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Kolkata, West Bengal, India

Best Possible Practices of Teaching in Higher Education in India

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Abstract : Ministry of Human Resource Development (MHRD) has claimed a growth in higher education scenario. It has shown growth in Gross Enrolment Ratio (GER), number of universities, number of higher educational institutes and in number of faculties. But the fruitfulness of such quantitative growth depends largely on its qualitative outcome which mainly depends on the way of imparting knowledge. After describing the higher education scenario in India, this paper tries to locate the best possible way of higher education teaching in India. Firstly, it states the different approaches of teaching methods. Then it tries to highlight a composite way of different approaches, like teacher centered with student centered and high technology with low technology to get the best way suitable for Indian paradigm. It ultimately comes to a conclusion that the method should not be generic and prescriptive by any particular authority but it should be specific and composite keeping the constraints in mind for the particular case.

Keywords : Autonomous Institutions, University Grants Commission, Higher Education in India

1. Higher Education in India

Higher educationsystem of India is the third largest in the world, next to the United States and China. The main governing body at the tertiary level is the University Grants Commission, which enforces its standards, advises the government, and helps coordinate between the centre and the state. Accreditation for higher learning is undertaken by 15 autonomous institutions established by the University Grants Commission (UGC). The education system of India falls broadly under the Ministry of Human Resource Development (MHRD). In the branches of the MHRD, the Department of Higher Education is responsible for overseeing the growth of the higher education sector. The aims of the Department are to improve quality of and access to higher education for all sections of the population.The majorobjective of the Department is to increase the Gross Enrolment Ratio (GER) in higher education to 30% by 2020. Some of the other objectives of the department include: extension of institutional base, greater inclusion of minorities, eradication of regional disparities, infrastructural improvement and increased global participation.

2. Challenges in Higher Education

India's Higher education faces problems ranging from income and gender disparities in enrolment, to poor quality of faculty and teaching and even to a general lack of motivation and

higher education. The basic criteria of higher education are to deliver the deeper knowledge of the subject not only fulfilling the market requirement or to produce a knowledgeable surplus. It has to develop a critical mind to generate inquisitiveness for advancement. The best possible method of teaching higher education in India depends on using the low to moderate technology with a student centered approach to create a questionable mind for heading towards a prosperous future.

So the conclusion is, to ascertain the best possible method by developing a composite approach as deemed necessary for the purpose, judging the availability of educational resources. Last but not the least, the number of more universities (903 of 2017-18 to 993 of 2018-19) does not justify the betterment of the higher education scenario and the best possible method of teaching higher education should not come as a prescription of higher authority like, NAAC or UGC but it may be developed for a particular state, university or institute, keeping the constraints and the normal approaches in mind.

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Innovations and Best Practices – A Study of Best Practices Followed in Vijaygarh Jyotish Ray College

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Abstract **:** Even though the higher education is developing its quality base in India, it is lagging behind the world class institutions. However, the Ministry of Human Resources Development (MHRD) and the University Grants Commission (UGC) is providing grants and facilities to the higher educational institutes on the basis of certain benchmark. The most reliable benchmark of quality of any institution depends on the best practices that an institution follows. In order to acquire certain degree of administrative and academic excellence, every institution must follow certain quality standards. According to National Assessment and Accreditation Council (NAAC), in order to achieve quality enhancement in education best practices must be advocated. The benchmarking is a system of measuring and comparing the processes adopted by an institution with those of others which is widely used in the academic circle. In this paper we will discuss the various aspects of best practices in context of Vijaygarh Jyotish Ray College and also recommend a few initiatives which may be taken up by the college.

Keywords : Best Practices, Academic Excellence, Benchmarking, Quality Enhancement.

Objectives

- To understand the meaning of Best Practices prescribed by NAAC.
- To assess the parameters involved in BestPractices
- How to apply Best Practices in different stages in different Higher Educational Institutions(HEIs)
- To study the Best Practices followed by Vijaygarh Jyotish Ray College(VJRC)
- To make an analysis of steps taken and make necessary suggestions.

