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Forward

I am pleased to place before you our third issue “Anchor” with research oriented articles and papers from the faculty. Around the world, countries have recognized that research is the key to the knowledge economy of the 21st century. Hence, this is an effort made by the institution to publish a Multidisciplinary Research Journal to sharpen the knowledge base of the teacher and at the same to take him to the cutting edge of professional excellence. We believe that research is a way to develop new understanding about teaching, learning and educational administration. This new knowledge has significance because it will lead towards academic excellence.

Teachers painstakingly prepare research papers on various issues and subject and present them at various seminars / workshops at the State, National and even at International level. “Anchor” seeks to compile all such papers already presented by the teachers at seminars. Articles of research orientation also find a place in the journal. It is hoped that all this will not only help to create new knowledge but also become nourishing food for students, faculty and people at large.

I appreciate the editorial team and the contributors for their hard work to bring out this issue. I hope that the contents of this journal will encourage and motivate to develop a research culture in the institution.

CSR IN INDIA IN THE MANDATORY AMBIT - An analysis

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Abstract

In order to encourage more entities to participate in the process of development of the society via- CSR, the Government of India has implemented the concept of CSR in Section 135 of the new Companies Act 2013 making it mandatory for Companies to spend at least 2 per cent of their average net profit over the preceding three years on CSR activities. On one side in a country like India, mandating CSR should be hailed as a positive step forward in ensuring inclusive growth. But there are also a number of reasons to think it may not greatly improve CSR. It may distract business leaders who are ready to embrace strategic CSR. Companies may treat it as a “check the box” exercise rather than looking at ways to innovate and generate a return from doing social and environmental good. This paper aims at exploring and analyzing the CSR mandate under Companies Act 2013 and also at raising arguments for and against the mandate. Key words: CSR, mandate, inclusive growth, sustainable development .

Introduction

The 21st century that witnesses unprecedented challenges and opportunities in the global scenario, creates immense need for inclusive and sustainable development for developing countries like India. Corporate sector in India which is today globally viewed as a responsible component of ascendancy of India is expected to take a leadership role to overcome such challenges. Corporate being integral part of the society can play active role to attain inclusive growth and development of the society as well as the nation at large. Very often Corporate Social Responsibility is understood from the perspective of business generosity to community projects. But, today, CSR in India has gone beyond the ambit of charity and donations and is shaped in more organized manner. The provision of Company's Act 2013 that has got the most attention is the so-called “2 per cent” requirement, which made India the first country to mandate CSR. The practice of CSR is not new in India however, the new legislation may bring more companies in to the fold and also the CSR spending is likely to increase.

Review of literature

Chandrakanta Sahoo (2011) studied “Corporate Social Responsibility: Issues and Controversies”. He concluded that CSR in India is restricted to narrowly defined set of people and areas. There is need to augment the scope of CSR with respect to stakeholders involved, CSR practices of corporations from independent community development interventions to more long lasting initiatives through their association with civil society organizations and government in planning, policy making and implementation of various RD interventions.

Gahlot Sushmita (2013) studied “Corporate Social Responsibility: Current Scenario” and concluded that the Clause 135 introduced by the Companies Act 2013 would go a long way in strengthening the social initiatives taken by the companies. Apart from boosting transparency and accountability, it would also open up the avenue for Corporate Social Responsibility Consulting. However, steps are required to be taken to sort out issues of penalties in the event of non-disclosure, scope of Schedule VII, internal controls etc. If the law is followed in true spirit, India Inc. would succeed in discharging its social responsibility in an effective and efficient manner.

Rajeev Prabhakar and Ms. Sonam Mishra (2013) studied “A Study of Corporate Social Responsibility in Indian Organization: An-Introspection” & concluded that Corporate sustainability is an evolving process and not an end. The Companies bill is a good initiative on the part of the government however what would be included in, spending on CSR is unclear and is left for the companies to decide. The bill puts forth challenge for the companies to determine a strong and innovative CSR strategy which should deliver high performance in ethical, environmental and social areas and meet all the stakeholders objectives.

Swati Sharma, Reshu Sharma & Jugal Kishor (2013) studied “Emerging trends in Corporate Social Responsibility in India-A Descriptive study” found in their study that CSR which was considered as an act of philanthropy in the past, over the years, has been changing from charity to responsibility. Companies today are more sensitive about their social role. The CSR activities are not constrained only to their stakeholders. The companies have realized that brands are built not only around good quality of the product; but also around emotions and values that people ascribe to those products.

Akanksha Jain (2014) studied “The Mandatory CSR in India: A Boon or Bane” & found in her study that the mandated 2% CSR investment in the new Indian Companies Bill is a novel solution to India’s social problems. It may not be perfect but it is a product out of necessity for economic justice in India. This new policy may turn out to be a boon for both the corporate and the society, propelling India towards the path of equitable and sustainable growth.

Objectives and approach of the study:

- To elaborate the concept of CSR in the light of Section 135 of Companies Act 2013.
- To analyse the implications of the act making CSR mandatory in India.
- To determine the challenges in execution of the new CSR mandate.

Research Methodology:

The research paper is an attempt of exploratory research based on the collection of secondary data from various sources of publications including magazines, books, journals research article and the internet. Looking into requirements of the objectives of the study the research design employed for the study is of descriptive type.

CSR in India– an overview

The concept of social responsibility has not recently been formulated, but it has a long history in both the east and the west under the guide of social philanthropy. CSR in India has traditionally been seen as a philanthropic activity. Keeping with the Indian tradition, it was an activity that was performed but not deliberated. As a result, there is limited documentation on specific activities related to this concept. Also, with global influences and with communities becoming more active and demanding, there appears to be a discernible trend, that while CSR remains largely restricted to community development, it is getting more strategic in nature than philanthropic, and a large number of companies are reporting the activities they are undertaking in their official websites, annual reports, sustainability reports and even publishing CSR reports. CSR today is a avenue for companies to earn that goodwill which sponsorship can't. Over the years which was considered as a voluntary contribution by corporate for social good has now been made mandatory with inclusion of section 135 in the Act stating corporate have to spend at least 2% of turnover on CSR project.

CSR in the ambit of Companies Act 2013

The Companies act 2013, has the potential to be a historic milestone, as it aims to improve corporate governance, simplify regulations, enhance the interest of minority investors and legislate the role of whistle-blowers. The act provides an opportunity to catch up and make our corporate regulations more contemporary. The act contains several provisions which would change the way Indian corporate do the business and one such provision is spending on CSR activities. Section 135 of the 2013 Act states that every company having:-

- Net worth of Rs.500 crore or
- Turnover of Rs.1000 crore or
- Net profit of Rs.5 crore or more

During any financial year shall constitute a CSR committee of the board comprising of 3 or more directors, out of which at least one director shall be an independent director and shall be responsible to formulate and recommend to the board, CSR policies, which shall indicate the activities to be undertaken by the company as specified in Schedule (vii) giving preference to the local areas and areas around it, where it operates. The committee shall also recommend the amount of expenditure to be incurred on the CSR activities and monitor the CSR policy of the company from time to time. The board shall ensure that the activities included in CSR policy are undertaken by the company and ensure that the company spends, in every financial year, at least 2% of the average net profits calculated in accordance with provisions of section 198 of the 2013 Act. If the company fails to spend such amount, the board shall, specify in its report the reasons for not spending the amount.

As per Schedule VII of the draft rules, recommended CSR activities include:

1. Eradicating hunger and poverty
2. Education
3. Gender equality and women empowerment
4. Reducing child mortality and improving maternal health
5. Combating HIV, malaria and other diseases
6. Environmental sustainability
7. Provision skills
8. Social business projects
9. Contribution to PM's National Relief Fund
10. Such other matters as may be prescribed.

Analysis and Interpretation:

Section 135 which has evolved after a long period of debate is widely accepted for the inclusive growth and sustainable development of India. There is need for active involvement of corporate to work hand in hand with the government and the civil society to bring sustainable development. The act, if implemented in true spirit, has potential to be a game changer for our country. This new legislation implemented from April 2014 would bring more companies in the fold and also the CSR spending is likely to increase where the ground reality in the past was that most of the companies don't even spend 1% of their PAT on CSR and not even 50% of the companies report their CSR annually. Also the idea of CSR in the new mandate, through its disclose-or-explain mandate for corporate, will promote greater transparency and disclosure. Now CSR will no longer be

a silent backroom activity. Companies will require creativity and talent to drive their CSR initiatives effectively. Thus CSR can also be looked as a buzz in the job market. At this point the CSR regime in India is in a nascent stage and there will be hitches and a lot of fine tuning will be required. But still it is worth appreciating the spirit with which the challenging step is taken to make CSR mandatory in India thus making corporate more socially responsible.

The clause on CSR is appreciated and criticized in equal parameters. On one side the development sector and the civil society considers it as a welcome measure to sensitize corporate towards social good and on the other side corporate feel that this new legislation could distract business leaders who are ready to embrace strategic CSR. There are number of reasons to think it may not greatly improve CSR and mandate has also left some areas unclear. Mention of few of them is made here:

- The mandate directs CSR spending to few chosen areas which are already being accepted by many corporate but on the other hand it is discouraging CSR spending on other critical areas like human rights, livelihood, R&D welfare of elderly people, etc which needs additional resources.
- The list specified under Schedule VII of the Act is an inclusive list and not exhaustive. It is too narrow. Thus it restricts the CSR committee to think out of the box.
- Section 135(5) recommends the company to give preference to the local area where it operates for CSR spending. This will definitely promote community business relationship but “Inclusive development” principle gets sidelined. Instead if there could be provision for proportionate spending for local areas as well as for areas requiring additional resources for development, it could lead to inclusive development of the country.
- Spending 2% of net profits on CSR activities in a financial year should not lead to spending on such projects which have a timeline of one year.
- There may be reluctance in compliance, especially in case of those companies which are not profitable but fall under the category due to triggering net worth.
- Section 135 applies to both public and private sector companies therefore the requirement of minimum three directors in the CSR committee need clarification whether the private companies need to appoint a third director to comply this provision.
- Contribution to PM’s National Relief fund and such other funds under the ambit of suggested CSR activities may undermine the true intention of CSR provision. Instead such donations should be limited to certain percentage of CSR spending for one financial year.

- Compulsory CSR initially is difficult to find place in the corporate governance but for the same the corporate should not be criminalized since the companies are investing their own money and the government is asking to pay them for their own (government's) misdoings.
- However if CSR is mandated in such a strong way then India will loose on FDI.As the regulatory environment in India will not favorable for doing business.

Conclusion

Philanthropy and CSR is not a new concept for Indian companies. However the implementation of the new mandate on CSR under Companies Act 2013 will bring more than 6000 Indian companies under the pressure of regulatory and societal framework to pursue CSR activities more professionally. But as Plato said, "Good people do not need laws to tell them to act responsibly, while bad people find a way around the laws." As only one financial year of its implementation is passed the real impact of it is still not visible. But if implemented in true spirit, the effective partnership between the Corporate, NGOs and the Government will place India's social development on a faster track. But with the controversy around the CSR provision, and the lack of specificity and details, there is an opportunity for leading companies to influence the way the CSR mandate is interpreted. Given the immense need and tremendous business opportunity in India, this can only be a good thing.

Scope for further study

After completion of one financial year of implementation there is a scope to study the impact of the implementation of the Act on the CSR spending of the companies and also impact on the society.

Refernces

Akanksha Jain (2014) "The Mandatory CSR in India : A Boon or Bane", *Indian Journal Of applied Research* , Volume : 4 ,Issue : 1, Jan 2014.

Chandrakanta Sahoo (2011) "Corporate Social Responsibility: Issues and controversies", *Journal of Business and Management Vol - 3, No 2.*

Gahlot Sushmita (2013), "Corporate Social Responsibility: Current Scenario", *Research Journal of Management Science, Vol. 2(12), 12-14, December (2013),*

General Circular No. 21/2014, Dated 05/01/2014- CSR, By Government of India, Ministry of Corporate Affairs

Hand book on CSR in India, published by Confederation of Indian Industries.

<http://archive.indianexpress.com/news/companies-bill-passed-with-mandate-on-csr-spending/1047290/>

<http://indiacode.nic.in/acts-in-pdf/182013.pdf>

<http://philanthropynews.alliancemagazine.org/2014/05/31/legal-mandate-for-corporate-social-responsibility-2-issues-for-indian-companies-and-ngos/>

<http://www.caclubindia.com/articles/corporate-social-responsibility-under-the-companies-act-2013-19132.asp#.VLyaFCxLLIU>

<http://www.eco-business.com/opinion/india-companies-act-2013-five-key-points-about-indias-csr-mandate/>

<http://www.mondaq.com/india/x/302204/Corporate+Commercial+Law/Corporate+Social+Responsibility+Now+A+Mandated+Responsibility>

https://www.academia.edu/4308942/Critique_of_Mandatory_CSR_Requirement_of_the_Companies_Act

Kamal Garg "Accounts, Audit & Auditors under the new Companies Act, 2013", Bharat Law House Pvt. Ltd., New Delhi, First Edition 2014, Pp (105-131)

Nitin Kumar "Corporate social responsibility: an analysis of impact and challenges in India " *Abhinav International Journal of Research In Management & Technology. vol. 3, Issue 5 (May 2014)*

Rajeev Prabhakar and Ms. Sonam Mishra (2013) "A Study of Corporate Social Responsibility in Indian Organization: An- Introspection", *International Business Research Conference, Ryerson University, Toronto, Canada.*

Swati Sharma, Reshu Sharma & Jugal Kishor (2013), "Emerging trends in Corporate Social Responsibility in India-A Descriptive study", *Global Journal of Commerce & Management Perspective, Vol. 2(2).*

Vivek Wankhade "Analysis of corporate social responsibility spending of the indian companies", *Vol-3, Issue 4 (April, 2014)*

www.companiesact.in

GREEN HOTEL: AN ECO-FRIENDLY APPROACH (A case study of Hotel Dona Sa Maria)

Authored by: TYBCOM students

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Guided by: Ms. Resham Kaur Bhambra, Asst. Professor, Department of Commerce

Abstract

Tourism being one of the leading growth sectors of the global economy, bringing in billions of dollars annually in developing countries and transporting millions of people internationally through the years, has created an increasing amount of stress on the environment. This is a common problem in many areas where tourism runs into the limits of natural resources. Thus looking into this scenario today Ecotourism is growing rapidly to harmonize tourism and environmental sustainability. The hotel industry have also recognized the negative impact of their business activities on the environment and have taken action to alleviate those impacts. Ecotourism The term "green hotels" describes hotels that strive to be more environmentally friendly through the efficient use of energy, water, and materials while providing quality services. Green hotels conserve and preserve by saving water, reducing energy use, and reducing solid waste. As Goa is a popular and most preferred tourist destination, there is a concern of heavy negative impact on the environment from the tourism related activities. Thus there is a need to promote environment friendly business practices like Green hotels. In this paper we have made an attempt to discuss the concept of green hotels and their best eco friendly practices with a case study to illustrate the ways hotels are becoming greener. Although implementing the best practices saves money, the goal of being a green hotel is to eliminate as much as possible the negative impacts on the environment both by reducing the consumption of resources and by changing the practices so that the waste produced can be used.

Key words: Environment sustainability, tourism, Green hotels

Introduction

Travel, from the very beginning of history has –had a fascination for man. The urge to know the unknown, to discover new strange places, to seek change of environment and to achieve new experiences, inspired mankind to move from one place to another place. But the concept of pleasure travel has changed quite drastically during the past thirty years. Tourism being one of the leading growth sectors of the global economy, bringing in billions of dollars annually in developing countries and transporting millions of people internationally through the years has created an increasing amount of stress on the environment. For example, as a result of increasing tourism in Goa, India, developers built several hotels & the hotels harness natural resources available for the local and community life and also create several hazards for the environment. This is a common problem in many areas where tourism runs into the limits of natural resources. Thus looking into this scenario today Ecotourism (tourism that is nature-oriented and environmentally focused

— is growing rapidly. In the United States alone, 43 million tourists consider themselves to be ecotourists. This represents a growing market for environmentally friendly options in the tourism industry. Ecotourism aside, many in the hotel industry have recognized the negative impact their business activities have on the environment and have taken action to alleviate those impacts. Environmentally responsible business practices dovetail well with the newfound popularity of ecotourism. They harmonize tourism and environmental sustainability.

The term “green hotels” describes hotels that strive to be more environmentally friendly through the efficient use of energy, water, and materials while providing quality services. Green hotels conserve and preserve by saving water, reducing energy use, and reducing solid waste. They have seen benefits such as reduced costs and liabilities, high return and low-risk investments, increased profits, and positive cash flows. Identifying these benefits and incentives has allowed the popularity of green hotels to grow. The most costly and wasteful use of resources in hotels are usually in the consumption of nonrenewable energy, excessive water use, and the generation of waste. In this paper we have made an attempt to discuss the concept of green hotels and their best eco friendly practices with a case study to illustrate the ways hotels are becoming greener. Although implementing the best practices saves money, the goal of being a green hotel is to eliminate as much as possible the negative impacts on the environment both by reducing the consumption of resources and by changing the practices so that the waste produced can be used.

Objectives of the Study:

- To understand co-relation between the tourism, hotel industry and the stress created by the Hotels on the environment.
- To focus on the concept of Green hotels.
- To analyse the benefits of hotels going green.
- To study how to create green hotels.
- To understand the best eco friendly practices used by green hotels with the help of case study.

To understand the concept of green hotels and the best eco friendly practices used by green hotels we have chosen Hotel Dona sa Maria as our study unit. Primary Data was collected from the study unit with the help of questionnaire prepared for the proprietor and staff of Hotel Dona sa Maria through personal interview. Secondary Data was collected from Books, Journals and Internet.

Tourism, Hotel & Stress On Environment---An Interlink

Environment may be defined as the sum total of all conditions and influences that affect the development and life of all organs. Environment would include not only the

immediate surrounding but also a variety of matters connected with the human activity and its impact on the natural sources. The tourist and environment are both interrelated and contribute to each other. Environment got appreciation through tourism and tourism is enjoyed by masses because of environment. We can say that environment is one of the important raw materials of tourism industry, without which it cannot produce a good product. Economic of tourism, more often than not, overrides other consideration of pith and marrow, resulting in resources damage at the end, which may be irreparable loss in many cases of sensitive or unique ecosystems. By its very nature tourism is said to be self-destructive. But, the tourism industry's growth through the years has created an increasing amount of stress on the environment, for increased tourism has meant increase in hospitality facilities to serve the needs of tourists. The hospitality industry comprises several categories including accommodation, restaurants, events, theme parks, pubs, transportation, cruise line and additional fields within the tourism industry. The various issues which are of concern when we link Tourism, Hospitality/Hotels and the stress on environment are as follows:

The hospitality sector contributes greatly to the generation of waste and in India it has been noted that hotels and restaurant waste contribute around 25%-30% of total waste generated in the country. The world today is faced with many challenges of waste disposal and management. It has been noted that waste handling poses the greatest challenge to humankind in spite of the numerous technological achievements. Government is also spending lots of moneys to manage waste and its associated problems, yet yielding minimal results. Different methods are used in managing waste in the world and may differ for developed and developing countries, urban and rural areas, and for residential and industrial producers. Waste produced by hospitality units fall under commercial waste which is usually managed by the generator or producer.

Another issue associated with Tourism development is the pressure put on natural resources when it increases consumption in areas where resources are already scarce. The tourism industry generally overuses water resources for hotels, swimming pools, golf courses and personal use of water by tourists. This can result in water shortages and degradation of water supplies, as well as generating a greater volume of waste water. In Hotels, Guest demand for water usually far exceeds than that of local residents. In addition to the water required for each hotel room and general hotel management areas such as kitchens and laundry rooms, features such as swimming pools, lawns and golf courses mean a huge increase in water usage. Such demand can degrade or destroy local water resources, threatening the availability of water for local needs.

Tourism also creates great pressure on local resources like energy, food, and other raw materials that may already be in short supply. Hotels use a lot of energy for daily operations and recreational activities. In many facilities, energy is the second-highest operational

cost after payroll. This high demand for energy is often due to the use of energy-intensive technology to provide modern comforts and conveniences, such as air conditioning. The vast majority of hotels and resorts meet their energy needs by purchasing energy produced through the burning of fossil fuels (coal, oil and natural gas), which contributes to local air pollution and global climate change. The extraction, refining and transport of fossil fuels can also cause environmental damage. Improvements in housekeeping efficiency and the use of renewable energy can decrease dependence on energy produced through fossil fuels.

