மற்றும் மேற்கு வங்காளம் ஆகிய மாநிலங்கள் அமைந்துள்ளன. அதற்கு ாறாக மேற்கு கடற்கரைப் பகுதியில் கேரளா, குஜராத் ஆகிய மாநிலங்கள் ட்டுமே புயலால் பாதிக்கப்படுவனவாக உள்ளன.

ஒரு சூறாவளி உருவாவதற்கான சூழல்கள்

1. வெப்பம் சூரியனால் வெப்பம் உண்டாகின்றது.
2. ஈரப்பதம் கடல்நீர் இதனை ஏற்படுத்துகின்றது.
3. அமைதியான இடம் இந்த நிலைமையானது, கோடைக்கால காற்று இறுதியிலும், குளிர்காலத் தொடக்கத்திலும் ஏற்படுகின்றது.

அமைதியான கடலின் மேல் சூரியனின் வெப்பக்கதிர்கள் பாய்கின்றன. அதனால் வெப்ப அலைகள் தோன்றுகின்றன. அத்துடன் மிகப்பேரளவிலான கடல் நீரின் ஈரம் பொதிந்த வெப்பக்காற்று உயரே எழுகின்றது. அந்த காற்று அதனுடைய வீரியம் குறைவாக இருக்கும் நிலையில் மெல்ல மெல்ல உயரே செல்லுகின்றது. வெப்பத்தின் காரணமாக காற்றின் ஒவ்வொரு மூலகும் (Molecule) உயரே செல்லத் தொடங்க அந்த இடத்தினை நிரப்பப் பக்கத்தில் உள்ள மற்றொரு மூலக்கூறானது அவ்விடம் நோக்கி நகர்கின்றது. அந்தக் காற்று விரிவடைகின்றபோது அது குளிர்ச்சி அடைகின்றது. அந்தக் குளிர்ச்சி நீர்த்திவலைகளைத் தோற்றுவிக்கின்றது. அந்த நீர்த்திவலைகளினுள்ளே பொதிந்துள்ள வெப்பம் அந்தக் காற்று மண்டலத்தை மறு வெப்பம் அடையச்

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UNIT-I: Introduction to Cyber Security (5 Hours)
Cyber Security - Improving Cyber Security – Attacks -
Computer Criminals - Security Services.

UNIT -II: Malware and Cyber Crime (7 Hours)
Malware Definition – Adware- Spyware-Ransomware -
Virus-Worms- Trojan Horse Rootkits -Kinds of Cyber
Crime: Cyber Stalking- Hacking- Forgery -Software
Piracy – Phishing –Spoofing - Denial of Service Attack
(DOS) – Steps to File a Cyber Crime Complaint-
Documents Required for Filing a Complaint- Prepare a
Case Study On Cyber Stalking.

UNIT- III: Cryptography

(6 Hours)

Introduction- Plain Text to Cipher Text – Block Cipher –
Stream Cipher - Encryption and Decryption –
Steganography – Biometrics – Digital Signatures-
Preparing a Case Study on Digital Banking.

UNIT – IV: Security In Networks

(6 Hours)

Network Concepts – Media - Protocol-Types of Networks
Strong Authentication- Wireless Security- Traffic Flow
Security – Firewalls.

UNIT –V: Web and Smartphone Security(6 Hours)

Guidelines for Social Networking - Email Security –
Phone Security: Platforms, Setup and Installation –
Communicating Securely - Wi-Fi Security.

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1. Introduction to Cyber Security

1.1 Cyber Security



“Cyber Security is a collection of interacting processes intended to make cyberspace safe and secure.”

“Cyber security is the collection of tools, policies, security concepts, security safeguards, guidelines, risk management approaches, actions, training, best practices, assurance and technologies that can be used to protect the cyber environment and organization and user’s assets.” Organization and user’s assets include connected computing devices, personnel, infrastructure, applications, services, telecommunications systems, and the totality of transmitted and/or stored

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Editors

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Chapter - 5

L- Fuzzy Connected On L- Fuzzy Supratopological TM-Systems

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ABSTRACT

In 2010, Tamilarasi and Megalai introduced a new class of algebras known as TM-algebras. In this paper, we discuss the notion of L- fuzzy connected on L- fuzzy supratopological TM-systems.