Resorts, hotels and restaurants produce significant quantities of gray water (discharge from washing machines and baths) and black water (from kitchen dishwashing and toilets). In many cases, especially when there is no strict compliance monitoring by the government, this waste is not treated. Poor sewage treatment can lead to the pollution of ground and surface water and the degradation of marine resources, such as coral reefs. For people, inadequate treatment of human waste can lead to various infections and diseases. When this happens in an area, its tourism is affected negatively.

Hotels produce large quantities of solid waste, from packaging and food scraps to cleaning and maintenance materials, some of which are toxic. Aside from being an eyesore, waste piles also result in water and soil pollution that could run all the way to the sea and swimming areas. Effective waste water treatment can prevent serious illness among guests and staff members, and limit the number of serious complaints from guests who become infected after drinking or swimming in polluted waters.

Environmental responsibility makes ecological sense, because keeping the environment pristine means that tourists will come to appreciate and enjoy the natural beauty of the location of your business. Increasingly, environmental responsibility also makes financial sense. Gone are the days when “going green” necessarily meant making large investments in expensive technology. Simple waste segregation, for example, can drastically reduce a resort’s expenses in transporting garbage off. Encouraging guests to follow simple steps, such as turning off lights and recycling water, could mean saving thousands on a resort’s water bill. The benefits of responsible tourism are not far-off and unclear. They are tangible, and in several cases, can be perceived immediately. On the other hand, it may take years before the negative impacts of environmental neglect are felt.

Today the challenges faced by the hotels includes: gauging their performance against others within their industry and identifying solid waste management efficiency improvement opportunities. But such initiatives have not much been published, may be due to the high level of competition in this sector. According to the survey of HVS, some of the international chain of hotels operating in India does not even have an environmental policy in place while their counterparts in other countries are known for their green image.

However, of late, the scenario in India is rapidly changing for better, as the locals and global environmental pressures are becoming evident. Indian hotel industry is just beginning to realize their energy and environmental management is putting edge strategies for their business profitability. Hotels and other hospitality venues have a significant opportunity to reduce negative environmental impacts associated with guest rooms, event space, and general facility use through measures such as energy and water efficiency, waste reduction and management, sustainable and local purchasing, and use of alternative transportation. Hotels can also contribute to human health by providing healthy, comfortable, and productive indoor environments with improved indoor air quality, access to daylight and views, and occupant control of the lighting and thermal environment.

Going Green is one step in this direction.

Identification of areas for greening:

Nearly everything that a hotel does can harm the environment. However, environmental problems are so broad that it can be difficult to know which are more important than others, how to prioritize them, or how to incorporate them into the hotel's daily operations becomes an issue. Thus an "Environmental Management System (EMS)" is a formalized, systematic approach to incorporating both environmental and social issues into every face of the hotel's activities. By using an EMS, the hotel has an established way to identify problem areas, set goals and develop strategies for improvement, implement those strategies, and monitor progress. An EMS can help the hotel to set environmental benchmarks and quantitatively measure its progress. The success of any EMS depends on the ongoing commitment and collaboration of every staff member, including senior management.

For a successful EMS in a hotel following commitments are important:

- Ensure that all hotel management and staff are committed to the concept and long-term practice of greening.
- Establish a formal sustainability policy and goals.
- Create a green task force for the hotel.
- Be sure to include representatives from each department that can both inform the task force and take information back to their departments.
- Review all aspects of the hotel, including its waste, purchasing, energy, water, air quality, noise, buildings and green areas, local culture, and guest information.
- Identify areas for improvement in each of these areas.
- Establish priority areas in which waste is the greatest.
- Work with employees from relevant departments to establish particular goals, time lines, and strategies for improvement.

- Ensure that at least one person takes responsibility for each area of improvement.
- Be sure that all staff members understand their particular roles in greening and that they understand how to achieve established greening goals.
- Train management and staff through workshops and other means on the connections between their jobs and environmental health.
- Offer staff feedback through performance reviews and other methods.
- Be sure to encourage staff and managers, who might be intimidated by their new responsibilities.
- Let guests know what they can do to help the hotel's commitment to becoming a green hotel.
- Encourage guests to protect local ecosystems.
- Monitor progress toward goals and identify areas for improvement. Devise strategies accordingly.
- Give feedback to staff, guests, and others to let them know what improvements the hotel has made along its greening journey.

In total a green hotel is an environmentally friendly hotel geared toward minimizing its negative impact on the earth and environment while still providing guests with the best services possible. Large and small measures are taken to save water, lower electricity usage, and recycle. Most of the ways in which the hotel goes green are behind the scenes, but sometimes a green hotel needs to rely on the help of the guests as well.

Creating a Green Hotel -----a solution to preserve environment:

The three key areas of environmental impact of hotels are energy, water, and waste:

- Energy - Excessive energy use is extremely costly and with minor adjustments, it can lead to massive cost savings. Hotels generally use more energy per visitor than local residents, as they have energy intense facilities, such as bars, restaurants, and pools, and have more spacious rooms. Studies have determined that a hotel emits an average 20.6 kof carbon dioxide per night.
- Waste - Hotels are not only resource intensive and that waste generation is one of the most visible effects on the environment. Studies have identified "that an average hotel produces in excess of one kilogram of waste per guest per day". Approximately 30 percent of waste in hotels can be diverted through reuse and recycling.
- Water - Tourists and residents alike require a clean and dependable supply of water for survival including drinking, cooking and cleansing. However, water is integral to the amenities usually expected by tourists, such as swimming pools, landscaped gardens,

and golf courses. Thus, tourists demand more water than local residents on a per capita basis. It has been estimated that 15,000 cubic meters of water would typically supply 100 rural farmers for three years and 100 urban families for two years, yet only supply 100 luxury hotel guests for less than two months. In destinations that do not have the required infrastructure and systems to manage these impacts, severe degradation of the environment can occur.

Recognizing the importance of hotel greening, the hotel industry has been pursuing green practices since the 1990s due to fluctuating economic levels and a strong focus on customer service. There are many green practices that hotels can implement as preventative measures to save unnecessary costs. Examples of these practices are:

1. Recycle the old beds and mattresses. It cuts the cost, creates a competitive advantage, interests guests, and saves environment.
2. Start a linen reuse program in all guest rooms. This is now common practice in many hotels and is a cost-saving, water-saving and time-saving measure that works well. Many customers avail themselves of the opportunity to hang up their towel instead of tossing it in the bath immediately for changing. Place signs in your guest rooms indicating that this program is operational; either make your own or have them printed locally.
3. Save water. There are several ways to reduce water usage in each guest room. Some include:
 - Installing low-flow shower heads and sinks aerators.
 - Switching to low-flow toilets or install toilet-tank fill diverters.
4. Save energy. Reducing energy usage reduces your fuel bills, so it makes common sense. Here are some ways you can achieve this:
 - Switch to LED (Light Emitting Diode) lighting to reduce electricity use. LED's have the lowest carbon footprint, last 5-20 times longer, and are safe (compact fluorescent light bulbs all contain mercury, a hazardous heavy metal) in guestrooms, lobbies, and hallways. Use sensors or timers for areas that are infrequently used.
 - Educate the staff to turn off lights and turn down heating or air conditioning when rooms are unoccupied. Also, during summer months, to close the drapes.
 - Use daylight exclusively in the lobby, bar, and restaurant for as much of the day as possible. Consider installing skylights if needed.
 - Install window film to lower heating and cooling loads and reduce glare in guestrooms.
 - Replace exit signs with Light Emitting Diode (LED) exit signs.
 - Purchase "Energy Star" appliances wherever possible.
 - Replace old electrical appliances with both water and energy conserving models.

- If the hotel has a pool and/or hot tub, install a solar water heating system and use pool and hot tub covers when the pool area is closed.
 - Use proper insulation and reflective roof coverings.
5. Monitor, record and post rates of energy and water use. Make repairs or replace equipment when rate changes indicate problems. Include filter changes, coil cleaning, thermostat calibration, and damper adjustments in your ongoing maintenance plan.
 6. Buy in bulk. Whenever possible, buy food and guest amenities in bulk (i.e., use refillable hair and skin care dispensers). This saves extra journeys and packaging.
 7. Recycle. Recycle the hotel's waste in the kitchen, guest rooms, dining room etc. There are several ways in which one can encourage guests and staff to recycle:
 - Provide guestroom recycling baskets for newspaper, white paper, glass, aluminum, cardboard, and plastic.
 - Provide recycling bins both in public areas (i.e., poolside), in the kitchen, and in the back office (including one at each desk) to make recycling as easy as possible.
 - Buy office and guest amenity products that contain recycled material.
 - Use recycled paper products (with high post-consumer recycled content) that are either unbleached or bleached using a chlorine-free process. Minimize the amount of paper used for each guest (i.e., reduce paper size of invoices, etc.). Print with soy-based inks.
 8. Buy organic, fair trade, cruelty-free guest amenity products whenever possible. Make it clear that you are supporting such products and try to obtain these products across a diverse range of products, such as:
 - bedding and guest robes
 - hair and body care
 - Coffee, tea and chocolate, etc.
 9. Clean green. Use nontoxic or least-toxic cleaners, sanitizers, paints, pesticides, etc. throughout the hotel. Make sure all chemicals are stored safely in a well-ventilated area.
 10. Get the guests motivated to use green transportation options. Provide the guests with bicycles, walking maps, and information on public transportation.
 11. Avoid disposable products or throwing away useful items. Disposable products fill up landfills and create garbage on the property. There are suitable alternatives:
 - Provide reusable items such as cloth napkins, glass cups, ceramic dishes, etc. with all food and beverage services.
 - Provide glass cups and ceramic mugs (instead of plastic) for in-room beverages.

Place cups and mugs upside down on paper doilies (instead of covering opening with a plastic wrapping).

- Donate leftover food to a local nonprofit organization and/or use a compost bin.
 - Donate leftover guest amenities, old furniture and appliances to charities.
12. Try green dining. If the hotel has a restaurant, consider transitioning it into a Certified Green Restaurant. Buy organic, locally-grown food and/or plant an organic garden to provide fresh produce for your guests.
 13. Garden with consideration for protecting the ecosystem and water-saving. Switch to drought resistant native plants in garden areas. Replace mowed landscaping with native ground cover.
 14. Create an incentive program to encourage your staff. The program should be tailored to encourage participation in and improving upon environmentally-friendly practices.
 15. Other popular cost cutting measures for the short, mid and long-term include:
 - Use of compact fluorescent lights - saves energy.
 - Local products - save transportation costs.
 - Installation of green roofs - saves energy.
 - Installation of solar heaters or other renewable energy source - saves energy.

The ultimate result of these actions is a win-win situation; to reduce hotel operational costs and harmful environmental impacts

Benefits of going green to the hotels:

The detail of the benefits of going green to the hotel can be illustrated as follows:

- **Cost savings:** Financial savings are one of the most significant factors that influence the implementation of environmental initiatives in a hotel. This is especially evident for hotel businesses that operate in a highly competitive market and where the cost of energy, water and waste disposal are high. Hotel operators that can maximize their efficiency and reduce waste will be more cost-effective than their competitors.
- **Competitive advantage:** Green programs can provide a competitive advantage to leaders as long as green activities continue to be voluntary. Over time, however, green practices in the hospitality industry will become a baseline requirement, particularly as the cost of non-renewable energy continues to rise , regulatory pressure increases, and consumers become more demanding. Therefore, hotels with business models that revolve around green practices will have the strongest opportunity to achieve a competitive advantage by being ahead of the emerging sustainability curve.
- **Employee retention:** Employees are identified as one of the greatest benefits of going

green. Employees, like hotel guests, are increasingly sophisticated and “tuned” into current thinking in society and are far more likely to identify with an employer whose principles and practices are aligned with their values. Environmental programs have proved to be an effective means of generating enthusiasm and motivating staff to work as a team to achieve a common purpose. Many hotel companies use environmental programs as a staff incentive - the financial savings earned are translated into cash or other rewards such as in-house events or trips. Employee turnover rate in the hotel sector is relatively high therefore increasing the retention rate will also save the business money in training of new staff.

- **Customer loyalty:** Over the past 25 years there has been a shift in the expectations and demands of consumers. The typical hotel guest of today is more sophisticated and to varying degrees is likely to be concerned about environmental issues such as recycling bottles, cans and paper at home as well as making greener lifestyle choices, such as organic food or fuel-efficient vehicles. Many guests however, make their decision to stay at a hotel facility based on location, amenities, and service.
- **Regulatory compliance:** Hotels must anticipate future regulatory changes and implement initiatives to mitigate the possible costly effects of emerging regulation. Savvy businesses are aware that regulations do not have to be a negative restraint on their daily operations – infact, they can offer opportunities to gain an advantage over competitors. Some environmental regulations are good for economic competition as they stimulate innovation that can offset the cost of compliance. By implementing measures in the face of societal and regulatory pressures, unexpected, but substantial cost savings as well as potential new areas of profit may be found.
- **Risk management:** Risk minimization is now viewed as increasingly intertwined with good corporate social responsibility and governance. Managing risk is as much about minimizing the potential damage from decisions and actions taken from within a company as it is about managing external exposure. Traditionally, a hotel’s risk management strategy has been focused on health and safety concerns around food and water, pest infestation, fire or water damage, outbreaks of disease, and guest security and safety. In recent years however, environmental and social issues are emerging as a key risk issue for the lodging sector.
- **Social cause:** Beyond regulation and compliance, many environmental and social initiatives are voluntary. Whether driven by cost savings or a principled strategy, the hotel industry is recognizing the environment, the community and their human capital as a valuable resource to be protected. Long-term business sustainability will depend on this. Many hotels have implemented social initiatives and corporate social responsibility (CSR) into their regular day-to-day practices. Corporate social

responsibility in the hotel industry ideally exists in human resources management, the local community, and through promoting and practicing environmental initiatives and is heavily influenced by internal and external forces.

Case Study: Dona Sa Maria Eco Friendly Hotel

Dona Sa Maria is a popular eco friendly hotel located near the beautiful Cavelossim beach. Dona Sa Maria is situated in Tamborim, close to places of interest like Cavelossim Church (Approx. 2km) and Cavelossim Beach (Approx. 4km). Goa has many other exciting places such as Naval Aviation Museum, a gallery showcasing vintage naval aircrafts and Coco Beach, a destination for adventure activities which can be visited. This eco hotel is equipped with their own in-house restaurant and bar. Hotel “Dona Sa Maria” is owned by Mr. Serafino Cotta--a locate from nearby Goan village (Mobor). This hotel was built by him in the year 1996. Mr. Serafino Cotta has a great passion for environment, so he came up with an idea of creating a green hotel with startup capital of Rs. 67,00,000 in 1996 and every year he has been upgrading it. The hotel provides facilities such as rooms, fishing trips, restaurant, a pub, swimming pool, car hire, bicycle on rent, taxi services, laundry and other related facilities. Creating a green hotel requires lot of effort and funds, maintaining it is also a great challenge on the part of owner and the employees as well. Mr. Serafino Cotta says that his strength is his fully trained Staff. As a result his hotel could effectively function without much stress and difficulties.

Dona Sa Maria is an eco-friendly hotel with a cordial ambience and quality services. Along with eco-friendly solutions like waste-recycling and awareness programmes, the hotel also boasts of comfortable well-equipped rooms that invite guests for a restful stay. The fun-filled activities add zing to the stay and the essential amenities make it convenient. They offer continental, Chinese, Goan, Indian and various other cuisines from around the world. Their room are cozy and makes the guest feel right at home! Some of the rooms overlook the swimming pool while others overlook the country side. Guests are sure to have a fun-filled time and a close-to-nature experience at Dona Sa Maria. The hotel brings for its guests a gamut of recreational facilities such as bird watching, dolphin viewing, cycle tours, fishing trips and church and temple tours.

Dona sa Maria is a self-sustaining hotel in every way. For any hotel milk, fish, fruit and vegetables are the key areas. Fruit and vegetables are purchased from locals who grow organically rich crops on organic farms in and around Cavelossim. Local vendors visit their doorstep to sell fresh milk directly.

To tackle with the crucial problem of waste , at Dona sa Maria they segregate garbage at every point when it is created. Their staff is trained to separate plastic, ceramic, metal, leftover food, peeled fruits, vegetable skins, tissue papers, bulbs, glass, batteries, tyres, tubes and even grease. Leftover food waste is fed to the pigs. Egg shells are crushed to

make powder and mixed with chicken feed. Hotel waste water from dishwashing goes into a pit where grease is separated. It is then used as a fertilizer for the banana plants after every six months. Filtered water is extracted regularly by pump and released to trees in the garden. Pigs have an aversion to potato, garlic and onion peels. All onion peels are buried deep in mud. The pigs remain healthy. Fish heads, chicken pieces and leftover vegetable crumbs go into a separate pit covered with cow dung. All leftover food or decayed food is converted into organic manure, rich in nutrients for plants around the hotel.

Non-biodegradable waste such as Navsagar from batteries is used underneath our tiles. Navsagar is dangerous if a person comes in contact with it. so they mix it with cement while fixing new tiles. CFL bulbs from hotel rooms are powdered with ceramic and mixed with cement to cover pathways in the hotel garden. Instead of burning tissue papers these are strained and mixed with liquid cow dung and processed to turn into fertilizer.

Hotel Dona Sa Maria also has an water recycling plant which undergoes various processes without making use of any chemical. This recycled water is then used for watering the plants.

Many drums are been kept to put aluminums waste, metal waste, broken glasses, papers and plastic waste etc. In this way they are very successful in using eco-friendly materials for toilets, water heaters, solar street lights which can be seen right while entering the hotel.

Some of their Eco Friendly Solutions are:

- Food waste recycled
- Garbage segregation
- Vegetables from organic farms
- Composting
- Solid waste is managed and treated
- Eco friendly soaps and detergents
- Eco friendly bags
- Eco awareness programs

Conclusion

The tourist and environment are both interrelated can contribute to each other. Environment got appreciation through tourism and tourism is enjoyed by masses because of environment. Tourism industry has both type of impact on physical environment i.e. positive as well as negative. Negative impacts are in the form of increased carrying capacity resulting in deterioration of the place, careless attitude of tourists about the site and its environment, threat to the destination's flora n fauna, waste disposal problem, disturbance

in the natural habitat of animals because of craze among the tourists to buy things which are made from different endangered species of plants and animals etc.

It is usually seen that as a result of increasing tourism several hotels have come up in the recent years. These hotels harness natural resources available for the local community and also create several hazards for the environment. This is a common problem in many areas like Goa where tourism runs into the limits of natural resources. To solve this problem, the concept of Ecotourism that is nature-oriented and environmentally focused tourism—is also growing rapidly. Ecology is a very strong trend, either convictions or a fashion, caring for the earth has become an ideal of many. As a result, eco-hotels have become an increasingly popular alternative in the tourism industry, the increase in demand has led therefore to a large range of hotels with planet friendly options for all requirements. An ecological hotel is one that is fully integrated into the environment without damaging the environment, contributing in some way to progress and improvement of the local community and sustainable growth of the tourism industry. If a hotel is minimizing its energy and water consumption, if it is making efficient use of resources reducing waste without compromising on quality or standard of service, it will increase the competitiveness of the hotel business. Moreover, so along with their own responsibility to the environment, they are well positioned to encourage others including their suppliers and business partners to do the same .therefore hotels can play a formidable role for change towards sustainable development.

“Green” Hotels are environmentally-friendly properties whose managers are eager to institute programs that save water, save energy and reduce solid waste—while saving money—to help PROTECT OUR ONE AND ONLY EARTH! Being green goes directly to an organisation’s bottom line. Being green goes directly to a higher long-term value of their property. Being green goes directly to their front doors which open wide to bring guests back again and again. Being green goes directly to keeping staff long-term because management clearly cares for their health and well-being.

Thus being green means guests, staff and management are healthier. Of those hotels who had established a green policy, the most frequently stated improvements resulting from this policy were:

- Increase profitability;
- Increase customer satisfaction;
- Improve employees satisfaction;
- Improve relationships with the local community;
- Give a marketing advantage over their competitors.

However, of late, the scenario in India is rapidly changing for better, as the locals and global

environmental pressures are becoming evident. Indian hotel industry is just beginning to realize their energy and environmental management is putting edge strategies for their business profitability. In Goa, the tourism industry is already adapting to alternative energy sources, like solar energy. Most hotels have solar-powered water heaters and use CFL light bulbs. This may not solely be the industry's initiative, for under Union tourism ministry guidelines, hotels are required to adopt environment-friendly practices, conserve energy, harvest water, segregate garbage and dispose or recycle it as per state pollution board norms. Hence we conclude that all hotels can be eco-friendly and they should be; keeping in mind the present environmental condition. We also suggest that government should recognize and appreciate the efforts of hotels to go green by introducing various schemes and subsidies. Rewards and related programmes should be introduced to boost such hotels.

References

- Manhas, P. S. (2012). Sustainable And Responsible Tourism-Trends,Practices,Cases. New Delhi: Phi Learning Private Limited.*
- Pyo, S. (2008). Bencharks Marks In Hospility And Tourism. New Delhi: Jaiso Publishing House.*
- Suresh, K. Travel And Tourism Chalenges And Opportunite. ICFAI University Press.*
- www.Topcanadian Hotels.Com*
- En.wikipedia.org/wiki/eco-hotel*
- http://www.tripadvisor.in/hotel-review-G312681-D477582-Reviews-Dona Sa Maria*
- www. dona sa maria. in*

HUMAN RIGHTS AND RIGHTS OF MIGRANT CHILDREN IN GOA.

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Abstract

The future of a nation depends on the quality children and the quality of children is closely linked with the provision of their rights. Since these rights can transform these children into useful and productive adults for the growth of the nation. Nevertheless, it is observed that a large number of migrant children in Goa are deprived of most of their rights especially those children who are involved in labour activities. Their health and lives are threatened. Hence, this paper aims to study the status of these migrant children, identify violations and suggest solutions to make their productive citizens.

Introduction:

The future of a nation depends on children. The better the quality of children, the better the prospects of the nation, In fact quality of children is closely linked with the provision of their rights. Human Rights of the children are a set of their required needs including food, shelter, education, health care, proper upbringing etc. The provision of these rights can transfer them into useful and productive adults for the growth of the nation. The significance of the rights of the people has two basic objectives. The first is to respect the dignity of a human being which gives a person self-esteem, confidence and encouragement. The second objective is to flourish his potential and qualities, which is not only beneficial for that individual, but for the society as well. Hence it is also applied on children. If children get their rights than their potentials will be sharpened.

Human Rights are rights that one has simply because one is a human being. Every human being born on this earth deserves to be treated with dignity. The Universal Declaration of Human Rights (UDHR) was adopted by member nations of the UN General Assembly on December 10, 1948. December 10th is celebrated around the world as International Human Rights Day.

It is observed that a large number of migrant children in Goa are deprived of most of their rights, particularly those children who have been undertaking different kinds of labour activities.

Children involved in it have to confront various dangerous things and situations which are threatening to their health and lives. These children remain away from useful and

productive activities, which would be beneficial for them. They turn into an excluded segment of the society, and become a liability on the society.

Objectives of the Study:

To study the socio, cultural and economic status of migrant children.

To identify the violations of Human Rights of the children taking place in different professions.

To Find a viable solution to provide rights to the subjected children to make them productive citizens.

Research Design:

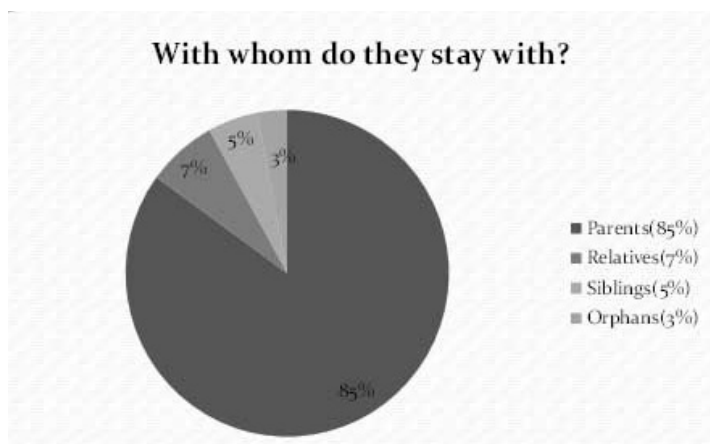
Survey Research Method was used. The respondents include 100 Children below 18 years of age from the main cities of Goa viz. Margao, Vasco, Panaji and Mapusa. 25 each from each city.

Data was collected through Observation and Interviews. Judgemental sampling was used.

Migrant community in Goa:

A Migrant is a worker who moves from one place to another to find work. People from other states come to Goa in search of jobs or to find opportunities to start small businesses. There are lots of untapped opportunities in Goa, So many traditional occupations which locals have given up. People from different parts of India, however value these opportunities greatly as a source of income, to make a living and even to secure their futures. The scope of this study is limited to migrant children coming from the lower income groups. Migrant population in Goa is around 400,000. Majority are driven to Goa by the need to survive. They live in poor conditions. Status of education and health is poor. Their rights to survival and protection are not secure.

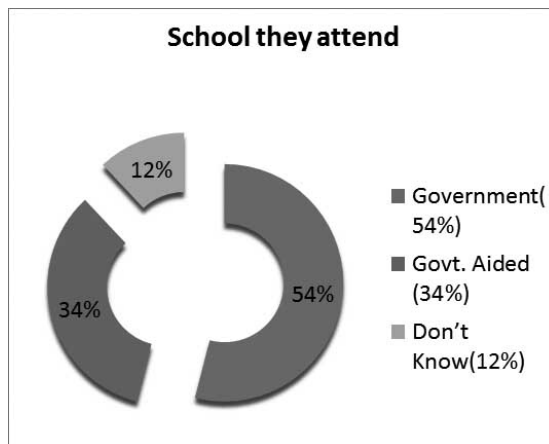
Following are the findings of the present study:



Almost 85% of the children lived with their parents. Some of the children work to support themselves and their families. A few lived with relatives or siblings. Relatives included maternal or paternal grandparents, aunts or uncles. Siblings are elder brother or married sister. Only 3% were orphans struggling to work and survive on their own.



A majority, nearly 60% of the migrant children were born in their native Villages. 40% were born in Goa.

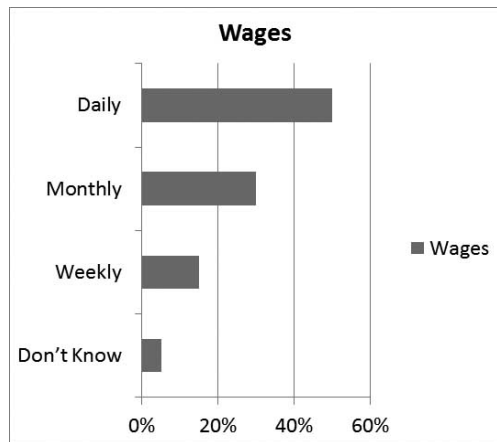
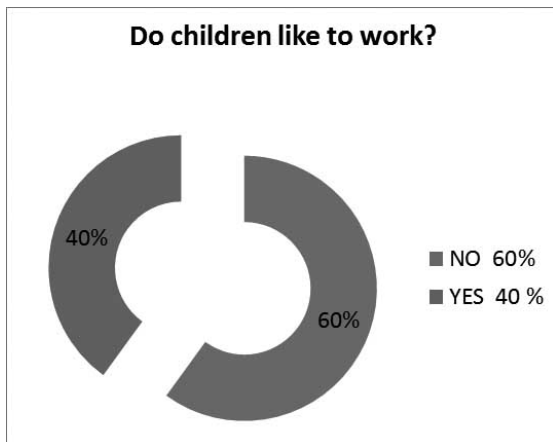
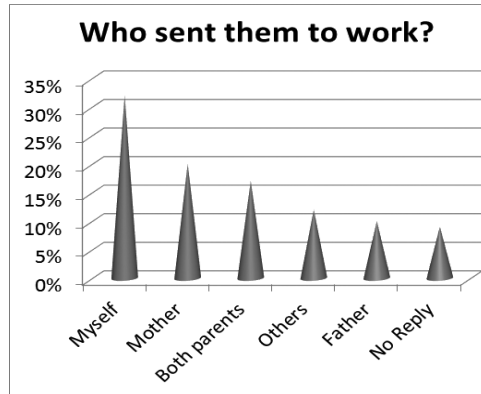
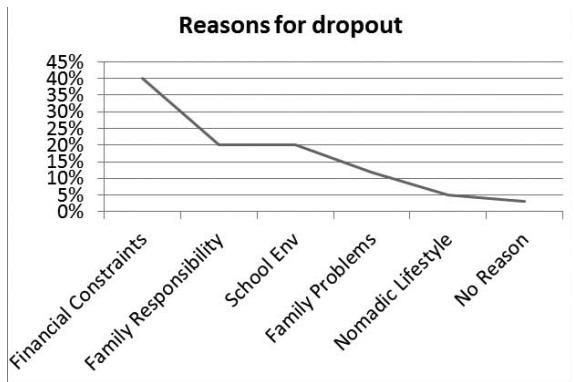


Most study in Government schools in their neighbourhood. Nearly 34% were studying in Government aided schools. Almost 12% could not tell if their school was a government or private school.

Almost 88% children are sent to school by the parents at least initially, either in Government schools or Government aided ones, However many reported to have dropped out at some stage or the other. All the above reasons were sighted for dropping out from

school financial constraints being the strongest one.

30 % of children said that they took up work on their own. Most children were sent to work by Parents either father or mother or both parents.



60% said they don't like to work but have to work as circumstances have pushed them into child labour.40% said they do not mind working because they get money.

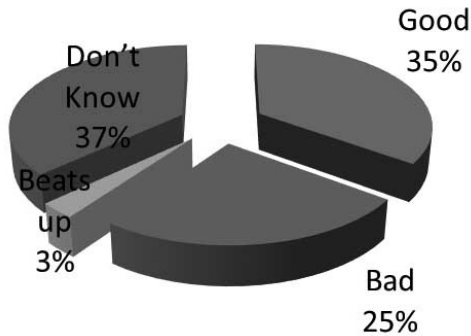
Majority are paid on a daily basis. The payment is low as compared to the work done.

35% felt that the employers were nice to them.25% said their employers were not good .37% said they don't know as they were self-employed.

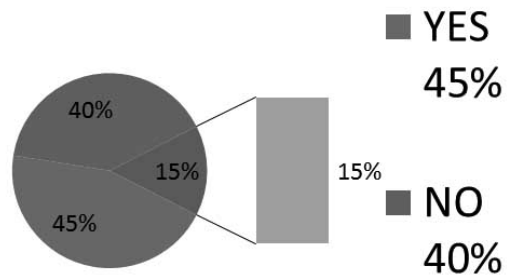
Nearly 45% of the children were self employed. The children call it a business and feel proud about it because they are their own bosses and do not work under anybody's supervision

Children performed the following jobs: Selling carry bags, Selling balloons, Selling fruits, Construction/masonry work ,Domestic labor ,Sand extraction, Scrap collection,

How the Employer behaves



SELF EMPLOYMENT



Breaking stones, Shop attendant, Pandal erection, Digging, Selling items on beach, Cutting fish, Working in auto garage, Working in hotel, Wagon loading, and any type of physical labor.

Outcome of such labour

Some of the work requires lot of strength and stamina.

It is hard to believe but true that contractors allow children as young as 10 years to do heavy work and parents make their children unload wagons.

This type of work creates a lot of health hazards that manifest later in life.

Their life span is reduced owing to heavy and hazardous work done during childhood.

WHAT THEY THINK ABOUT GOA



An overwhelming majority of the children give their earnings to their parents. 33% spend on food, 15% on movies and 5% on Gamblings.

“Home is where the heart is”. 80% like Goa very much. They have a strong attachment to

Goa, they can speak Konkani. With the exception of vacation time they do not move out of Goa at all.

Observations:

The study has identified that the basic Human Rights of the children like, the right to life, right of dignity, right of education, right of health care, right to family environment, right of proper care, right of proper rest, right of liberty, right of proper childhood and right of play are being violated.

Majority are born in Goa yet called outsiders. Humiliated in school by teachers, teased by Goan students, treated badly in hospitals, not accepted in the community, they have a lot of inferiority complexes, suffer from insecurity, stress and frustrations. No motivating educational environment, Children in coastal area- especially in the tourism belt are vulnerable to sexual Abuse, and also addicted to drink and drugs, most children sent to work by parents. This means that instead of learning, playing and growing up carefree, most of them start earning at a young age.

Payment made is low compared to the work done. In reality, they actually work for a pittance at the cost of their energy, health, education and emotions.

Recommendations :

Schools should be made full day, so that parents cannot force their children to work for money.

Children who are intelligent and interested in studying should be given special facilities and coaching.

The present teaching method is redundant and boring Government primary schools should adopt the play way method of education. The Government and local community should take some steps towards improving the social and economic status of the migrant community as they are an essential requirement for Goa's economy.

Housing colonies should be set up if possible for economically weaker sections of the society irrespective of caste creed religion and region. Which will help to narrow the local v/s non local divide?

The social welfare department should set up a team of social workers especially engaged to carry out awareness campaigns regarding importance of education, information about scholarship schemes, employment, self-employment schemes, career guidance, importance of health and hygiene etc.

References:

Bimal Kumar, (2000).problems of working children, A.P.H.publishing Corporation, New Delhi.

Jinesh C Kulshreshtha,(1978) Child labour in India.: shish publishing house New Delhi

Neera Burra, (1998) Born to work: oxford University press, New Delhi.

R.N.Pati,(1990).Rehabilitation of child labour in India, Ashish publishing House, New Delhi

Shukla CK, Ali S (2006). Child Labour and the Law. Sarup and Sons: New Delhi p.40.

Tapan Kumar Shandilya.,& shakeel Ahmad khan,(2003)Child labour:A global challenge, Deep and Deep publications New Delhi

UNICEF (2000). First Call for Children: World Declaration and Plan of Action from the World Summit for Children, Convention on the Rights of the Child. New York: UNICEF.

UNICEF (2004). The State of the World's Children 2004. New York:

ISSUES AND STRATEGIES OF TEACHER EDUCATION IN COMPUTER SCIENCE

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Abstract

This paper focuses on the various issues which computer science teachers face in providing quality education at higher education. The changing technology is one of the crucial factors for imparting computer science education to students and there exists a wide gap between industry expectations and teacher education. The computer science teacher faces many challenges in using various ways to impart and improve the quality of computer science education for the current generation of students. This paper focuses on various strategies to improve the quality of computer science education in higher education.

Keywords: Computer Science Education, Computer Science Teachers, Technology

Introduction

The implementation of computer technology in every field of the world has become an integral part of various businesses. The benefits can be viewed in the form of better automation of manual processes, reliability, portability and efficiency in the business activities. There is also a critical link between computer science education and the economic issues that an increasing number of countries are facing in light of the new global economy [Judith et al, 2010]. Computer science therefore includes: programming, hardware design, networks, graphics, databases and information retrieval, computer security, software design, programming languages, logic, programming paradigms, translation between levels of abstraction, artificial intelligence, the limits of computations (what computers can't do), applications in information technology and information systems, and social issues (Internet security, privacy, intellectual property, etc.) [Judith et al, 2010]. Computer science teachers are expected to be in sync with the changes in computer technology. It is also expected they possess the technical, pedagogical, and methodological skills required to teach computer science in a way that truly engages students [Judith et al, 2010]. Currently, a large section of students are already equipped with the use of computer technology as its availability and affordability is within reach. However there exists a gap between computer science teachers and students in imparting computer science education in the most efficient manner. This paper discusses the various issues that computer science teacher's face to impart the quality based education to the students. It also focuses on how

the teachers can impart computer science education through improved strategies to the students.

Issues in Computer Science Education

One of the challenges we face when discussing computer science education is that the field of Computer science seems to evolve so quickly that it is difficult to clearly define its contents and prescribe its boundaries [Judith et al, 2010]. We further discuss the various factors which impeded the computer science teacher in delivering the courses to the students.

Curriculum upgrade

The curriculum of most computer science courses are not in sync with the latest developments in technology and standards used in the industry. Due to this the teachers are not competent to impart education due to curriculum constraints. Curriculum upgradation goes through a process of approvals from various bodies of university/ educational institutions before its implementation. In many cases it is a time consuming process and by the time curriculum is approved the technology becomes out dated.

Teacher – industry link

The industry does not encourage teachers to be a part of the development team or provide in-house training. Teachers are given little opportunity to work on industry related projects on time to time basis. Therefore this leads to a gap between theoretical teaching and practical implementation. Many industries have linkages to educational institutions in form of MOU for student training in certification programmes; however there is a lack of teacher training programmes based on the curriculum with the support from the industries.

Mastery of Subject

The continual struggle to stay one step ahead of the students in a constantly changing discipline takes an enormous toll on even the most dedicated educators [Judith et al, 2010]. Computer science teachers continue to struggle to maintain mastery over their subject as the economy evolves with better forms of technology. Teachers with little or no computer science training are also frequently assigned to teach computer science courses [Judith et al, 2010].

Fear of use of newer pedagogy

Many Teachers are reluctant to use new pedagogy as they lack knowledge to use them. Traditional methods like blackboard, dictation etc are still used to impart computer science courses in higher education.

Poor resources and management support

Many institutions require a lot of funds to install new technology and also provide training to use the same for students and teachers. Updating and upgrading technology with respect to subject is not an immediate process and requires ample management support of the institution.

Teacher preparation time

As technology changes, it becomes difficult for the teacher to upgrade themselves from time to time basis. Teacher preparation time is more as time needs to be spent on designing lessons and evaluation techniques for computer science courses. It is a challenge for teachers to design exercises with a practical component considering the employability aspects of the course and requires testing of the same before delivering to the students.

Incompetent teachers

Unavailability of competent computer science teachers as most of them prefer to work in the industry where the growth is maximum. The learning process for a person in the industry is higher due to market demand of products and services along with stringent deadlines as compared to computer science teacher where the curriculum changes after a long period of time.

Limitations in B.Ed. Institutions

B.Ed colleges do not offer computer science as a subject for teacher education training. Therefore computer science teachers are not equipped to appropriately use the pedagogy in teaching. New entrants in the teaching profession who teach computer science courses find it difficult to adapt to newer pedagogies due to lack of training.

Lack of Feedback systems

Qualitative feedback mechanism is still lacking in computer science education. Feedback mechanism should comprise of course related structure, teaching methodology used by the course instructor, supporting infrastructure and respective stakeholders to improve the conduct of computer science courses.

Job Uncertainties

The uncertainty in the teaching careers of computer science teachers due to the contract systems employed in educational institutions in various parts of the country have led to the demoralization of teachers. This has thereby largely affected the quality of imparting computer science education to students due to frequent changes in teachers teaching various courses.

Strategies in Computer Science Education

Computer science teacher can employ various strategies to improve the quality of the

teaching of computer courses. A transition from teacher centric systems to student centric systems should be initiated by taking into account the various stakeholders.

Initiatives by Stakeholders

Educational institutions could initiate changes in the curriculum from time to time basis considering the update in the technology. The Government could assist institutions imparting computer science courses which is sync with the industry and could assist to provide some percentage of the financial aspect of setting up laboratories, installation of required software's and hardware technology.

Industries should involve active participation of teachers as a part of development teams, training, processes etc. thereby equipping the teacher to provide required information and knowledge to the students. This also enables to clear many doubts that students carry before getting into their prospective careers with the interaction with the teachers. On time to time basis, internship programmes for computer science teachers could be provided. This will enable teachers to be abreast with the current trend along with the industry requirements in the form of projects that could be done at the institution or at an appropriate period with the industry. Collaboration tools could be used to provide and track the progress of the teacher working on a industry related project. This would help teachers to gain confidence, hone their skills as well as be able to answer various queries asked by students within their classrooms.

Newer Pedagogy

The use of newer pedagogy could be used considering the type of students, class size and infrastructure provided at the institutional levels could be explored after appropriate planning and training by teachers. These could include mobile learning, online classrooms, virtual classrooms, learning management systems, open educational resources (OERs), massive open online courses (MOOCs), blogs, wikis, social media etc. to increase student centric learning in computer science courses.