AMS Classification: 54A40, 03E72, 06F35

KEYWORDS

BCK/BCI Algebra, TM-Algebra, Fuzzy set, Fuzzy Topology

INTRODUCTION

In 1966, Y.Imai and Isek [15] introduced two new classes of algebras that arise from the study on classical and non-classical propositional logic. These algebras are known as BCK and BCI algebras. It is known that the notion of BCI-algebras is a generalization of BCK-algebras in such a way that the class of BCK algebras is a subclass of the class of BCI algebras. In 2010, Tamilarasi and Megalai introduced a new class of algebras, arising from classical and non-classical propositional logic, called TM-algebras [21].

In 1965, L.A.Zadeh [23] introduced the notion of fuzzy sets, to evaluate the modern concept of uncertainty in real physical world. In the notion of fuzzy sets, the boundaries are not crisp or sharp but flexible. In 1967, J.A.Goguen [14] introduced the concept of L- fuzzy sets.

The theory of fuzzy topological spaces is developed by Chang [12], Wong [22], Lowen [17] and others. Mashhour et al [18] introduced the concepts of supratopological spaces. In 1987 M.E.Abd El-Monsef and A.E.Ramadan [19] introduced fuzzy supratopological spaces. R.Devi, S.Sampathkumar and M.Caldas [13] introduced supra α - open sets and S α - continuous functions. In 2007, Qutaiba Ead Hassan, Marid [20] introduced the notion of fuzzy connected spaces.

In [1], we studied L- Fuzzy Topological subsystem. In [2], we studied L- Fuzzy Topological TM-system. In [3], we studied L- Fuzzy Topological TM- subsystem. In [4], [5] we studied Fuzzy Supratopological TM-system, L- Fuzzy compactness. In this paper, we discuss the notion of L- fuzzy connected on L- fuzzy supratopological TM-systems and investigate some simple but elegant results.

PRELIMINARIES

In this section we recall some basic definitions that are required in the sequel

Chapter - 6

Inhibition of *Staphylococcus aureus* biofilm formation isolated from diabetic foot ulcer patients using ursolic acid extracted from *Ocimum sanctum* Linn

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ABSTRACT

Methicillin-resistant *Staph aureus* (MRSA) poses a huge risk to patients with wound infections. A significant increase in both mortality and morbidity a human being has been reported in patients infected with Methicillin-resistant *Staph aureus* due to the development of biofilm. MRSA is frequently resistant to a wee variety of antibiotics, which is more pronounced in those with the ability to form a biofilm. The pus samples were obtained from the patients' wounds of diabetic foot ulcers in Govt Hospital, Virudhunagar. Totally 40 pus samples were inoculated onto blood agar, mannitol salt agar and nutrient agar. The study aims to evaluate the ability of *Ocimum sanctu* inn extract to inhibit the Biofilm forming, drug-resistant pathogenic bacteria and to determine their ability to enhance the activity of antibiotics. The use of medicinal plants plays a vital role and these plants have been used for many yes for human health. There are still many plants that have various medicinal values. Thus they can be used in the treatment of an acute infectious disease caused by streptococcus bacteria drug-resistant microorganisms. The synergic activity of plant extract with beta lactam antibiotic (methicillin) may pave the way to use it is a broad spectrum of antibacterial activity against *S.aureus*.

KEYWORDS

Staphylococcus aureus, diabetic foot ulcer patients wound pus samples, MRSA strains, garlic extract

INTRODUCTION

Staphylococcus aureus belongs to a gram-positive group with a cocci shape. It was found in grape -like clusters. Frequently, *Staphylococcus aureus* is found in the anterior nasal cavity in humans, which are the favourable conditions for maintenance and infection. Especially, *Staphylococcus aureus* has the characteristic of biofilm formation. When *S. aureus* enters into the circulatory system, it avoids the detection by the immune system, binds to a specific surface, including the infection area and form biofilm to survive in the host (Lowy et al., 1998). Moreover, its biofilm can be created on both biotic and an abiotic surface, *Staphylococcus aureus* shows resistance to antibiotics that becomes a problem in treatment. Some infectious diseases related to the *Staphylococcus aureus* biofilm formation were cystic fibrosis, endocarditis, and arthritis. Bacteria could have characteristics to form a biofilm. The extracellular polymeric matrix is made from the combination of exopolysaccharides, teichoic acids, enzymes proteins and extracellular DNA (Melchior et al., 2006). According to the previous studies, the matrix's structure is changed from strains to due to the environment and the conditions. Biofilm may have a 3-dimension structure, but