Improved feedback mechanism

The use of Learning Management System to improve feedback mechanisms could be used to improve student teacher communication with respect to computer science courses.

Research in teacher education

Teacher education in the area of research with respective to computer science courses should be encouraged. Institutions with appropriate facilities could start short term courses for a periodic time and can have a feedback mechanism to check its progress. This can be further enhanced with collaborative efforts from other educational institutions and industry.

Innovative Strategies in Teaching Learning

Many Innovative strategies can be used by computer science teachers for effective teaching-learning process. These include small learning communities, project based learning, peer tutoring and instruction, global connections, creative teaching, newsletter by student and teacher collaboration, rubrics and portfolio based assessments. [Nair P. et al, 2003/2008]

Conclusion

In this research paper, we emphasize that Computer science education undergoes constant change depending on the current business environment. It will be a challenge to address most of the issues faced by computer science teachers when imparting computer science courses to students. This paper also addresses various strategies that computer science educators could initiate and implement in improving the quality of computer science education for the students. The stakeholders need to be a part of the computer science education to bridge the gap that exists between imparting knowledge and skills to reap the benefits of students in terms of better employability and efficiency.

Citations and References

Judith Gal-Ezer, Chris Stephenson. (2010). Computer Science Teacher Preparation is Critical. ACM Inroads, 1, pp. 61-66.

Major Issues and Problems in Teacher Education. (n.d.). Mumbai, Maharastra, India. Retrieved February 2015, from University of Mumbai: <http://www.mu.ac.in/>

Nair, P. (2003/2008). 30 Strategies for Education Innovation. (J. Sampson, Ed.) Retrieved February 2015(2010). Transforming Teacher Education Through Clincial Practice: A National Strategy to produce Effective Teachers. National Council for Accrediation of Teacher Education, Massachusetts Ave.

DATA MINING TECHNIQUES FOR KONKANI GRAMMATICAL GENDER IDENTIFICATION

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Abstract

In some languages, gender is a grammatical property of the noun. Grammatical gender identification enhances machine translation of such languages. This paper reports a three staged approach for grammatical gender identification that makes use of word and morphological features only. A Morphological Analyzer is used to extract the morphological features. In stage one, association rule mining is used to obtain grammatical gender identification rules. Classification is used at the second stage to identify grammatical gender for nouns that are not covered by grammatical gender identification rules obtained in stage one. The third stage combines the results of the two stages to identify the gender. The staged approach has a better precision, recall and F-score compared to data mining classifiers used on complete data set. The approach was tested on Konkani nouns extracted from the Konkani WordNet and an F-Score 0.84 was obtained.

Introduction

Gender is a grammatical property of nouns in many languages including Indian language such as Sanskrit, Hindi, Gujarati, Marathi and Konkani. In such languages adjectives and verbs in a sentence agree with the gender of the noun. For example translation of “He is a good boy” and “She is a good girl” in Hindi is “*vaha eka achchhaa laDakaa haai*” and “*vaha eka achchhii laDakii haai*”, respectively. We see that adjective good is translated into “*achchhaa*” or “*achchhii*” based on the gender of the noun. Using a freely available and highly used Google Translate machine translation system, translation of “*It is a nice river*” to Hindi is “*yaha eka achchhaa nadai haai*”. The grammatical gender of river i.e. “*nadai*” in Hindi is feminine hence “*achchhii*” should be used in place of “*achchhaa*” for the translation to be more appropriate. Thus, machine translation into any language with a grammatical gender will need to predict the grammatical gender of the noun to ensure agreement. Hence, determining grammatical gender of nouns in these languages is essential.

Features such as grammatical gender of nouns required for machine translation can be obtained from a lexical resource like WordNet. However all WordNets do not maintain gender of nouns. Many WordNets in Indian Languages namely Marathi, Konkani, Gujarati, Bengali, Sanskrit etc. have been created using the Expansion Approach [1] with Hindi WordNet as source. Hindi nouns have either *masculine* or *feminine* grammatical gender

whereas Bengali nouns do not possess grammatical gender. Nouns in Marathi, Konkani, Gujarati and Sanskrit can have either *masculine* or *feminine* or *neuter* grammatical gender. Grammatical gender of nouns was not directly borrowed from the source WordNet as all language do not share the same grammatical gender. There is a need to augment the WordNet nouns with grammatical gender so that WordNet can be a valuable resource for machine translation, specially for languages which have an agreement system with another aspect of the language, such as adjectives, articles or verbs.

In this paper we present an automatic three stage gender identification approach using word and morphological features, which can be used to assign grammatical gender to nouns in a WordNet. Our method was tested for nouns in Konkani WordNet. The main contributions of this work can be summarized as follows:

- Grammatical Gender Identification rules obtained using association rule mining.
- Classification model for grammatical gender identification where association rule found insufficient.
- New grammatical gender category called non-neuter.

The rest of the paper is organized as follows: Section 2 is devoted to related work. A description of grammatical gender identification is discussed in section 3. The staged approach used for grammatical gender identification is described in section 4. In Section 5, experimental results and evaluation are discussed. Section 6 concludes the paper.

Related Work

Related work for lexicon extension include semi-supervised approach used to predict lexical properties like grammatical gender for Wambaya [2], a low density language. Here co-occurrence frequencies with demonstratives and machine learning using context windows are used to predict the lexical properties. Gender classification, for Dutch nouns, has been attempted for rule-based MT generation tasks [3]. In which information derived from large annotated monolingual corpora, a set of context-checking rules based on co-occurrence of nouns and determiners are used. An SVM based tool has been developed for Romanian [4] to distinguish neuter gender which uses n-gram features.

General sound of the language has been exploited to determine the grammatical gender for German and Romanian [5]. Noun's ending have been used as a strong clue for gender in French [6]. Cognitive aspects of grammatical gender for Italian nouns referring to animals have been tested [7]. Bootstrapping process which make use of word forms, determiners, quantifiers and adjectives to predict gender for nouns in context [8] have been carried out. Other reported work on gender identification has been for anaphora resolution wherein gender information has been extracted from enhanced part-of-speech tagger [9]. Methods to classify all occurrences of nouns in a document using a wide variety of contextual, morphological and categorical gender features have been done [10]. These

works are targeted towards biological gender identification and not grammatical gender. Most of the work reported is for non-Indian languages and make use of determiners or gender-marked pronouns like his, her etc. Some of these methods are used for gender identification within a context. Other methods require manual preparation of annotated data like morphological suffix list with corresponding gender which is time consuming.

Grammatical Gender Identification

Noun-class [11] in linguistics refers to a particular category of nouns. Some natural languages categorize nouns into noun-classes based on either semantic criterion, morphology or some arbitrary convention. Noun-classes form a system of grammatical agreement. Some examples of common criteria that define noun classes include:

- animate vs. inanimate
- rational vs. non-rational
- human vs. non-human
- masculine vs. feminine
- masculine vs. feminine vs. neuter
- common vs. neuter

Grammatical gender [12] is a specific form of noun-class system. In languages with grammatical gender, every noun inherently carries one value (*masculine* or *feminine* or *neuter*). The values present in a given language are called the genders of that language.

In Indian languages such as Sanskrit, Marathi, Konkani and Gujarati, the grammatical gender property of nouns is one of the gender values namely *Masculine*, *Feminine* or *Neuter*. Earlier profession names (job titles) like doctor, lawyer, professor, “*aadaogada*” (advocate) etc were assigned *Masculine* gender because such professions were only practiced by men. However with changing times we see many women taking up such profession. Profession names now be used in either feminine or masculine sense and gender value can only be determined in the context of usage. For example “*Professor baraii shaikayata*” can be translated as “*The professor teaches well*” or “*She is a good professor*”. Here the noun “*Professor*” refers to a female professor which we can induce from the adjective agreement “*baraii*” in the sentence. However, the example “*Professor barao shaikayata*”, translated as “*The professor teaches well*” or “*He is a good professor*” where the noun “*Professor*” refers to a male professor which we can induce from “*barao*”. As a result such profession names cannot be assigned *Masculine* gender in languages like Konkani. To reflect this changing behavior in language a new gender value namely *Non-Neuter* was proposed. WordNet for languages like Konkani do not maintain two different entries for male Professor and female Professor, in such cases it is more relevant to assign *Non-Neuter* as grammatical gender value.

Definition Non-Neuter: *Non-Neuter* is a grammatical gender value assigned to a noun when the noun gender value can be either *masculine* or *feminine* based on the context and cannot be determined out of context.

Problem Statement

Given a set of nouns $N = \{n_1, n_2, \dots, n_k; n_i \text{ is Konkani noun}\}$ and a set $W = \{(w_1, f_1), (w_2, f_2), \dots, (w_m, f_m); w_i \in \text{Corpus } C, f_i \text{ is the frequency count of } w_i \in C\}$ the objective is to automatically identify appropriate grammatical gender for nouns in N and create set $N_G = \{(n_1, g_1), (n_2, g_2), \dots, (n_k, g_k); n_i \in N, g_i \in G\}$ where set $G = \{Masculine, Feminine, Neuter, Non_Neuter\}$

Input : Nouns

Output : Gender label (Masculine, Feminine, Neuter or Non_Neuter.

Resources/tools used: Raw corpus, Morphological Analyzer and WordNet.

Hypothesis: Morphological features along with word features can be used to identify grammatical gender of nouns.

To identify grammatical gender, we first identified all possible morphological and word features for nouns. We then prepared a data set based on these features. We describe the details of data set generation in the following sub-sections.

Data Set Generation

The features in the data set are grouped into two categories namely word features and morphological features. The morphological features are generated using the Konkani Morphological Analyzer [13]. The desired output feature, gender, is manually assigned for each tuple in the data set. The features used are listed in Table 1.

Let set α and set β hold all possible values for features *BeginVowel* and *EndVowel* respectively. To generate our data set we followed the following data preprocessing steps:-

Step 1: Extract nouns from the WordNet.

Step 2: Compute word features listed in Table 1 for each noun. Convert Unicode based string features to ASCII based string features using a map table¹.

Step 3: Compute set α and set β

Step 4: For nouns extracted with each feature in set α and set β , randomly pick ten nouns of each word length wherever possible.

Step 5: Prune noun entries corresponding to morphological variants.

Step 6: For each noun, compute values for morphological features in Table 1 using Morphological Analyzer tool for the language in this case Konkani.

Step 7: For each noun, manually assign gender feature.

Table 1. Data Set Features.

Feature Name	Feature Description
Word Features	
<i>Begin Vowel</i>	The vowel attached to the letter with which the word begins. If the word does not have a vowel attached to first letter, then this feature is set to null.
<i>End Vowel</i>	The vowel if any with which the word ends. If the word does not end with a vowel, then this feature is set to null.
<i>Length</i>	The number of characters in the word.
Morphological Features	
<i>PID</i>	The matching paradigm identifier.
<i>SOFS</i>	The suffix attached to the noun base to get the singular oblique stem for the noun.
<i>POFS</i>	The suffix attached to the noun base to get the plural oblique stem for the noun.
<i>PDCS</i>	The suffix attached to the noun base to get the plural direct form of the noun.
<i>FreqDSF</i>	Number of times the direct singular form of the noun occurs in the corpus
<i>FreqDPF</i>	Number of times the direct plural form of the noun occurs in the corpus.
<i>FreqSOF</i>	Number of times the oblique singular form of the noun occurs in the corpus.
<i>FreqPOF</i>	Number of times the oblique plural form of the noun occurs in the corpus.
<i>TotSOV</i>	Total number of oblique singular forms of the noun occurring in the corpus.
<i>TotalPOV</i>	Total number of oblique plural forms of the noun occurring in the corpus.
<i>SOVWin</i>	Distinct number of types amongst oblique singular forms of the noun occurring in the corpus.
<i>POVWin</i>	Distinct number of types amongst oblique plural forms of the noun occurring in the corpus.
<i>SR</i>	Rule applied to obtain the noun stem.

Table 1. Data Set Features

We have a total of 1264 nouns in our data set. The data set was used to identify a model for gender identification using supervised data mining techniques. We ran various classification algorithms on our data sets using 66% as training set and the rest as test set

to determine the best training model. The performance of data mining classifiers on our data set is presented in the next subsection.

Performance of Data Mining Classifiers

The performance of various types of data mining classifiers were tabulated based on word features only, morphology features only and both word and morphology features. The results obtained for each feature type are tabulated in Table 2.

Table 2. Performance of Machine Learning Classifiers.

Algorithm	Features								
	Word			Morphological			Word + Morphological		
	P	R	F	P	R	F	P	R	F
Bayesian									
Naive Bayes	0.676	0.679	0.658	0.770	0.781	0.766	0.775	0.784	0.769
Bayes Net	0.672	0.677	0.656	0.769	0.786	0.774	0.781	0.802	0.788
Function									
Logistic	0.696	0.712	0.689	0.788	0.809	0.792	0.786	0.805	0.794
MultilayerPerceptron	0.694	0.705	0.693	0.804	0.812	0.798	0.756	0.763	0.752
RBFNetwork	0.653	0.670	0.646	0.776	0.784	0.765	0.765	0.781	0.759
SimpleLogistic	0.709	0.691	0.661	0.774	0.805	0.786	0.792	0.821	0.803
SMO	0.721	0.681	0.644	0.775	0.807	0.787	0.783	0.816	0.798
Instance-Based									
IB1	0.713	0.714	0.697	0.757	0.767	0.759	0.774	0.781	0.766
KStar	0.728	0.714	0.697	0.747	0.753	0.744	0.761	0.763	0.754
Ensemble									
AdaBoost	0.416	0.563	0.437	0.605	0.576	0.467	0.496	0.626	0.542
Bagging	0.702	0.723	0.702	0.802	0.805	0.791	0.773	0.802	0.787
Random Sub Space	0.720	0.698	0.668	0.761	0.795	0.775	0.796	0.828	0.811
Decorate	0.688	0.714	0.695	0.801	0.814	0.800	0.802	0.819	0.804
Logit Boost	0.712	0.695	0.667	0.760	0.788	0.769	0.811	0.819	0.803
Rule-Based									
PART Decision List	0.701	0.723	0.700	0.770	0.786	0.776	0.790	0.809	0.798
Ridor	0.678	0.572	0.583	0.720	0.740	0.727	0.779	0.802	0.788
ZeroR	0.248	0.498	0.331	0.248	0.498	0.331	0.239	0.488	0.320
Decision Tree									
Random forest	0.726	0.726	0.708	0.777	0.791	0.779	0.784	0.809	0.794
Logistic Model Tree	0.709	0.691	0.661	0.774	0.865	0.786	0.799	0.826	0.811
REPTree	0.707	0.723	0.702	0.807	0.809	0.792	0.781	0.814	0.795

Analysis of Results: The performance of the various classifiers indicate that word + morphological features give better classification results compared to word features or morphological features used alone. The *ZeroR* Rule-Based classifier, which simply outputs the most common class irrespective of the attributes, is used as baseline or lower bound to evaluate classifier performance. *Bayesian classifiers* use a probabilistic framework, *Instance based classifiers* use nearest neighbor, distance based method for solving classification problem. These perform better than *ZeroR* the baseline used but don't provide the best learning model for the data.

The Function based classifiers like *Logistic Regression*, *Multilayer Perceptron* fit a function on the attribute vectors in the training data to determine the class. They have been used as a good training model for many applications. However for grammatical gender identification, *Logistic Model Tree classifier* that combines logistic regression and decision tree learning performs better and is more appropriate learning model. Ensemble learning method namely *Random Subspace* which is a decision tree based classifier has a performance similar to *Logistic Model Tree*. These observations suggest that a combination of classifier provide a better model for grammatical gender identification. One amongst *Random subspace* and *Logistic Model Tree* can be used as a supervised data mining model to identify grammatical gender with a F-Score of 0.811.

We were curious to know if we could extract some rules from our data which could be directly used to determine grammatical gender, and if so what is the precision or confidence level of such rules generated. Grammar books [14] and linguistic resources [15][16] available for the Konkani language do not explicitly specify any grammatical gender identification rules but suggest possibility of such rules. We wanted to check if the rules suggested and any new rule were generated by our data set and if so the precision or confidence level associated with such a rule. This motivated us to use a three stage grammatical gender identification approach described in the next section.

Staged Grammatical Gender Identification

4.1 Approach

A three stage approach was used wherein stage one used association rule mining to obtain a list of grammatical gender identification rules. Stage two used data mining classifiers to identify grammatical gender of nouns that could not be identified in stage one using grammatical gender identification rules. In stage three the rules generated and best classification model obtained were combined to calculate the performance of the staged approach on a separate test data set with 200 entries. We describe the three stages used in the following sub-sections.

4.2 Stage One: Association Rule Mining

Predictive apriori association mining algorithm available in knowledge analysis tool WEKA 3.6.11 was used to generate gender identification rules.

Three different experiments were conducted and rules were generated based on

1. Word features only
2. Morphological features only
3. Both word and morphological features.

For each type of feature multiple grammatical gender identification rules were obtained.

Features Used	# Grammatical Gender Rules	Sample Grammatical Gender Identification Rules Obtained
Word	13	$EndVowel = o \rightarrow Gender = masculine$ acc:(0.99498)
		$EndVowel = ehm \rightarrow Gender = neuter$ acc:(0.99497)
		$BeginVowel = se \quad EndVowel = a \rightarrow$ $Gender = feminine$ acc:(0.99454)
.....		
Morphological	10	$PID = 20 \rightarrow Gender = masculine$ acc:(0.99496)
		$PID = 19 \rightarrow Gender = neuter$ acc:(0.99493)
		$PID = 13 \rightarrow Gender = feminine$ acc:(0.99476)
.....		
Word + Morphological	35	$PID = 13 \rightarrow EndVowel = be$ $Gender = feminine$ acc:(0.99469)
		$PID = 9 \rightarrow EndVowel = a$ $Gender = feminine$ acc:(0.99433)
	

Only those rules which had more than 0.95 confidence were accepted. Table 3 tabulates the number of rules extracted and some sample rules for each feature type.

Table 3: Grammatical Gender Identification Rules obtained.

The rules obtained when both word and morphological features were used had some rules which were same as rules obtained using only word features and only morphological features. In addition some rules got combined to give more refined rules. Repetitive rules and refined rules were pruned and 16 rules were retained and implemented as Gender Identification Rule (GR).

The main contribution of using association rule mining is the 16 gender identification

rules obtained with confidence above 0.95 for each rule. These rules alone can be used to determine gender of 49.76% of entries in the data set with a precision of 0.97. The grammatical gender rules were not sufficient to identify grammatical gender for the entire data set. A substantial number of nouns remained unassigned. Hence original data set was reduced to create a new data set which held only those entries which cannot be assigned a grammatical gender using a rule. This new data set created is referred to as *Reduced Data Set (RDS)* The best model for *Reduced Data Set (RDS)* was picked by training various data mining classifiers on reduced data set. Next subsection describes the classification technique used on the reduced data set.

4.3 Stage Two: Classification

The reduced data set had 635 entries for which gender could not be determined using association rule mining. To decide which classification model will best represent our data, various classification algorithms available in WEKA 3.6.11 were executed. Table 4 gives the best performing classifications algorithm.

Features	Algorithm	Precision	Recal	F-Score
Word	IB1	0.768	0.758	0.692
	LogitBoost	0.528	0.726	0.611
	MultilayerPerceptron	0.657	0.705	0.615
	Random Forest	0.612	0.747	0.63
Morphological	IB1	0.598	0.579	0.588
	LogitBoost	0.698	0.695	0.697
	MultilayerPerceptron	0.589	0.579	0.584
	Random Forest	0.669	0.684	0.676
Word+Morphological	IB1	0.705	0.705	0.705
	LogitBoost	0.528	0.726	0.611
	MultilayerPerceptron	0.734	0.716	0.723
	Random Forest	0.72	0.747	0.712

Table 4: Classification Algorithm Results.

Table 4 indicates that word and morphological features used together provide a better classification model with best F-score of 0.723 obtained by *Multi-layer Perceptron*. This neural network function based classifier works well with both categorical and continuous attributes, performs well on the test set and hence is chosen as a learning model for training.

4.4 Stage Three: Staged Approach

The rules obtained in stage one and training model namely *multilayer perceptron* obtained in stage two were combined into a staged approach. The pseudo-code of the algorithm used by the staged approach to assign grammatical gender to noun entries in test data set is illustrated in Figure 1. The experimental results obtained and evaluations are presented in the next section.

Fig 1: Algorithm for assigning grammatical gender to nouns in WordNet.**Algorithm 1: Assign Grammatical Gender to Nouns in WordNet**

```

for each noun in WordNet
  if noun compatible with grammatical gender rule GR
    gender = GR(noun);
  else
    gender = MultilayerPerceptronClassifier(noun);
  end if
end for

```

Experimental Results and Evaluations

The goal of the experiment was to build a grammatical gender identification system. Two approaches namely data mining classifiers approach and staged approach were used for the same. A separate test data set with 200 entries was created to test the performance of the approaches. The staged approach algorithm presented in Figure 1 was tested on the test data set to determine its performance. Table 5 tabulates the results obtained using staged approach.

Table 5: Grammatical Gender Identification using Staged Approach.

Grammatical Gender	True Positives	False Positives	False Negatives	Precision	Recall	F-Score
Feminine	91	5	4	0.95	0.96	0.95
Masculine	50	11	15	0.82	0.77	0.79
Neuter	31	12	7	0.72	0.82	0.77
Non-neuter	0	0	2	0	0	0

Table 6 compares the staged grammatical gender identification approach with best performing data mining classifier. A minor improvement is seen in the weighted average values of precision, recall and F-score in the staged approach. The results obtained were analyzed and are presented in the next subsection.

Table 6: Staged Approach Vs Data Mining Classifiers.

Algorithm	Precision	Recall	F-Score
Staged Approach	0.854	0.86	0.84
Random Sub Space	0.78	0.807	0.79
Logistic Model Tree	0.807	0.837	0.82

5.1 Analysis of Results

To find out where the algorithm fails, the results obtained were analyzed from two perspectives namely association rule mining and classification model.

Association Rule Mining Analysis:

Analysis of grammatical gender identification rules generated by association rule mining indicated that the feminine gender is identified using these rules. As expected the precision and recall for the feminine gender is high as can be seen in Table 5. An example where assignment of feminine gender fails is for the Konkani word “*shaeta*” (goldsmith) which has grammatical gender masculine but is assigned as feminine. This is an exceptional case wherein its morphological features resemble those of a feminine noun. Another example of failure is word like “*baenagalaii*” (Bengali language/Bengali person) which has multiple senses wherein the different senses have different gender namely in the Bengali language sense the noun is feminine and in the Bengali person sense the noun is masculine. The algorithm fails for such cases. A few instances of masculine and neuter gender can be identified using rules, but most of masculine and few neuter gender nouns cannot be identified based on rules. There are no rules generated corresponding to non-neuter gender.

Classification Model:

The classification model has been used mainly to identify masculine, neuter and non-neuter genders. This word and morphological features used can classify nouns in the above stated gender values with a best F-Score of 0.72. Additional features like context based features may be used to improve the performance of such classifiers.

Conclusion

Grammatical gender of a noun in Konkani can be determined based on morphological and word features using a staged approach, with a weighted average F-Score of 0.84 thus supporting our hypothesis. On examination of grammatical gender identification rules we found that some morphological paradigms suggest grammatical gender. For some words like lawyer two paradigms get assigned suggesting that the noun has non-neuter grammatical gender. Some association rules example *BeginVowel=NULL EndVowel=o → PID=twozero Gender=masculine acc:(0.99315)* generated can also be used to automatically assign morphological paradigms to new noun entries based on word features. Future work will be focused on finding word, morphological or context features which give more clues to determine masculine and neuter gender.

References

- Bhattacharyya, P.: *Indowordnet*. In: *Proceedings of Seventh International Conference on Language Resources and Evaluation (LREC), Malta (2010)* 3785-3792
- Nicholson, J., Nordlinger, R., Baldwin, T.: *Deep lexical acquisition of type properties in low-resource languages: A case study in wambaya*. In: *Proceedings of the 26th Pacific Asia Conference on Language, Information and Computation*. (2012) 75-81
- Babych, B., Geiger, J., Rosell, M., Eberle, K.: *Deriving de/het gender classification for dutch nouns for rule-based mt generation tasks*. In: *Proceedings of the 3rd workshop on Hybrid Approaches to Translation (HyTra) @ EACL 2014, Gothenburg, Sweden (2014)* 75-81
- Dinu, L., Niculae, V., Sulea, M.: *Dealing with the grey sheep of the romanian gender system, the neuter*. In: *Proceedings of COLING 2012: Demonstration Papers, Mumbai, India (2012)* 119-124
- Nastase, V., Popescu, M.: *Whats in a name? in some languages, grammatical gender*. In: *Proceedings of the 2009 Conference on Empirical Methods in Natural Language Processing, Singapore (2009)* 1368-1377
- Spalek, K., Franck, J., Schriefers, H., Frauenfelder, U.: *Phonological regularities and grammatical gender retrieval in spoken word recognition and word production*. *Journal of Psycholinguistic Research* 37 (2008) 419-442
- Vigliocco, G., Vinson, D., Paganelli, F.: *Grammatical gender and meaning*. In: *Proceedings of the 26th Meeting of the Cognitive Science Society*. (2004)
- Cucerzan, S., Yarowsky, D.: *Minimally supervised induction of grammatical gender*. In: *Proceedings of HLT-NAACL, Edmonton (2003)* 40-47
- Kennedy, C., Boguraev, B.: *Anaphora for everyone: Pronominal anaphora resolution without a parser*. In: *Proceedings of COLING, Boulder, Colorado (1996)* 113-118
- Bergsma, S., Lin, D., Goebel, R.: *Glen, glenda, or glendale: Unsupervised and semi-supervised learning of english noun gender*. In: *Proceedings of the Thirteenth Conference on Computational Natural Language Learning (CoNLL), Boulder, Colorado (2009)* 120-128
- Noun class (2015) "[http://en.wikipedia.org/wiki/Noun class](http://en.wikipedia.org/wiki/Noun_class)".
- Grammatical gender (2015) "[http://en.wikipedia.org/wiki/Grammatical gender](http://en.wikipedia.org/wiki/Grammatical_gender)".
- Desai, S., Desai, N., Pawar, J., Bhattacharya, P.: *Autoparse: An automatic paradigm selector for nouns in konkani*. In: *Proceedings of the 11th International Conference on Natural Language Processing (ICON), Goa, India (2014)* 154-162
- Borkar, S. In: *Konkani Vyakran. Konkani Bhasha Mandal (1992)*
- Almeida, M. In: *A Description of Konkani*. Thomas Stephens Konknni Kendr (1989)
- Sardessai, M. In: *Some Aspects of Konkani Grammar*. Unpublished M.Phil. Thesis (1986)

HUMAN RESOURCE MANAGEMENT- A CASE STUDY OF CACULO GROUP

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ABSTRACT

In the corporate world, employees have been traditionally viewed as assets to the enterprise. So keeping this in mind we did a study on the working of the Human factor in Caculo group which is one of the leading groups in dealership of leading cars, property building and Malls in Goa Caculo group has 7 units under them. The data is collected from 3 units of the group and the method used is both primary and secondary data collection through company visits, personal interviews, websites and books. There has been a good employer- employee relationship, employees are provided reasonable salaries, there are different activities held to motivate them, sanctioning proper leave and with proper working hours are the findings from the research. We would suggest the group to introduce vocational courses to its employees, better canteen facility, building good relationship with the fellow employees and providing additional facilities like medical and transport facilities.

Introduction

An organization is made up of four resources, namely, men, material, money and machinery, of these, the first one is living one, i.e. human and the other three are non-living i.e. non-human. It is the human/people that make use of non-human resources. Hence, people are the most significant resource in an organization. It is man who makes a difference in the organizations. Human resources are heterogeneous in the sense that they differ in personality, perception, emotions, values, attitudes, motives and modes of thoughts. Their behavior to stimuli is often inconsistent and unpredictable. While other resources depreciate, human resources appreciate with the passage of time. Better educated, more skilled, better aware of their interest and rights are some distinguishing features of modern human resources. These make it difficult for managers to use human resources in an effective and efficient manner. Given the highly competitive and complex business environment, attracting and retaining qualified and competent employees have become a real challenge of the day for the managers.

Human Resource management means employing people, developing their resources, utilizing, maintaining and compensating their services in tune with the job and organizational requirements with a view to contribute to the goals of the organization, individual and the society.

This study is focused on the Human Recourse Departments of Caculo Group. The research is done on the 6 units of the group but the data collected is from 3 units namely Caculo Mall, Caculo Ford and Caculo JCB.

Objectives of the Study

- To know the performance of Caculo units.
- To know the recruitment procedure of Caculo Group.
- To know the overall performance of the employees.
- To analyze perception of employees towards the company.

Research Methodology of the Study

The methods adopted for information are:-

Primary source: The study has used both from both primary and secondary data. The primary study has been conducted, using the survey method. All concerned departments were interviewed. Observation method also was adopted in order to collect the relevant information.

Secondary source: Information was also collected from websites. All the information received was compiled together, conclusions had been drawn and necessary suggestions have been made.

A Case Study on Caculo Group

The Caculo Group of Companies was founded by the visionary late. Shri. Mahadeva S.B. Caculo in the early 1900's. A very prominent business family, the Caculo Group has only grown from strength to strength over the past 10 decades. Mr. Manoj Caculo is the current Chairman and Managing Director of the Group ably assisted by his younger brother – the dynamic Mr. Suraj. M. Caculo.

The group had interests ranging from construction to manufacturing and from trading to real estate. In the late 1990's the group decided to consolidate its business interests and are currently engaged in retail dealerships of automobiles and earthmoving machinery. The main vision of the group has always been – Total Customer Satisfaction through Total Quality Management, and this has been carried forth throughout the decades. The companies are totally customer driven with a primary focus to excel in all that is endeavored.

The House of Caculo's had been a conglomeration of companies and had traversed through four generations since its inception in 1910. Although many of its primary business ventures were in due course of time traded off owing to the changes in the economic scenario, the group has retained its primary interest in automobiles.

Structure of Caculo Group

- Caculo Automotive Pvt. Ltd. --- Sole dealers Ford India.
- Caculo Cars Pvt. Ltd. --- Costal Honda dealer of Honda Cars in Goa.
- Caculo Earthmovers Pvt. Ltd. --- Authorized dealers for the JCB India Ltd.
- Caculo Builders --- Caculo Mall.

Units of Caculo Group

The following is the detailed information collected on 3 the units of *Caculo Group*.

1. Caculo JCB

J.C. Bamford Excavators Limited (JCB) India started operations in 1979 and today it is the fastest growing company in the Indian earthmoving and construction equipment industry. The company is a pioneer in the industry and has been recording excellent growth rates year on year.

JCB India has five operational world class manufacturing facilities; one in Ballabhgarh, Haryana near New-Delhi, two in Pune and two in Jaipur. In Goa, there are two units of Caculo JCB one is at Verna in South Goa and another in Karaswada, Mapusa. The manufacturing facility is the world's largest backhoe loader plant which also manufactures Litfall, the pick-&-carry crane. This facility also manufactures the BSIII JCB "ecoMAX" engine, which is big on fuel savings and high on performance with 16 valve efforts.

JCB India offers an extensive range of 25 variants in 7 product lines---

Backhoe loaders, Articulated Dump Trucks, Compaction Equipment, Compact Track Loaders, Defence Products, Light Equipment, Lighting Towers, Telescopic Wheel Loader, Wheel Loaders, Industrial Forklifts, Telescopic Handlers, Hydraulic Excavators, Skid Steer Loaders, Generators, Rough Terrain Forklifts, Site Dumpers, Eco Welfare Unit.

JCB has one of the largest distribution network led by dedicated and highly committed dealers principals. At present, JCB has 60 dealers and over 600 outlets operating in India.

Objectives of Caculo JCB

- *Caculo JCB* aims at enhancing customer relationship.
- *Caculo JCB* aims at maintaining a market share of above 80%.
- *Caculo JCB* ensures customer delight throughout, the sales process and aim at customer retention to be maintained above 85%.
- *Caculo JCB* aims in retaining its staff through various employee engagement activities and by good HR practices.
- *Caculo JCB* ensures the safety of the staff and provide for a hazard free environment at the dealership.

Quality policy

Caculo JCB delivers defect-free, competitive & timely services to its customers. “Customer Delight” is goal and not just “customer satisfaction”.

Caculo JCB aims to exceed customer expectation through innovation, continuous quality improvement and people involvement ensuring health, safety of employees and environment.

Caculo JCB have the people, the equipment, the knowledge and clear ISO 9001:2008- Process of implementation, to make it happen JCB perpetuate an attitude of “DO IT RIGHT THE FIRST TIME” and are committed to quality forever.

**** THE QUALITY POLICY OF CACULO JCB IS SAME FOR CACULO FORD AND HONDA.**

Caculo JCB in Goa

Caculo JCB unit is operating in Verna in South Goa has 58 employees working in it organization. This unit is divided into 7 department's .i.e. Sales department, Service department, Human Resource department, Accounts department; Customer Relation department, Parts department and Housekeeping department. Each department is managed by separate managers. The average monthly sales in JCB are 6 or 7 machines per month.

Recruitment and selection

The recruitment procedure in the company are mostly walk-in- interviews and referral etc. The candidates are selected on the basis of qualification, work experience and better communication skills. After the selection process the candidates are given on-the-job training.

Remuneration

The employees in the organization work for 8 hours. They have an attendance register wherein the employees have to sign at the time of entering and leaving.

On or before 6th of every month, the salaries are credited in their bank accounts. The employees are also given allowances like travelling allowance and they also get bonus during Diwali vacations. Awards are given to the employees for their hard work. Events like blood donation, Christmas party, traffic safety programs etc are scheduled for the employees.

2. CACULO FORD

Ford India Pvt. Ltd is a wholly owned subsidiary of the Ford motor company in India. Ford India Pvt. Ltd's headquarters are in Chennai and Tamil Nadu. In Goa there are 2 units of Caculo Honda, one is at Panjim in North Goa and other is in Verna at South

Goa. Currently it is the sixth largest car maker in India after Maruti Suzuki, Hyundai, Tata, Mahindra and Chevrolet. Ford Private Limited began production in 1926, but was shut down in 1954 as the company faced losses in business.

Ford re-entered the market in October 1995 as Mahindra Ford India Limited (MFIL), a 50-50 joint venture with Mahindra & Mahindra Limited. Ford increased its interest to 72% in March 1998 and renamed the company Ford India Private Limited.

Products offered

The ranges of products of Ford are Figo, Ford, Fiesta, Ford Classic, Ford Endeavor and Ford Ecosport.

Objectives of Caculo Ford

- Caculo Ford aims at achieving Customer View Point (CVP) score which is to be 50 points and above as per the objectives of Ford India Ltd.
- Business plan objective (Number of Repair Orders, Labor and Parts) to be achieved 100%.
- Caculo Ford aims in retaining its staff through various employee engagement activities and good HR practices.
- Caculo Ford aims to ensure the safety of the staff and provide for a hazard free environment at the dealership.

Quality policy

The quality policy of Caculo Ford is same as Caculo JCB and Caculo Honda.

Caculo ford in Goa

Caculo Ford operating at Verna in South Goa has 135 employees working. There are 3 departments i.e. their major ones are sales, service, spares which are managed separately.

Recruitment and selection

The recruitment procedures adopted in the organization are through advertisements, walk-in interview, referrals, consultancies and through social networking sites. Their selection is done depending upon position; such as if it is related to service then ITI qualification and communication skills are required. Training is also provided to the employees after appointment.

Remuneration

The company has a manual system for keeping a record of attendance. All employees' works from 9.00 am to 5.30pm. Employees are paid salary on or before 5th of every month. Their salary is credited in their saving bank account. The company has 30 financial leaves divided,

into 15 days for first 6 months and 15 for next 6 months. Benefits provided in the office/ workplace for employees are PROVIDENT FUND and ESI.

Incentives are also given during Diwali. Social gathering is also carried out every year. Along with the working there are many activities and competitions held. The blood donation camps and donations are provided to orphanage etc.

They also give awards for employee, “as an employee of the month”, in terms of performance. employee, then if the person repeats the same fault/ mistake then a warning letter is given. If he still continues with the same then the employee is given a termination letter.

3. Caculo Mall

Caculo Mall is a premier Mall, build on international standards, to the discerning consumers in Goa. All these years’ consumers in Goa have been deprived of leading brands like, classy ambiance, aesthetic and just prices, all of which now have address at the Caculo Mall. Stores offering best of brands are KFC, Westside, Manek Gem, Arrow, Blackberries, Lee, Wrangle, Magson-Supercentre, Time collection, Pan-India, a wide variety of North Indian and South Indian specialties, chaat, continental and Pan Asian cuisine along with chillzzz offering wide variety of shakes, sodas, ice creams and ample valet car parking, gaming zone etc. are only some of the highlights in the mall.

Strength of employees

The strength of employees in the office of Caculo Mall is around 40 – 45 employees, and in Food Court there are 25- 30 employees.

Recruitment

The recruitment procedure of employees are referral, consultant and through walk- in-interviews. Their selection is done on the basis of knowledge and experience.

Remuneration

The working hours for employees are from 9.00 am to 6.00 pm in office and in Food Court the working hours are from 10.00 am to 7.00 pm. Leaves granted to the employees are 15 paid leaves, 9 sick leaves and 6 casual leaves are given with a prior application of one week.

DATA ANALYSIS

The study was conducted in three units of Caculo Group namely (Ford, Jcb, Mall). The analyses were conducted on the basis of responses provided by the employees. The following are the results.

Table No. 1 NUMBER OF EMPLOYEES WORKING

Units	less than 2 years	2 years	5 years	8 years & above	Total
JCB	2	2	6	10	20
FORD	6	3	7	9	25
MALL	3	7	-	-	10
				TOTAL	55

Source: Field work *Fig.1. Number of employees working*

This chart gives details about the duration of years of employees working in the 3 different companies of Caculo Group. 11 employees are working from less than 2 years, i.e.2 in JCB, 6 in Ford, 3 in Mall. Only 12 employees are working from last 2 years which is 2 in JCB, 3 in Ford and 7 in Mall. And 13 employees are working from 5 years. Around 19 of them are working since the last 8 years because they are getting good salary, incentives & all the facilities in the company.

Table No. 2 NUMBER OF WORKING HOURS OF THE EMPLOYEES

Units	6 hours	8 hours	8 hours & above	Total
JCB	0	13	7	20
Ford	1	19	5	25
Mall	0	6	4	10
			TOTAL	55

Source: Field work *Fig .2. Number of working hours of the employees*

The following chart gives details about the working hours of employees. Only 1 employee from Ford works for 6 hours, 13 employees from JCB, 19 from Ford & 6 employees from Mall are working for 8 hours. And 7 employees from JCB, 5 employees from Ford & 4 employees are working for more than 8 hours i.e. some employees wish to work for extra time with the intension that they are getting extra pay with the salary.

Table No.3 RANGE OF SALARY

(In Rupees)

Units	3000-6000	6000-10000	1000-16000	16000 & above	Total
JCB	3	8	8	1	20
Ford	0	17	5	3	25
Mall	0	6	3	1	10
				TOTAL	55

Source: Field work *Fig.3. Range of salary*

The above chart shows the details of salary given to employees of the company & the salary of employees depends upon their designation. As only 3 workers from JCB are

getting salary less than 6000 , from Ford & Mall no one is getting salary below 6000 because the servants & guards from company they mostly get salary below 6000 and after they complete a certain years there is increase in their salary. 5 Ford employees and 3 from Mall are getting the same salary, this section includes employees from Accounts department, CRE & others. Only managers from all the 3 companies get salary above 16000.

Table No.4 YEARLY LEAVES OF THE EMPLOYEES

Units	7 days	10 days	15 days	30 days	Total
JCB	0	0	11	9	20
FORD	0	1	19	5	25
MALL	0	0	4	6	10
				TOTAL	55

Source: Field work

Fig.4. Yearly leaves of the employees

The above chart gives the details of yearly leaves sanctioned to each employee in the company. In all the 3 companies a leave for 7 days not sanctioned. The leave is sanctioned for 10 days, 15 days and 30 days. The companies rules of sanctioning leaves are different some employees who are new in the company they don't get leave for certain months.