Chapter - 10

Effect of Annealing Temperature on Structural and Optical Properties of α -Fe₂O₃ Thin Films Prepared by Sol- Gel Spin Coating Method

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ABSTRACT

Iron oxide (α -Fe₂O₃) thin films were prepared onto the glass substrates by sol-gel spin coating method. The influence of Annealing Temperature on the structural and optical properties of the (α -Fe₂O₃) thin films were investigated. XRD analyses showed the formation of hematite thin films structure along (104) as preferred orientations and intensities of which change with post annealing whereas the grain size with increase in temperature of 350°C to 450°C was varied in 95 -143 nm upon heating treatment. SEM results indicate that the random distribution of Fe₂O₃ nano-grains with agglomeration is observed on the substrate surface. FT-IR spectrum, two absorption peaks at 486 and 523 cm⁻¹ corresponding to the metal -oxygen (Fe-O). The UV- optical band gap energy was found to increase with decrease of (α -Fe₂O₃) thin films with direct band gap energy from 2.75 – 2.60 eV. The Photoluminescence (PL) peaks shows green radiation at ~ 520 nm was observed in all samples.

KEYWORDS

Sol-gel method, XRD, SEM, FT-IR, UV- visible and PL.

INTRODUCTION

Metal oxide thin films are subjects of great interest because of their broad spectrum of technological applications in different areas [1]. Nanocrystalline transition metal oxide thin films are fascinating materials because their electrical and magnetic properties which have great importance in the field of micro-electronics and nano-electronics, mainly for the development of optoelectronic devices. Iron oxide thin film is one of the best metal oxide thin films due to its novel structural, optical, electrical and magnetic properties. In recent years, much attention of scientific community has been focused on iron oxides due to their potential applications such as magnetic devices [2], gas sensor [3-6], humidity sensor [7], solid state lithium ion battery [8], super capacitor [9], water splitting for hydrogen production [10], solar cell [11-12], solar filters [13] etc. It has different crystalline phases depending on stoichiometry, such as wustite (Fe O), magnetite (Fe₃O₄), hematite (α -Fe₂O₃) and maghemite (γ -Fe₂O₃) [14]. Among these, α -Fe₂O₃ and γ -Fe₂O₃ phases of iron oxide and studied their related applications. Among these, several researchers have studied about hematite (α -Fe₂O₃) phase is the most common iron oxide in nature. It is an n-type semiconductor, having a small band gap (2.1eV) and is the most stable iron oxide under ambient conditions [15]. A variety of chemical techniques have been used to fabricate iron

Chapter - 14

A Study On Core Activities of IRCTC Services with Special Reference to Rail Neer Service

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ABSTRACT

In the present study banking sector of India is operation in a energetic challenge concerning public sector bank customer base effectuation. Service quality plays a major role in getting customer gratification. Banks are trying hard to win customer gratification by providing better quality services. This study customers' service quality of public sector banks of India. Data was collected from total 120 customers of public sector banks using Questionnaire. The results show that proportion of service quality such as Tangibility, Reliability, Responsiveness, Empathy and Assurance significantly conclude customer trust and consignment. The study suggest that public sector banks should also come forward and try their best to provide better quality service to win back their customers.

KEYWORD

Customer gratification, Service Quality, Public Sector banks, effectuation.

INTRODUCTION

In today's ever-increasing globalization of services and brands, a public transportation service business like Indian Railway Catering and Tourism Corporation (IRCTC) needs to attend to the satisfaction of their consumers, particularly with respect to those variables considered by customers in their evaluation and choice. The study provides a reference framework for understanding and describing the importance of different variables in affecting customer's satisfaction with IRCTC services pertaining to Tamilnadu.