Table No.5 RELATIONSHIP WITH THE EMPLOYER

Units	Friendly	Good	Average	Poor	Total
JCB	11	8	1	0	20
Ford	16	9	0	0	25
Mall	4	5	1	0	10
				TOTAL	55

Source: Field work

Fig.5. Relationship with the employer

This table gives the details of relationship of employees with their employers & the companies' staff. Here more than 30 employees are having a friendly relationship with the employer. 2 of employees says that their relation is average and no one is having poor relation with the employer of the company because there is good understanding between each other and they work as one unit .

Table No.6 BETTER JOB PROSPECTIVE

Units	Accept	Reject	Total
JCB	18	2	20
Ford	20	5	25
Mall	10	0	10
		TOTAL	55

Source: Field work *Fig.6. Better job prospective*

This chart shows the details of the better job prospective for employees as it is the responsibility of company to provide good working condition to their employees. In this chart only 18 numbers of employees from JCB, 20 employees from Ford & 10 employees from the Mall said that if they get a better job prospective they are going to accept it because everyone wants the good salary and better facilities. Only 2 employees from JCB & 5 employees from Ford says that they will reject if they get a better job prospective from other companies as they are very much attached to the working place and also because they think that they are satisfied with the salary and working environment of the company.

Conclusion

Human Resource is more crucial today for the success of any organization than ever before. Human Resource Department is an important link for employees to understand the organization and, for the organization to communicate effectively with its employees.

While organizations are becoming conscious of the potentials of new technologies, they must also realize the crucial role that human being plays in managing the organization.

Workers are no longer seen as a liability, but as a key resource which needs to be carefully nurtured and constantly developed. If a company needs to excel, it needs its workers satisfaction. Training improves the chances of obtaining promotions among employees which gives them self confidence and better opportunities. It brings positive attitude among employees and increases the motivation levels of the employees in the organization. It helps an employee to take the benefit of the rewards system and incentives available in the company.

From the above analysis, we can conclude that in all of the 3 units of Caculo Groups had a very friendly environment at its workplace. An organization succeeds when the workplace is satisfied. As we can see the employees of Caculo Group are having a good employer - employee relationship, they are been provided with incentives, activities are organized apart from their work and good working conditions. We can see that they are given reasonable salaries and they are provided with schemes like Provident Fund, ESI, etc. The average numbers of working hours are 8 hours followed by the 3 units. The approximate no. of leaves sanctioned are 15 days. JCB had the highest number of

employees working for more than 8 years in the company which shows their loyalty to the company. In the company most of the employees are looking for a better prospective, this is a serious issue which the company needs to tackle well.

Suggestions

- After conducting the research on 3 units of Caculo Group, the following suggestions can be made:
- Introduction of vocational educational courses to its employees.
- Motivate the employees to work together, share ideas and develop a sense of ownership over their job and workplace.
- Updating more techniques for customer satisfaction.
- Better canteen facilities should provide to its employees.
- Increase in CSR activities to create awareness in the society.
- Building good relationship with the fellow colleagues.
- Providing more facilities like Medical facilities, Transport Facilities etc.
- Following the trend of Job rotation.
- Providing bonus and other incentives at the time of festivals.

References

- Dr.S.S. Khanka (2012). Human Resource Management, evolution and development, planning, job analysis, recruitment and design,. S.Chand and company, New Delhi.*
- Pattanayak ,Biswajeet (2003). Human Resource Management. Prentice hall of India private Limited, New Delhi.*
- S.Seetharaman and B. Venkateswara Prasad (2007). Human Resource Management. Scitech Publications Chennai.*
- William. G. Nickel, James. M. Mchugh and Susan. M. Mchugh (1999). Understanding Business. IRWIN Mcgraw Hill New York.*

Websites

- www.caculomall.in
- www.jcbindia.com
- https://en.wikipedia.org/wiki/Ford_India_profile.
- https://en.wikipedia.org/wiki/Ford_India_Private_Limited
- www.caculogroup.net/

PERCEPTION OF MATHEMATICS AT SCHOOL LEVEL - A CASE STUDY OF TISWADI TALUKA

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Abstract:

Many people, both students' and adults appear frightened of Mathematics or maintain they hate it. The sample of study involved 175 students' from five schools of Pilar vicinity. The aim of this study was to examine the level of students' interest and attitude in Mathematics subject, Mathematics subject and teachers teaching, students' perception towards Mathematics subject. The findings suggest there is no significant difference between students' interest and attitude, Mathematics subject and teachers teaching. There was a strong significant relationship in students' perception towards Mathematics subject. Although the study was limited only to five schools, the findings provide a conceptual framework for further research into how students views could be used by both teachers and educational authorities in improving the teaching and learning of mathematics as students' are in a better position to provide useful information regarding their teachers teaching and how it impacts on their learning.

Introduction

Mathematics has an ever increasing role in every human activity. It played a vital role in the advancement of science and technology. Industries in the advanced countries has benefited immensely from the invention of mathematics, of increasing levels of sophistication. Mathematics inculcates habits of thought that help promote scientific temper and hence mathematics is vital for our future well-being.

Mathematics is the foundation for success in a variety of content areas during a pupil's educational experience. Mathematics is crucial not only for success in schools, but in being an informed citizen, being productive in one's chosen career and in personal fulfillment. In today's technology driven society, greater demands have been placed on individuals to interpret and use mathematics to make sense of information in complex situations. There are several things that the pupil learns in school mathematics like skills of communication, problem solving, concentration etc. These skills will be applied by the pupil to other situations in their lives, whether it is the workforce or post secondary education.

The Objective of the Study

"I hate mathematics" is the general perception that the pupil's have regarding mathematics. The aim of mathematics and its role in education is providing pupil's with the knowledge in mathematics needed for them to be able to make well-founded decisions

when making different choices in everyday life, in order to be able to interpret and use the increasing flow of information and be able to follow and participate in decision-making processes in society. Throughout the school years every individual has their own opinion to what they like and dislike in school. These opinions often change throughout the time because of a teacher's strengths and weaknesses. The teacher plays a major influence on school mathematics education. A teacher is crucial to a pupil's success. The ideal teacher knows several ways to explain a certain concept.

- The objectives can be enumerated as follows:
- To evaluate the importance of mathematics
- To study pupil's views on mathematics
- To develop interest and motivation for studying mathematics and applying them to various context
- To study the role played by mathematics teacher
- To study the correlation between mathematics and the role of mathematics teacher
- To study the different issues relating to mathematics
- To suggest remedial measures to develop interest in mathematics

Scope of the Study

For the purpose of investigation/ case study in perception of mathematics at school level, five rural and sub-urban schools were chosen at random of Tiswadi taluka . They are Fr. Agnel High School (Pilar), Our Lady of Rosary High School (Dona Paul, Panaji), St. Lawrence High School (Agassaim), Immaculate Heart of Mary High School (Goa Velha), Azmane High School (Neura).

Data Presentation, Analysis And Interpretation

TABLE 1: SEX WISE ANALYSIS

Sr. No.	Sex	No. of Respondent	Percentage
1	Male	66	37%
2	Female	109	63%
	Total	175	100%

Inference: The tabular analysis and the pie diagram reveals that the percentage of females was more in this study of investigation, although the majority of schools adopted for study were co-education schools.

SEX WISE PERCENTAGE

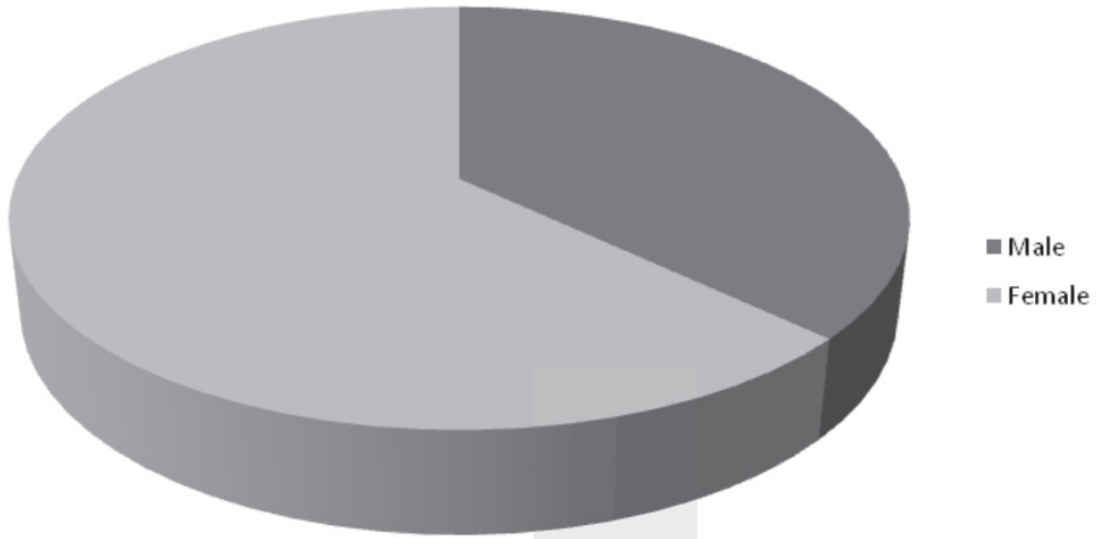


TABLE 2: ANALYSIS ON IMPORTANCE OF MATHEMATICS

	Agree	Disagree	Not sure
Average	109.5	29.6	36
Standard Deviation	33.42	16.95	19.05
Coefficient of Variance	30.52%	57.26%	52.92%

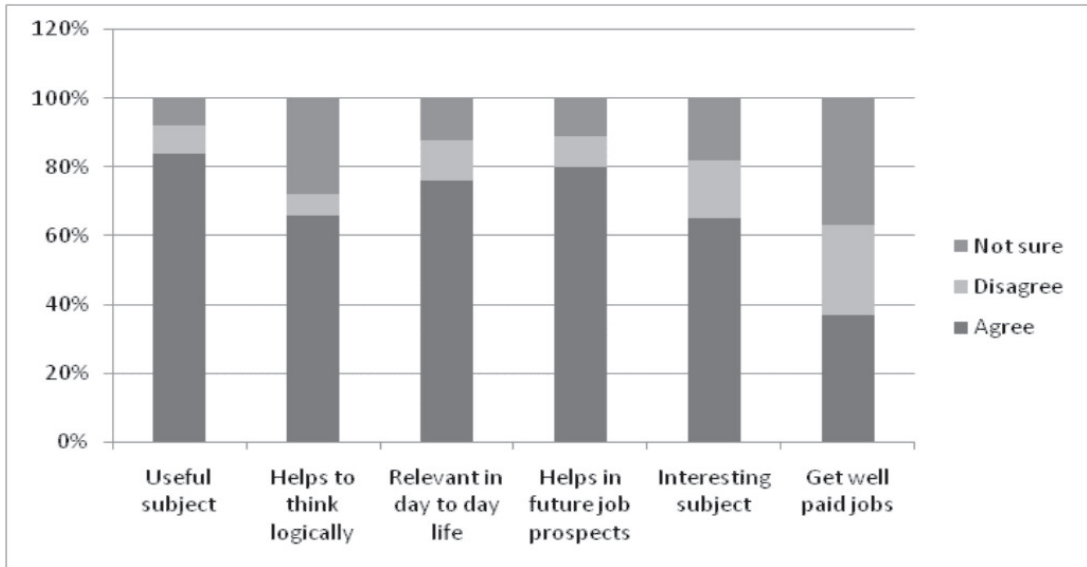
Inference: The tabular analysis reveals the fact that the average number of pupil's agreed that mathematics is important and that the pupil's who agreed to mathematics is more consistent compared to those who disagreed to the importance on mathematics.

TABLE 3: ANALYSIS ON PUPIL'S VIEWS IN MATHEMATICS

Percentage Number of Respondents

	AGREE	DISAGREE	NOT SURE
Useful subject	84%	8%	8%
Helps to think logically	66%	6%	28%
Relevant in day to day life	76%	12%	12%
Helps in future job prospects	80%	9%	11%
Interesting subject	65%	17%	18%
Get well paid jobs	37%	26%	37%

FIGURE 2: PUPIL'S VIEWS ON MATHEMATICS

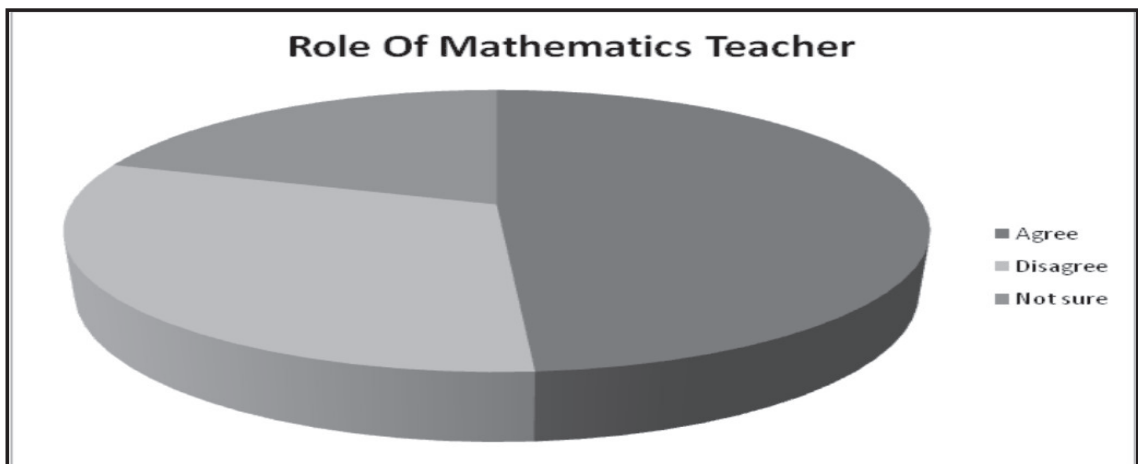


Inference: The tabular analysis and graph reveals the fact that majority of the pupil's views were in favour of the relevance of mathematics in every human being lives.

TABLE 4: ROLE OF MATHEMATICS TEACHER

Sr. No	Role Of Mathematics Teacher	No Of Respondents	Average No Of Respondents
1	Agree	690	86.25
2	Disagree	440	55
3	Not Sure	283	35.38

FIGURE 3



Inference: The tabular analysis and the pie chart reveals the fact that the teachers skills and the way they treat all pupil's equal ,even though they are weak in mathematics is important.

Table 5: Analysis Of Correlation Between Mathematics And Role Of Mathematics Teacher

	Agree	Disagree	Not sure
Mathematics	610	304	185
Role of mathematics teacher	1095	296	360

Karl Pearson's Correlation Coefficient = 0.94

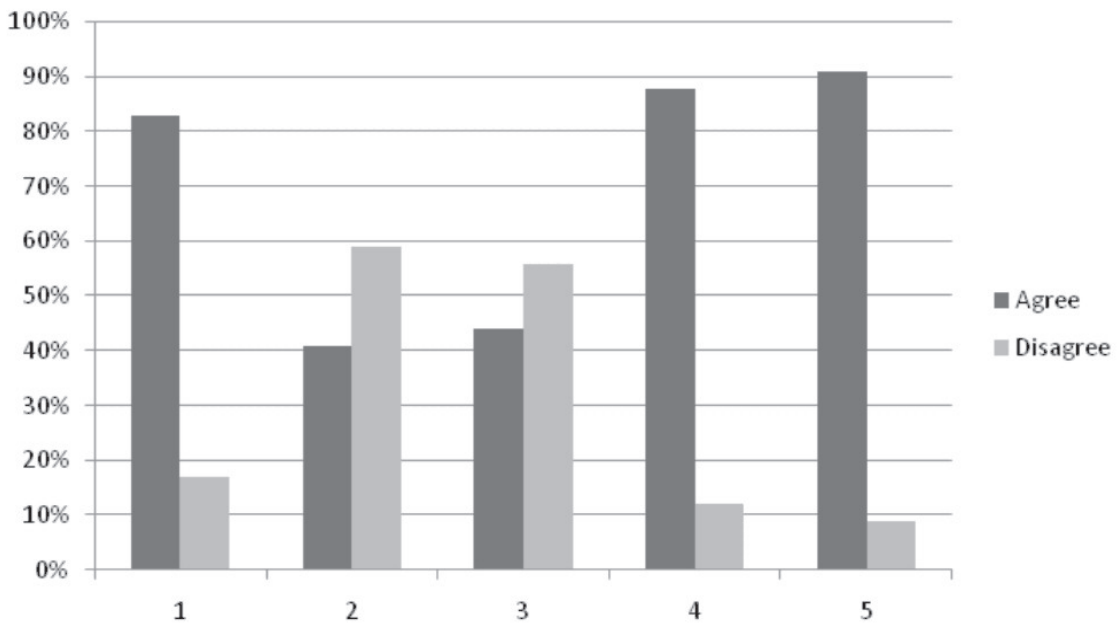
Inference: The tabular analysis and Karl Pearson's correlation coefficient reveals the fact that there is a positive correlation between mathematics and role of mathematics teacher and hence the teacher should be very perfect and skillfull in dealing with the subject mathematics.

TABLE 6: ANALYSIS OF DIFFERENT ISSUES ON MATHEMATICS

Percentage No Of Respondents

Sr. NO	DIFFERENT ISSUES	AGREE	DISAGREE
1	Need help in mathematics	83%	17%
2	Intend to continue mathematics after S.S.C	41%	59%
3	Mathematics should be an optional subject	44%	56%
4	Mathematics teachers should be perfect and skillful	88%	12%
5	Mathematics teachers should give good base at primary level	91%	9%

FIGURE 4: DIFFERENT ISSUES ON MATHEMATICS



Inference: The tabular analysis and the graph reveals the fact that the problems of the students should be dealt with due consideration.

Findings

During the analysis it was found that most of the students understand the importance of mathematics in their day to day life and for them the role of a teacher is very important. There are few sections of students who have mathematics phobia or don't like mathematics and they are the ones who are less consistent.

Recommendations

- The pupil's should be given regular practice so that their mistakes or concepts could be clear at an early stage.
- There should be regular follow up and remedial teaching for those who are weak in mathematics.
- Though majority of students find it interesting, teachers should think of various activities to inculcate interest among the remaining pupil's.
- There should be correlation between mathematics and other subjects.

Conclusion

A survey was conducted to study pupils perception towards mathematics at school

level in Tiswadi taluka, five different schools were investigated for the same which depicted the different views of pupils towards their liking, thinking, interest and relevance of mathematics to their day to day life, the role of the mathematics teacher is equally important to create the liking and interest in pupils life. As rightly said “ I listen I know , I see I remember, I do I understand “ can be applied by using different activity based learning techniques and teaching aids, which creates a platform and provide a clear vision for the pupils to understand the importance of mathematics for their better being and future prospects.

ENGAGING SUCCESSFUL AGEING OF OLDER PEOPLE IN PHYSICAL ACTIVITIES THROUGH SPORTS

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ABSTRACT

As people age across their life, many struggle to access appropriate levels of physical activities. This paper aims to provide an encouraging support for older people who want to be physically healthy through sports activities. It aims to provide recommendations to various bodies that can help to support and engaging of older people for successful ageing.
Keywords: Older People, Physical Activity, Sports Participation

Introduction

In the past several decades, increasing efforts has been placed on understanding and defining what constitutes healthy or successful aging, However, there remains little consensus of what the definition of successful aging should be and its constituents. Various studies have shown that regular physical activity has many health benefits. However, many older people are physically inactive and reluctant to participate in physical activity especially through sports.

Research Objective

- To identify the current barriers of participation in physical activities.
- To identify approaches that would engage physical activity through sports among older people.

The primary objective of this research is to determine the current levels of participation in physical activity through sport among older people. This research aims to examine and describe the attitudes of older people towards physical activity through sports participation. This research also aims to provide recommendations that would engage physical activity through sports.

Methodology

The methodology used was close ended questions which included individual interviews with a selected sample of 100 older participants between the age group of 50 to 70 years, across the villages of St. Andre Constituency, with a focus on those who do not have a

major illness and/or disability and who have not gone through any formal sports training.

Terminology Used

Before discussing the various aspects on how older people should be engaged in physical activity through sports, the following terms needs to be highlighted:

- Older Person is defined by the World Health Organization, Sport and Recreation Bodies traditionally as any person over the age of 50.
- Physical Activity is defined as any bodily movement produced by skeletal muscles that result in energy expenditure. The energy expenditure can be measured in kilocalories. Physical activity in daily life can be categorized into occupational, sports, conditioning, household, or other activities.
- Exercise is defined as any physical activity pertaining specifically to fitness or training and is not a part of a daily routine. Exercise is a subset of physical activity that is planned, structured, and repetitive and has as a final or an intermediate objective in improvement or maintenance of physical fitness.
- Physical Fitness is defined as a set of attributes that are either health- or skill-related.
- Sport refers to physical activities that one does on their own or in a team for competition or fun.

Barriers to Participation in Physical Activity

In our study, it was found that several common barriers existed; which prevented older people from participating in physical activities through sports. Some of the common barriers that were identified that prevented older people from participating in physical activity are as follows:

- Lack of confidence/Fear
- No interest
- Social Embarrassment
- Cost
- Gender Influences
- Attitudes
- Community safety
- Social Support
- Expertise
- Transportation
- No family Support

Approaches for Involvement and Engagement

In order for older people to engage in physical activity through sports, the following approaches could be used. They are as follows:

- As a part of social responsibility by educational institutions, the faculty engaged in physical education activities could re-design existing sports to cater to the older people.
- As a part of corporate responsibility by organizations, assistance could be provided through funding of certain sporting activities and creating an awareness of importance of older people engaging physical activity through sports.
- Village panchayats can also provide mechanism to promote and encourage older people from various communities to involve and participate in physical activity through sports. The activities could be designed keeping in mind the various barriers that an older person would face and thereby encourage more involvement of them in sporting activities. This will help to increase socialization among older people and in the planning and development of future programmes.
- Sports trainers and coaches could develop innovative and creative programmes for older people which can avoid stereotyping of the older person and promote positive images of older people.

Conclusion:

This paper aims to provide an insight on how and when older people engage themselves in physical activity through sports, there are long term benefits in terms of health and longevity. Older people can reduce on various health issues as they age through the years. Additionally, there would be increased socialization among the older people and they would be more engaged, thereby minimizing loneliness. There would be increased self confidence and improves their independence

References:

“Physical Activity And Sport – Participation And Attitudes of Older People in Ireland Research Report Prepared” by IPSOS MORI, Go for life programme and the Irish Sports Council.

Physical Activity, Exercise, And Physical Fitness: Definitions and Distinctions for Health-Related Research, By C J Caspersen, K E Powell, and G M Christenson.

“How To Improve Your Wellbeing Through Physical Activity And Sport” by Sport England and The National Lottery.

“Participation In Sports And Physical Activity: Associations with Socio-Economic Status and Geographical Remoteness” by Rochelle M. Eime, Melanie J. Charity, Jack T. Harvey and Warren R. Payne.

“Older adults perspective on successful aging: Qualitative Interviews” by Jennifer Reichstad, Geetika Sen Gupta, Colin A. Depp, Lawrence A. Palinkas, Dilip V. Jeste.

“Older People, Sport And Physical Activity: A Review Of Key Issues” by Linda Nicolson, A Research Study For Sport Scotland, Research Digest No. 99, Published by Sport Scotland.

SPORTS, PHYSICAL ACTIVITY, HEALTH AND ECONOMIC DEVELOPMENT

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ABSTRACT

Right from elementary education, all the way through university level, numerous studies have shown that there is a direct correlation between engaging students in sports and their development in education. According to a study conducted by the United Nations in 2003, "Increasing the time spent on physical education in schools does not reduce marks in intellectual subjects but rather improves the ability of some students to learn and retain information." Studies have shown that societies which encourage sports have lower crime rates, lead to empowerment of women, leads to a decrease in poverty, and brings families and communities together.

Key words: physical activity, healthy lifestyle, health benefits, nutrition, intensity

“Winning in a sporting event is not a matter of life or death – it is much more important than that”. This sporting cliché sums up an attitude towards sport that is increasingly common around the world. The object of this article is to examine how sport has become such a major factor in everyday life.

Although research interest on physical activity and health dates back to the 1950s, the breakthrough in the scientific evidence on health benefits of physical activity largely took place during the 1980s and 1990s. There is an overwhelming amount of scientific evidence on the positive effects of sport and physical activity as part of a healthy lifestyle. The positive, direct effects of engaging in regular physical activity are particularly apparent in the prevention of several chronic diseases, including: cardiovascular disease, diabetes, cancer, hypertension, obesity, depression and osteoporosis.

The Report from the United Nations Inter-Agency Task Force on Sport for Development and Peace states that young people can benefit from physical activity as it contributes to developing healthy bones, efficient heart and lung function as well as improved motor skills and cognitive function. Physical activity can help to prevent hip fractures among women and reduce the effects of osteoporosis. Remaining physically active can enhance functional capacity among older people, and can help to maintain quality of life and independence.

Physical activity and psychosocial health

The WHO has estimated that “one in four patients visiting a health service has at least one mental, neurological or behavioural disorder, but most of these disorders are neither diagnosed nor treated”. A number of studies have shown that exercise may play a therapeutic role in addressing a number of psychological disorders. Studies also show that exercise has a positive influence on depression. Physical self-worth and physical self-perception, including body image, has been linked to improved self-esteem. The evidence relating to health benefits of physical activity predominantly focuses on intra-personal factors such as physiological, cognitive and affective benefits, however, that does not exclude the social and inter-personal benefits of sport and physical activity which can also produce positive health effects in individuals and communities.

Sport and Physical Activity as part of a Healthy Lifestyle

A number of factors influence the way in which sport and physical activity impacts on health in different populations. Sport and physical activity in itself may not directly lead to benefits but, in combination with other factors, can promote healthy lifestyles. There is evidence to suggest that changes in the environment can have a significant impact on opportunities for participation and in addition, the conditions under which the activity is taking place can heavily impact on health outcomes. Elements that may be determinants on health include nutrition, intensity and type of physical activity, appropriate footwear and clothing, climate, injury, stress levels and sleep patterns. Sport and physical activity can make a substantial contribution to the well-being of people in developing countries. Exercise, physical activity and sport have long been used in the treatment and rehabilitation of communicable and non-communicable diseases. Physical activity for individuals is a strong means for the prevention of diseases and for nations is a cost-effective method to improve public health across populations.

In general, there is clear evidence that youth participating in competitive sports programs are more likely to eat more healthily, be of lower weight, be less likely to smoke cigarettes, or engage in sexual activity. In addition, sports participation has been shown to be associated with less antisocial behaviors such as drinking alcohol, use of illicit drugs, and engagement in violent activities.

- ◆ *The relationship between sport and smoking:* Youth who participate in organized sports at school or in their communities are less likely to engage in risky behaviors, such as cigarette smoking and drug use, than non-sports participants (Pate, 2000). A study in the US suggested that high school athletes smoke only slightly less than their inactive classmates, but use snuff or chewing tobacco more often. This study drew on data from a national survey of American adolescents (Gerlach, 1996).
- ◆ *Sports, drugs, eating and drinking behaviors:* Many studies show that youth involved in organized sports have lower rates of drug use. Male and female teenaged athletes are less likely to use drugs, including marijuana, cocaine, crack cocaine, heroin and hallucinogens. Both male and female sports participants report a slightly higher incidence of binge drinking than non-sports participants, but lower overall alcohol

use (Australian Institute of Criminology, 2000). There is, however, some evidence that sports participation, particularly among males, can increase some harmful health behaviors. In one study, sports participants were as likely as non-participants to report engaging in binge drinking during the previous month, as well as eating high-fat foods, and vomiting or using laxatives to prevent weight gain. However, in general, youth involved in organized sports are more likely to report eating fruits or vegetables the previous day and less likely to be overweight (US Department of Health And Human Services, 2004).

- ◆ *Sport and antisocial behavior:* Organized sports have been associated with less antisocial behavior, such as carrying a weapon, or contemplating or attempting suicide. (US Department of Health and Human Services, 2004) Lower suicidal ideation has been reported among those engaged in organized sports. Girls' participation in sport enhances body image and self-esteem, increases confidence and scholastic performance, decreases school drop-out rates, and reduces the risk of depression (Girls, Inc, 2000). Australian Sports Commission investigated whether sport and organized physical activity programs have a positive effect on youth antisocial behavior. A number of crime prevention strategies worldwide involve physical activity and sports as deterrents to crime (Australian Institute of Criminology, 2000). Despite the empirical studies that show positive effects, some research has shown that in some cases, those that engage in highly competitive contact sports, such as ice hockey, football, and rugby may promote violence among participants. In such cases, the pressures associated with sports can promote excessive anxiety and aggressive behavior. The negative outcomes of sports involvement appear to be due to adults, particularly parents and coaches, and the emphasis on winning, and when the pursuit of victory is accompanied by direct and indirect signals that aggressive behavior is acceptable to achieve it.
- ◆ *Sports and pregnancy prevention:* Large studies have found that girls who play sports have lower pregnancy rates, engage in sexual intercourse less frequently, have fewer partners, and begin sexual activity later than those not involved with sports (Wade, 1998).
- ◆ *Physical activity vs. organized sport: are the effects on health behaviors the same?* Considering that the literature on sport and health behavior focuses on participation in structured, organized and often competitive sports for youth, it is reasonable to question if a similar positive effect exists for physical activities that are less organized or competitive, and fall under the '30 minutes of moderate activity' promoted by many world and national public health agencies. Only one study (reported in Archives of Pediatrics and Adolescent Medicine, 2003) attempted to distinguish risky behaviors among adolescents who are specifically associated with participation in team sports rather than those associated with physical activity alone. Teenagers who are physically active and participate in team sports were found to be less likely to engage in unhealthy behavior such as substance abuse and risky

sexual activities than those not involved in team sports. Fewer boys in team sports were found to have used “other drugs” like cocaine, heroin and methamphetamines, compared to their active non-team counterparts. Otherwise, active team males were no less likely to have used cigarettes, marijuana, or alcohol or to have initiated intercourse than their active non-team or non-active peers (DiscoveryHealth.com, 2003). For female students, however, the combination of team sports and physical activity was particularly important. Female teens who participated in team sports and who were vigorously active were less likely to engage in risky behaviors than teens who were only part of a team or only exercised vigorously. Studies indicate that physical activity in general, and being on a team but not participating are not sufficient enough to gain a positive effect on health behavior—teens need to be active members of the team. Team sports, particularly for girls, offer benefits beyond the known physical ones. In addition, there is evidence that parents who engage in physical activities with their children are more likely to have children with positive health behaviors. It seems clear that active parents play an important socializing role in imparting positive health behaviour in their children.

The Mental Benefits of Sports

Sports have always been known for their physical benefits. In recent years, research has also found that sport participation can positively affect your mental health.

- ◆ *Sports Improve Your Mood:* Want a burst of happiness and relaxation? Get involved in a physical activity. Whether you are playing sports, working out at a gym, or taking a brisk walk, physical activity triggers brain chemicals that make you feel happier and more relaxed. Team sports in particular provide a chance to unwind and engage in a satisfying challenge that improves your fitness. They also provide social benefits by allowing you to connect with teammates and friends in a recreational setting.
- ◆ *Sports Improve Your Concentration:* Regular physical activity helps keep your key mental skills sharp as you age. This includes sharp thinking, learning, and using good judgment. Research has shown that doing a mix of aerobic and muscle strengthening activities is especially helpful. Participating in this kind of activity three to five times a week for at least 30 minutes can provide these mental health benefits.
- ◆ *Sports Reduce Stress and Depression:* When you are physically active, your mind is distracted from daily stressors. This can help avoid getting bogged down by negative thoughts. Exercise reduces the levels of stress hormones in your body. At the same time, it stimulates production of endorphins. These are natural mood lifters that can help keep stress and depression at bay. Endorphins may even leave you feeling more relaxed and optimistic after a hard workout on the field. Experts agree that more quality research is needed to determine the relationship between sports and

depression.

- ◆ *Sports Improve Sleep Habits:* Sports and other forms of physical activity improve the quality of sleep. It does this by helping you fall asleep faster and deepening your sleep. Sleeping better can improve your mental outlook the next day, as well as improve your mood. Just be careful not to engage in sports too late in the day. Evening practices within a few hours of bedtime may leave you too energized to sleep.
- ◆ *Sports Help You Maintain a Healthy Weight:* The Centers for Disease Control and Prevention (CDC) recommend sports participation as a healthy way to maintain weight. Individual sports, such as running, cycling, and weightlifting, are all particularly effective ways to burn calories. Staying within a recommended weight range reduces the likelihood of developing diabetes, high cholesterol, and hypertension.
- ◆ *Sports Boost Your Self-Confidence:* The regular exercise that comes with playing sports can help boost your confidence and improve your self-esteem. As your strength, skills, and stamina increase through playing sports, your self-image will improve as well. Sports provide you with a sense of mastery and control, which often leads to a feeling of pride and self-confidence. With the renewed vigor and energy that comes from physical activity, you may be more likely to succeed in tasks off the playing field as well as on it.
- ◆ *Sports Have Been Linked to Leadership Traits:* Team sports such as soccer, baseball, and basketball are breeding grounds for leadership traits. Studies done in high schools reveal a correlation between sports participation and leadership qualities. Because of the opportunity to train, try, win, or lose together, people involved in sports are naturally more inclined to adopt a “team mindset” in the workplace and in social situations. The team mindset leads to strong leadership qualities over time.
- ◆ *Benefits for Young Children:* Sports can benefit children in many of the same ways that they benefit adults. The biggest difference is that when children start participating in sports at a young age, they are far more likely to stay active as they grow older. The same source suggests that participating in a team sport improves academic performance, leads to better scholastic outcomes, and results in more after school participation.

Educational benefits of sports

Right from elementary (primary) education, all the way through university level, numerous studies have shown that there is a direct correlation between engaging students in sports and their development in education. The most important aspect doesn't come from a physical standpoint, but more from a self-esteem and self-awareness standpoint. Due to higher levels of self-esteem and confidence, children are less likely to miss school, are more likely to do their homework and earn better grades.

According to a study conducted by the United Nations in 2003, “Increasing the time spent on physical education in schools does not reduce marks in intellectual subjects but rather improves the ability of some students to learn and retain information.”

Many students entering high school have a hard time managing to fit in sports into their schedule. However, taking part in sports can have a tremendous impact on their education.

It is shown that “extra-curricular sport participation throughout high school is a good predictor of having a job with a future and a job with autonomy at the age of 24.” In other words, high school students who manage to play extra-curricular sports on a competition level are more likely to be employed by the age of 24.

Social benefits of sports

When one thinks of sports, the societal benefits it brings would probably not immediately come to mind. And yet, it has been shown again and again through studies that societies which encourage sports have lower crime rates, lead to empowerment of women, leads to a decrease in poverty, and brings families and communities together.

The reasons are quite simple when one thinks about it: most sports are team oriented. When a cricket team is formed, a bond is automatically made among teammates. The same applies to football, basketball, field hockey, etc. As a result of children being involved in sports, crime rates drop and communities become safer. Women are empowered because, through sports, their self-esteem improves and confidence grows.

Sports as an industry

Sport is a rapidly growing industry worldwide. The global sports industry is estimated to be worth around USD 600 billion comprising a range of associated businesses such as sports manufacturing,

retail, tourism, sports medicine, venues & infrastructure, media & hospitality and merchandising. While sport is an organized business in developed economies, this has been a Government led initiative in India where corporate sector’s presence has often been through corporate social responsibility channels. The exception has been the commercial sporting formats leagues, especially in cricket, where corporate sector has been very active in recent years.

Sport began as a leisure time activity reserved only for a few declared amateurs. In the 20th century however it has become a social phenomenon for the masses. In industrial countries sport has developed into its own economic branch contributing about two percent to gross domestic product (GDP). Today’s challenge is to make sport an economic factor also in less developed countries.

Major sports events are of limited and brief interest, if they do not succeed in motivating the masses to play sport, which in turn stimulates the market for sports articles

and equipments, from shoes for the individual athlete to community facilities for a broad range of disciplines. *“In order for ten people to have an amazing prowess, you have to have one hundred practicing intensely and one thousand just participating in the sport culture,”* said Pierre de Coubertin, the founder of the modern Olympic Games. *“In order to sell millions of T-shirts and basketball shoes, you have to have tens of millions of people playing sports and attributing to it a positive image,”* could be added by today’s sporting goods industry. This economically virtuous dynamic functions in developed countries. Playing sports has become its own market because of non-profit associations or private enterprises that offer all sorts of services from simple personal instruction to a subscription in a fitness centre.

There is also a significant market for sports events through broadcasting and sponsorship rights to ticket sales. These three markets – sports activities, sports equipment and sports events – interact to set the wheels in motion for an economic development which cannot be ignored and which creates a growing economic sector. Sport has become not only a consumer good, but consumes goods itself. It generates economic wealth and jobs, and at the same time brings health and educational benefits to those who practice it.

In addition to the creation of new sources of income at different levels, sport can also have indirect economic consequences. For example, it can improve the efficiency of a national economy by contributing to maintaining and improving the health of the people. This means that fewer workers have to take sick leave which in turn means less production days lost and lower costs for health services. Through sport, children and teenagers can acquire basic social and organisational skills which are also important in economic life.

Economic benefits of sports

Here’s an interesting statistic. We know that Australia has a competitive cricket team, just like us. And yet, Australians annually spend more than 7 billion British Pounds on sports consumption. That translates to approximately 70,000 crore annually. It is almost a surefire guarantee that India does not spend anywhere close to that amount in sports consumption.

The reason Australians spend so much on sports is not simply a function of their spending potential. India’s population is 50 times the size of Australia’s population. The reason is that Australia is heavy promoter of cultivating sports into its culture. Rugby, cricket, traditional football, Australian football, tennis, basketball- are all encouraged and intertwined into Australia’s ecosystem. The result is that the public is willing to spend 70,000 crore annually on sports consumption.

In another study, it was shown that in the United Kingdom, the consumer expenditure

relating to sport was 10.4 British pounds, making sport activity a critical factor in raising its economy.

The bottom line is quite simple, when a society actively promotes sports into its culture, encouraging kids to not only play sports as a hobby or as a recreational activity but to actively, intensely compete; it benefits the society from not only an educational, health, and societal level- but actually benefits the country's economy as a whole.

Conclusion

In conclusion it can be safely concluded that participation in sports activities can lead to a number of positive implications on an individual in terms of health, academics, social well-being, mental well-being, as well as on the economy in terms of creation of employment avenues, businesses and boosting the country's economy.

References:

1. Aries, E., McCarthy, D., Salovey, P. & Banaji, M.R. (2004). A comparison of athletes and non-athletes at highly selective colleges: academic performance and personal development. *Research in Higher Education*, 45, 577-604.
2. Shephard R.J., (1997). Curricular physical activity and academic performance. *Pediatric Exercise Science*, 9, 113-125.
3. Andreff W. (2005), « Sport and Economic Development », in Edward Elgar Companion to the Economics of Sports (Andreff W. & Szymanski S., Eds), London: Edward Elgar.
4. Pope, D. G., & Pope, J. C. (2009). The impact of college sports success on the quantity and quality of student applications. *Southern Economic Journal*, 75(3), 750–780.
5. Broh, B.A. (2002). Linking extracurricular programming to academic achievement: Who benefits and why? *Sociology of Education*, 75, 69-96.
6. Lipscomb, S. (2006). Secondary school extracurricular involvement and academic achievement: A fixed effects approach. *Economics of Education Review*, 26(4), 463-472.
7. Beem, K. (2006). Righting the balance in the athletics-academic equation: *The School Administrator*, June, 1-15.
8. Carp, S. (2007). Athletics versus academics: conflict weighs on Rebels. *Reviewjournal.com*, 1-14.
9. Child Health (2004). High blood pressure—a growing problem among U.S. children. *Child Health Alert*, November, 1.
10. Dawkins, M.P. (2006). Participation in school sports: risk or protective factor for drug use among white and black students? *The Journal of Negro Education*, Winter, 1-9.
11. Baade, R.A., & Dye, R.F. (1990, Spring). The impact of stadiums and professional sports on metropolitan area development. *Growth and Change*, 1-14.
12. Quirk, J., & Fort, R.D. (1992). *Pay dirt: The business of professional team sports*. Princeton, NJ: Princeton University Press.