OBJECTIVES OF THE STUDY

1. To know the core activities of the IRCTC.
2. To know the consumer perception towards Rail Neer Service.

PACKAGED DRINKING WATER (RAIL NEER)

To enhance passenger amenities, the IRCTC launched Rail Neer, a branded packaged drinking water for the rail commuters. Rail Neer is processed, purified and bottled at state-of-art plants. Completely automatic plant and no manual handling of product water at any stage. IRCTC stands for quality and has a key role in ensuring service and product of the highest quality for the rail passenger as well as visitor to any railway premises. High quality product can only be ensured when production is in-house under full control and supervision of IRCTC.

Chapter - 15

A Multi-Comparative Study on Usage of Virtual Water Between the Selected Countries

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ABSTRACT

The virtual water trade is the idea that when goods and services are exchanged, so is virtual water. When a country imports one tonne of wheat instead of producing it domestically, it is saving about 1,300 cubic meters of real indigenous water. If this country is water-scarce, the water that is saved can be used towards other ends. If the exporting country is water-scarce, however, it has exported 1,300 cubic meters of virtual water since the real water used to grow the wheat will no longer be available for other purposes. The objective of the paper is , a multi-comparative study on virtual water usages' between the countries based on some selected agricultural crops. The purpose of the paper is to find out, which country has comparatively low in consumptions of virtual water on selected crops. The secondary data were collected from the WTO report for selecting countries on and agricultural crops. The countries were, USA, China, India and Indonesia and crops were Paddy, Rise (husked), Rise (Broken) and Wheat. The data were collected from the year 2018 WTO report. Computer program Statistical Package for Social Sciences (SPSS) version 21 was used to analyze the data. Multiple Analyses Of Variance was used to analyze the objectives.

KEYWORD

Virtual Water, Water Food print and Water Trade

INTRODUCTION

The virtual water concept was first considered as a way to understand how water-stressed countries could provide their people with sufficient supplies of food, clothing and other water-intensive items. However, because many goods and services are now exchanged through global trade, water-scarce countries faith more and more on the water resources of other countries to supply their consumer product needs. Accordingly, a country with limited water resources often imports water-intensive goods like cotton textiles rather than have local growers cultivate cotton crops at great cost to their local water conditions.

In the framework of recent developments from a supply-oriented to a demand-oriented management of water resources it opens up new fields of governance and enables a differentiation and balancing of different insights, basic conditions and interests. Analytically, the concept enables one to differentiate between global, regional and local levels and their linkages. This means, that water resource difficulties have to be solved in problems if they cannot be successfully addressed in the local or regional watershed.

Based on the above background, the objective of the paper is, a multi-comparative study on virtual water usages' between the countries based on some selected agricultural crops. The purpose

Chapter - 16

A Study on Awareness and usage of E-Tickets in Railways

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ABSTRACT

Transport service system has become an integral part of common man's life, people travel from one place to another place due to personal or official purpose through the mode which is convenient to them. Nowadays the cost of road transport is highly increased in Tamil Nadu, so people they preferred another option, for that they preferred rail transport. The internet is one of the more recent developments in communications and information transfer. An electronic ticket is a contract, in digital format, between the user and the service provider, and reduces both economic costs and time in many services such as air travel industries or public transport. The Indian railway has modernized in terms of technology, ticketing, computerization and overall management.

KEYWORD

E- ticket, E- Commerce, Smartphone

INTRODUCTION

The Internet plays a vital role and everything in this world is evolving as per the technology and we to adapt to the new technology. In the beginning of modern era, Computers played a major role, only high level operations and for performing research computers have been used initially, only few peoples were using computer and then people started using computer for their personal use. Later emerged the mobile technology and now mobility became everything. Everything made easy using mobility. Since the customers' Internet activities have shifted from using browsers to mobiles, there arises the new opportunities to interact with products from mobile. Indian Railways is becoming technologically advanced and the fact that people can book their tickets online. After IRCTC launched the online ticket reservation system through its website (www.irctc.co.in) in 2002, the site quickly achieved the distinction of being the largest e-commerce portal in Asia. This web site is so popular all over the world that it is visited at least a million times a day either to find out the Train fare, ticket reservation or the availability status of a wait listed ticket. E-ticket provides economic costs and time in many services such as travel industries or public transport. People who have access to a computer and the internet can now reserve their tickets online. The online service system shall be able to support 7200 tickets per minute a day the and it support 1,20,000 simultaneous users at any point. It will have the capability to easily scale up as demand increases in future. In fact, Indian Railway reservation has made things easier for many people who want to travel through trains. Indian Railway Online Booking has certainly changed the system of reservation in India.

Chapter - 17

A Study on Factors Influencing Work Life Balance of Women Employees in Commercial Banks at Virudhunagar District

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ABSTRACT

Nowadays women are working in almost all kinds of professions demonstrating that there is no gender difference at work place. This is a positive development that women are making their presence which reflects in different walks of their life. Nevertheless, every woman should also manage their home and personal life. The present scenario with increasing demands at work place and the interface between work life and personal life assumed more work pressure which demands more attention towards work life balance issues. There are different factors those affect work life balance among them one set of factors could be demographic variables. The present study is undertaken to determine the relationship between the demographic variables and work life balance. The women employees working in banking sector at VIRUDHUNAGAR district constitute the universe for this study and a sample size of 566 employees is chosen. The hypotheses are tested using ANOVA and it has revealed that there is significant relationship between demographic variables and work life balance. This study concluded that the work life balance initiatives should be designed to help employees based on the demographic variables and work life balance issues that would help the employees' work life and personal life.

KEYWORD

Demographic variables, Work Life Balance, Women employees.

INTRODUCTION

Work life balance is a concept that supports the efforts of employees to split their time and energy between work and the other important aspects of their lives. Work life balance is a daily effort to make time for family, friends, community participation, spirituality, personal growth, self-care and other personal activities, in addition to the demands of the workplace. It means creating a balance to schedule an equal number of hours for each of the various work and personal activities. The right balance between professional and personal life of today will probably be different on tomorrow. Thus the core of effective work life balance definitions is two key concepts: daily achievements and enjoyment.

The tremendous increase in industrialization and rapid changes in education paved employment opportunities for women in a massive increasing trend. Nowadays the career women are continually challenged by the demands of full-time work and when the day is done at the office, they carry more of the responsibilities and commitments to home. Women are growing more ambitious as they become key players in the world of work, contributing to major company successes. Majority of women work lives are a juggling act that included multiple responsibilities at work, heavy meeting schedules, and business trips. In this fast growing and competitive world, as every possible opportunity for employment is increased, the organizations need to create a congenial atmosphere where employees can balance their professional and personal life. So employees need to properly

Chapter - 18

Relationship between Organizational Culture and Leadership Impact on Job Satisfaction in Ramco Cement Industry at Thulukkapatti

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ABSTRACT

Organizational culture refers to the beliefs and values that have existed in an organization for a long time, and to the beliefs of the staff and the foreseen value of their work that will influence their attitudes and behavior. Administrators usually adjust their leadership behavior to accomplish the mission of the organization, and this could influence the employees' job satisfaction. It is therefore essential to understand the relationship between organizational culture, leadership and job satisfaction of employees. Leadership and organizational culture are considered to be two of the most crucial organizational elements in order for firms to compete successfully and to gain sustainable advantage. Culture is a driving force in today's organizations. An organization's culture is made up of many different factors including leadership, work environment, employee satisfaction and performance, and reward and recognition. When one of more of these factors suffers, the organization as a whole suffers. So, they have proposed to undertake this study to overcome the above issues.

KEYWORD

Employees, Organizational culture, leadership, job satisfaction, cement industry

INTRODUCTION

Organizational culture encompasses values and behaviors that "contribute to the unique social and psychological environment of an organization". According to Needle, organizational culture represents the collective values, beliefs and principles of organizational members and is a product of such factors as history, product, market, technology, strategy, Type of employees, management style, and national culture; culture includes the organization's vision, values, norms, systems, symbols, language, assumptions, environment, location, beliefs, and habits. Organizational culture is the specific collection of values and norms that are shared by the people and groups in an organization and that manage the way the employees work together with each other and with stake holders' exterior the organization. Organizational culture can be diagnosis from the point of view of its effect on the following six types of motives of people viz., achievement, affiliation, expert influence, control, extension and dependency.

Leadership is an important element of the directing function of management. Wherever, there is an organized group of people working towards a common goal, some type of leadership becomes essential. "The power of leadership is the power of integrating. The leader stimulates what is best in us he unites and concentrates what we feel only gropingly and shatteringly. Leadership is the ability to