A BRIEF STUDY OF EFFORTS MADE BY GOA GOVERNMENT TO PROMOTE SPORTS IN GOA

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INTRODUCTION

“Ei Prithibi Ek Krirangan” ,the theme song for 12th South Asian Games, written by Dr. Bhupen Hazarika, literally means ‘The world is a playground’ and “Sports brings in Peace, Prosperity and Progress”.

History of Goa reflects that sports existed since ancient times and games were played for recreation and enjoyment. Traditional Goan games over the years like Kho-Kho, Langddi, asket and basket, logorio, card games etc are not popular today and the children and youth have lost interest in them. Goa being the colony of Portuguese for 400 years have inherited the same taste towards football. Though India is a cricket crazy country, Goa along with West Bengal and Kerala are the only Indian States where people are passionate about football. Goa’s dominance in Indian football can be gauged from the fact that it has prominent clubs participating at national league and few players have also captained Indian national team. The Government of Goa not only promotes football sport but provides infrastructure and other facilities to encourage people to play various other sports for pleasure or for physical exercise or as professional sports.

OBJECTIVES OF THE STUDY:

- To study the schemes to promote physical education, Sports and games by the Government of Goa.
- To find out who are benefitting from the sports policies implemented by the Government.

METHODOLOGY OF THE STUDY:

The information for our study is procured from both Primary and secondary sources.

- Interviews were conducted with various officials at various sections in the Directorate

of Sports.

- Information was also collected from the Citizens Charter published by the Directorate of Sports and Youth Affairs, Government of Goa and from the website www.dysa.gov.in.

LIMITATIONS OF THE STUDY:

Our study is restricted to the information made available to us by the The Directorate of Sports and Youth Affairs, Government of Goa.

THE CASE STUDY:

The Directorate of Sports and Youth Affairs, Government of Goa is an apex body for sports which was set up on 1st July, 1973 by the then Chief Minister of Goa, Daman & Diu, Shri Dayanand B. Bandodkar for promoting physical education sports and games in the then Union Territory of Goa, Daman & Diu.

This newly formed department which was initially started its journey with a meager budget of about Rs. 10.00 lakhs and the activities were managed by a handful of officials. Over the years it has grown and has highly qualified and experienced officers/coaches and supporting staff and are bearing huge expenditure towards the effective implementation of its multifarious schemes for promotion of Physical Education, Games, Sports and other Youth related activities

FUNCTIONS OF THE DIRECTORATE OF SPORTS & YOUTH AFFAIRS:

The functions of the Directorate and schemes being implemented for development of Physical Education, Games and Sports are through its various sections are as under:

1. ADMINISTRATION SECTION:

The Administration Section of this Directorate looks after all duties related to the establishment work of the department and the three NCC Offices which come under the direct control of this department inclusive of the common cadre of all the Physical Education Teachers under the control of the Directorate of Education.

2. ACCOUNTS SECTION:

The Accounts Section deals with all the budgetary work of the Department including framing of Annual Budget, preparing of Performance Budget, Revised Estimates, Monthly Expenditure Statements, Planning work inclusive of centrally sponsored schemes and releasing various types of the grants-in-aid under different schemes controlled by the department of various Educational Institute including release of grants to the Sports Authority of Goa.

3. PHYSICAL EDUCATION SECTION:

PROMOTION OF PHYSICAL EDUCATION:

This section of the department looks after the implementation of the Physical Education Programme right from the Primary to the Higher Secondary School level besides promoting youth activities, such as, NCC, NSS, Scouts and Guides, Red Cross etc., so as to ensure mass participation in Physical Education & Youth activities and contribute in building up “Fit People in a fit Nation”.

The following schemes are looked after by this section:

a) **PREPARATION/ REVISION OF SYLLABUS IN PHYSICAL EDUCATION & PROPER IMPLEMENTATION OF THE PHYSICAL EDUCATION CURRICULAM IN SCHOOLS:**

The Physical Education Officers visit various educational institutions in the state every year and submit the Annual Reports with the follow up action to the implemented by the Educational Institutions which send back a compliance report to the Directorate of Sports.

b) **PROMOTION OF LITERATURE ON PHYSICAL EDUCATION, SPORTS & YOUTH AFFAIRS:**

The objective of this scheme is to encourage scholars to write own literature in Physical Education Sports, Recreation, Youth Activities, Allied Sciences and other Health Related Topics beneficial to the student and non-student youth including Sports organizations, so as to keep them abreast with the latest trends in these important faculties of education.

c) **REFRESHER TRAINING COURSES / SEMINARS FOR PHYSICAL EDUCATION TEACHERS AND COACHES:**

Refresher Courses, Workshops, Seminars and Orientation Courses are conducted from time to time to acquaint them with the latest techniques, skills and Training methodology in their respective sports.

The Directorate of sports conducts 8 to 10 refresher courses in a year for physical education teachers and coaches which are of two to three day duration. Attendance for the faculty employed in government institutions is compulsory.

Teaching is provided in various games such as Handball, Lagori, Zumba etc. In 2015 – 16, 214 teachers attended. Earlier the courses were conducted only for the Government

schools however since last year it has been extended to private schools.

d) CELEBRATION OF DAYS OF NATIONAL IMPORTANCE:

The Department organize Special District, Taluka and State Level Functions on the occasion of days of National Importance. The Directorate of sports intimates all the educational institutions informing them of the programmes and competitions as various levels, the school then deputed students related to the sports and cultural activities. The department conducts rehearsals for the programme to be held. Refreshment and transport is provided to all the participants

On these occasions special programmes are organized such as Mass Physical Displays, Singing of National Integration Songs, Sports Competitions, Folk Dances, Singing competitions etc.

e) BHARATIYAM TRAINING PROGRAMME:

Bharatiyam was designed to involve Mass participation of the young children in the age group of 12 to 15 years in the programme of Physical Education, Physical Fitness and National Integration.

The objectives behind Bharatiyam are:

- To highlight the importance of Physical Education
- Evaluating the importance of Physical Education
- Demonstrating the spirit of youth.
- Promoting emotions and National Integration.

f) GRANTS TO RURAL SCHOOLS FOR PURCHASE OF SPORTS EQUIPMENT AND DEVELOPMENT OF PLAYGROUNDS

This is a Centrally Sponsored Scheme whereby grants to a maximum of Rs. 1.50 lakhs are released by the government of India to the Rural Schools for purchase of Sports equipment or for Development of Playgrounds. The grants given to private schools and higher secondary per year is Rs15000/-, however the grants allotted to the Government schools is according to the students strength.

g) SUPPLY OF SPORTS EQUIPMENT FOR GOVT. & NON- GOVT. SCHOOLS.

Under this scheme:

- 1) The department annually procures and supplies Sports material to the Government Primary, Middle, Secondary and Higher Secondary Schools to enable these budding sports persons to improve their performances in their respective sport.
- 2) Financial assistance for purchase of Sports equipment is also released to Non-Government Middle, Secondary and Higher Secondary Schools and Colleges.
- h) **ESTABLISHMENT AND MAINTENANCE OF VYAMSHALLAS:**

The department undertook to establish Vyamshallas in all the rural and urban areas in Goa to promote indigenous activities and encourage the youth of the locality to develop their physique through regular training in such “Vyamshallas/Gymnasia”.

The development maintenance and the management of the Vyamshallas is by the Directorate of Sports.

i) **DEVELOPMENT OF YOGA EDUCATION:**

This scheme is devised to spread Yoga activities in Educational Institutions and amongst the public at last to ensure a physically fit and mentally sound community. Yoga teaching is compulsory from Std 1st to 10th in the government schools . earlier only physical education teachers were trained to conduct Yoga however since last year primary teachers are also trained.

In 2015-2016 about 500 teachers were given training.

4) YOUTH SECTION:

This section of the department deals with the promotion and effective implementation of the various Youth Welfare Activities through NCC, NSS, Scouts and Guides, Red Cross, Youth festivals etc, which form an important part of the Physical Education Curriculum in the state.

5) PROJECT SECTION:

The section of the directorate is entrusted with the development of the much needed Sports Infrastructure in the State through its various Schemes inclusive of the Grant-in-aid Schemes to Panchayats and Non-Government Educational Institution for development of playgrounds and Multipurpose Halls. The department undertakes to develop International Standards Sports Complexes/Multipurpose Indoor Halls/ Swimming Pools and other requisite playing facilities for Major area games, at the Village Taluka, District and State Level.

1) GRANTS FOR CONSTRUCTION OF STADIA PAVILIAN PLAYGROUNDS TO VILLAGE PANCHAYATS/MUNICIPALITIES.

INTRODUCTION: As per the scheme, the department releases grants to the village Panchayats/Municipalities for the development of the Village Panchayat/Municipal playgrounds inclusive of the cost of acquisition, to a maximum of rs.20.00 lakhs based on the area available.

2) GRANTS TO NON-GOVERNMENT SECONDARY/HR. SECONDARY/ COLLEGES/UNIVERSITY FOR DEVELOPMENT OF PLAYGROUNDS OR A MULTIPURPOSE HALL:

- a) The Directorate releases grants to the non-Government Secondary/Higher Secondary Schools/Colleges/University for development of playgrounds for the benefit of the students, as per the area available to a maximum of Rs. 40.00 lakhs for the development of a playground.
- b) Grants for construction of multipurpose hall size not less than 17 X 17 X 7 MTS. Rs. 80.00 lakhs.
- c) The institution who have adequate land and need to also develop facilities for minor area games playfields shall be given assistance from Rs. 50,000 to 5 lakhs.

In 2015-16 five schools availed of the grant and 2016 – 17, three schools have availed of the same. From 2010 – 11 till date 61 institutions have been given grants.

3) DEVELOPMENT OF GOVERNMENT VILLAGE SCHOOL PLAYGROUNDS:

The Scheme is designed to provide the much needed playground facilities to the student and non student community in all the villages in Goa, particularly in the Tribal and Rural areas, for ensuring mass participation in the field of Sports.

Since 2010 – 11 till date the Directorate of sports have given grants to 99 villages for the development of playground.

4) ESTABLISHMENT OF MAJOR TALUKA SPORTS COMPLEXES, SPORTS SCIENCE AND RESEARCH CENTRE, CAMPSITES ETC.

Aims & objectives: To provide the much needed training facilities of International standards as per the technical requirements of the various sports discipline to the high caliber athletes for bettering their performances and ensuring positive results at the National & International Arena.

PLACES	FACILITIES						
Fatorda	International Football Stadium	Swimming Pool	Multipurpose Hall	Playing fields	Gymnasium		
Campal	Football Stadium	International Standards Swimming Pool	Multipurpose Indoor Stadium		Gymnasium	400 mts. Grass track for major and minor games	Skating Rink
Peddem		Swimming Pool	Multipurpose Indoor Stadium	Playing fields		400 mts. synthetic Track	Indoor Boxing Training Centre
Ponda		Swimming Pool	Multipurpose Indoor Stadium		Gymnasium	200 mts. Grass track for major and minor games	
Chicalim			Multipurpose Hall	Spectator stand	Gymnasium	400 mts. Grass track for major and minor games	Turf Cricket Wicket Practice net
Sanguem			Multipurpose Hall	Playing fields	Gymnasium	400 mts. Grass track for major and minor games	
Quepem		Swimming Pool	Multipurpose Hall	Playing fields	Gymnasium		
Bicholim		Swimming Pool	Multipurpose Hall		Gymnasium		
Sattari			Multipurpose Hall	Playground			
Pernem			Multipurpose Hall	Playground			
Chaudi, Canacona		Swimming Pool		Play ground		Area for minor games	

6) SPORTS SECTION:

This section of the department promotes mass participation in Sports amongst the talented rural and urban student youth right from the Primary level to the Higher Secondary School Level by organizing sports competitions at various levels, for spotting out talent, selecting the talented sportspersons/teams and providing them long term training on scientific lines inclusive of Pre-National Coaching Campus for deputing

the State School teams for the National Level Competitions organized by the School Games Federation of India., besides implementing various other schemes for providing incentives to outstanding sportpersons, such as, employment opportunities, presentation of State Sports Awards, Financial to Indigent Sport persons,etc. inclusive of the Inter State Exchange of Youth Scheme, Adventure Sports, Civil Services Tournaments, etc, as detailed below:

1) SPORTS FESTIVALS:

Under the Dcheme, Sports Competitions are conducted for students, right from the Primary School Level to the Higher Secondary School Level in various Sports disciplines for Boys and Girls in various age groups and the selected players are duly required to undergo a 3 weeks Pre-National Coaching Camps after which the State Team is deputed to participate at the National School Games organized by the School Federation of India.

ADVANCE SUMMER COACHING CAMPS:

The directorate has undertaken to organize the prestigious Advance Summer Coaching Camps with a view of providing the much needed long term coaching on scientific lines to the talented and promising sportpersons. 4th week to April to 2nd week of May every year. These coaching camps have been discontinued since 2012.

PRESENTATION OF STATE SPORTS & YOUTH AWARDS:

State Government institutes the prestigious Bakshi Bahaddar Jivabadada Kerkar State Sports. Award to the meritorious sportpersons of Goa, who have performed creditably and earned laurels at the National and International level, aas also, to the Sports Promoters. However both thee awards have not been given since 2010 but efforts are on to give the same by 2016-17.

SPECIAL SPORTS AWARDS:

The Government also felicitates the former Ex-Olympians, International sportpersons of Goan Origin having earned laurels for the Country through the other states. This award has been discontinued since 2012.

THE DILIP SARDESSAI SPORTS EXCELLENCE AWARD:

The Government of Goa initiated the Dilip Sardessai Sports Excellence Award Shri Dilip Sardessai, to be presented to the highest achiever amongst Goan sportpersons representing Goa at any International Level Sports Competition. This award was started in 2008-09 and it comprises of a cash award of Rs 2.0 lakh.

REGISTRATION OF SPORTSPERSONS FOR EMPLOYMENT UNDER SPORTSMEN CATEGORY:

The department registers the names of outstanding sportspersons under the sportsmen category for the purpose of employment on submission of the duly filled in Forms II & IV respectively enclosing relevant certificates of achievements in sports. From 2012-16, 779 sportspersons have benefitted from this scheme.

ISSUE OF CERTIFICATES TO NATIONAL LEVEL SPORTSPERSONS FOR OBTAINING ADDITIONAL MARKS FOR ADMISSION IN PROFESSIONAL COLLEGES:

The department issues certificates to the sportspersons having represented the State at National/International Level for obtaining additional marks for admissions in Professional Colleges on submission of relevant certificates. In 2015-16, 45 students cleared the exam thus benefitting from this scheme.

CIVIL SERVICES TOURNAMENTS:

Under this scheme Inter Departmental Competitions are concluded in the State to ensure physical fitness amongst the Government employees besides enabling them to improve their talents for achieving laurels at higher level competitions. About 18 sports events are held for all Government departments.

FINANCIAL ASSISTANCE TO INDIGENT SPORTSPERSONS:

This scheme was introduced in 1983 during the VII Five Year Plan, with a view to provide the much needed financial assistance to the outstanding sportspersons/sports organizers in indigent conditions either due to old age or other causes such as accidents or ill health, having inadequate sources of income. In 2015-16, 68 sports persons have benefitted from this scheme. For State level players Rs3000/- is given per month, for national level Rs5000/- and for International level Rs8000/-.

ASSISTANCE TO DEPENDENTS:

Assistance on the same scale will be given to widow of deceased sportsmen whose income from all sources does not exceed Rs. 3,000/- per month, if she too is in indigent circumstances.

7) COACHING SECTION:

This section of the department has been specially set up to provide systematic coaching on scientific lines to the budding talent in Goa. The various schemes being implemented by this section are as follows:

a) COACHING SCHEME & ESTABLISHMENT OF COACHING CENTRES:

The department has established Coaching Centres at State & District level wherein

regular Coaching is conducted by qualified and experienced coaches from 6.30 a.m to 8.30 a.m in the morning and from 4.00 to 6.30 p.m in the evenings.

At present there are 10 coaches for different sport activities.

- State Coaching Centre:

The State Coaching is situated at the Campal Sports Complex, Panaji.

- North District Coaching Centre:
- The North District coaching is situated at the Peddem Sports Complex, Mapusa.
- South District Coaching Centre:

The main centre is at the Fatorda Sports Complex and there are three sub Centres one each at Chicalim Vasco, Ponda and Betalbatim.

b) SAI TRAINING CENTRES:

- The SAI Girls Training Centre at Peddem, Mapusa.
- The SAI/SPDA Training Centre at the Ponda Sports Complex.

DEPUTATION OF CANDIDATES FOR THE 6 WEEKS CERTIFICATE COURSE AT SAI/NIS.

This Scheme is envisaged to provide inservice training to the Physical Education Teachers or Academic Teachers for undergoing a 6 weeks Certificate Course in coaching offered by the Sports Authority of India in the Sports Discipline in which they are proficient, so that they can undertake Coaching in the Schools in a systematic manner.

c) DEPUTATION OF CANDIDATES FOR THE SAI/NSNIS REGULAR COURSES IN COACHING:

Under this scheme the department deposes one or two candidates every year for undergoing the Regular Course in Coaching conducted by the Sports Authority of India, National Institute of Sports.

Special Scholarship: Special scholarships are sanctioned by the SAI/NIS to the following categories:

- International/Olympics
- Women having completed M.P.Ed. Degree
- Economically backward classes Sportspersons.

d) DIET COACHING SCHEME:

This is a special scheme whereby special 15 days Coaching Camps are conducted for selected trainees in various Rural and Urban areas in Goa, in various Sports disciplines only in the evening sessions i.e between 3.00 p.m to 6.00 p.m to provide the much needed systematic coaching to the trainees on scientific lines, for enhancing their levels of performance.

8) THE SPORTS AUTHORITY OF GOA:

The Sports Authority of Goa, is an autonomous body and registered under Societies Registration Act 1860 and is fully financed by the Government of Goa on “MEET THE DEFICIT” basis and for this purpose funds are being provided by Government as grant-in-aid subject to the provision being made in the budget for the purpose and also availability of funds.

The Sports Authority of Goa has been rendering commendable services for the development of Sports and Games in Goa,

ANALYSIS OF THE STUDY**STRENGTHS:**

- The Directorate Of Sports makes Physical Education as an integral part of General Education, this helps in developing interest among the students at a very young age in Physical education, sports and games.
- Organisation of Taluka, District and State level events the Directorate has helped students to pursue sports as a career.
- Creation of infrastructure such as playgrounds , multipurpose complexes have helped children, the young and old to involve themselves in sports as a recreational activity also to pursue sports at a Professional level
- The financial assistance provided to the sports person has encouraged many to involve themselves in sports activities at various levels
- Various awards instituted by the Directorate of Sports for outstanding sports persons has helped in motivating newer entries into various sports
- Provision of allotment of additional marks to sports persons has benefitted the youth to pursue the related sport activity and higher education

WEAKNESS:

- Despite the effort made by the Government to develop and train Sportsperson the performance at National and international level has been dismal

- The Government policies implemented through the Directorate of Sports has not been able to tap the potential of the talented sports persons who belong to the lower strata of the society.

OPPORTUNITIES:

- In order to attract additional investments into the sports sector to adopt world class infrastructural facilities, highly qualified coaches etc the government should partner or enter MOU with internationally reputed agencies or organizations.

CHALLENGES:

- The Government faces the problem of motivating talented sport persons to pursue sports as a career
- The increasing academic pressure on the students has also resulted in students giving up sports activities
- Due to the insecure future in the sports field the parents often do not encourage their wards to take up a sports career.

CONCLUSION:

Over the last five decades, the Directorate of Sports and Youth Affairs, Government of Goa is significantly committed towards promoting various sports activities in the State. Integrating sports education in general education process, employing qualified coaches, Expanding of infrastructural facilities such as international sports complexes, playground, etc reflects the contribution made by the Directorate of Sports and Youth Affairs in creating awareness and involving people to adopt sports for entertainment or as a physical activity or as a professional sport.

The performance of State teams or individual sportspersons at national or international level and bagging medals for sports like football, chess, swimming etc also reflects the efforts put in government.

In order to enhance sports infrastructure and the performance of State's sportspersons as per international standards, Goa Government should partner with private agencies or enter into Memorandum of Understanding or collaborations with various reputed national and international organizations. This would help in having services of highly qualified coaches and world class sports infrastructure facilities thereby achieving sports excellence in the State.