Introduction

In order to introduce quality in the higher education, the growth opportunities into the education sector is being looked into from a broader and global perspective. Knowledge is one of the determining

f) Cultural programmes and prize distribution ceremonies are organized by the NSS unit of the college where the children of the socially deprived area participated

g) 'Pronam' an inclusion programme for the elderly has been organized by the college NSS unit in collaboration with KolkataPolice.

h) The college is giving self-defense training to the female students of the college in collaboration with the Kolkata Police under the 'Sukanya'programme.

i) The institution organizes various National events like Independence Day, Republic Day, commemorating death/birth anniversaries of renowned Indian Luminaries.

8) The institution has organized various rallies and candle march honouring the sacrifice of our fallen soldiers, in case of national disasters,etc.

9) The college has been regularly participating and winning prizes in various inter- college competitions, quiz programmes, sportsevents.

10) The college has a medicinal herb garden which is maintained by the Department ofBotany. The college has a 0.84 acres campus most of which is littered with shrubs, herbs, green fruit-bearing trees which create a soothing ambience forall.

11) The Green Consumer Club of VJRC and DRCSC organized a Green consumer fair to make the students socially aware of the environment and instill a culture among them to use ecofriendly materials like jute bags, plates made out of coconut leaves,etc.

12) The college has an active Kanyashree Cell which is in continuous collaboration with the Govt. of West Bengal to make the Kanyashree scheme an ongoing success in VJRC. Recently the college held a 'Kanyashree Udjapan' ceremony in the college along withKMC.

Conclusion

With keeping in mind the current environmental and ecological needs, the college has taken all the necessary steps which are fulfilling the needs of the society. As a responsible member of the community, it is expected that every individual should contribute to the betterment of the society, and thus fulfilling the overall objectives of the institution. Best practices can be called 'best' only when the society is benefited from these. Thus, more active engagement by the HEIs in tandem with different NGOs will create further awareness and a sense of belonging among the stakeholders of the community.

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Biosorption of Heavy Metals by Various Micro Organisms : A Review

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Abstract : Heavy metal pollution through various wastewater discharges from industries have currently become a key environmental concern throughout the whole world. Release and distribution of heavy metals has adverse affects on the environment via contamination of surface- and ground-water resources. The heavy metals present in the aquatic environment are considered to be the major inorganic contaminant for their mobility in the aqueous ecosystem, toxicity to various life forms and non-biodegradable nature. The heavy metals detrimental to human health include Pb, Hg, Cd, As, Cu, Zn and Cr. As and Cd cause cancer, Hg can cause mutations and genetic damage, while Cu, Pb and Hg can cause brain and bone damage. The problem of heavy metal pollution in aquatic ecosystems, including fish needs continuous monitoring and surveillance as these elements do not degrade and tend to bio-magnify in man through food chain. Hence, there is a need of constructing effective strategies for removal and proper management of heavy metals. The commonly adopted methods for removing the heavy metal ions from aqueous streams includes chemical precipitation, lime coagulation, ion exchange, reverse osmosis and solvent extraction. These so-called conventional methods are usually ineffective when the metal concentration in the effluent is low. These methods are also non-selective, costly and non eco-friendly. Biosorption, the process of passive cation binding by dead or living biomass, represents a potentially simple and cost-effective way of eliminating toxic heavy metals from industrial waste waters. While the abilities of various microorganisms to remove metal ions from solutions have been extensively studied, fungi have been recognized as a promising class of low-cost adsorbents for removal of heavy-metal ions from aqueous waste streams. Algae, fungi and bacteria differ from each other in their constitution, giving rise to different mechanisms of metal biosorption. Adsorption process may be an alternative technology for the removal of heavy metals, which are present in very low concentration in the aquatic environment. In recent times, significant improvements were made in both efficiency and economy for removal of heavy metals and metalloid (arsenic) from water using adsorbents. But less attention was paid to recycling of used adsorbents and recovery of the heavy metals from the desorbing agents. The main objective of this review paper is to discuss the available information on heavy metals removal by utilization of microbial biomass and scrutinize the practicality of exploiting them for heavy metal remediation.

Key Words: Biosorption, Heavy Metals, Adsorbents, Microorganisms, Wastewater

Introduction

The soil and water contaminations are frequently occurred by toxic heavy metals and organic pollutants as a consequence of human activities. Several toxic metals (Cd, Cu, Hg, Pb, Mn, As, Ni,

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Non-relativistic reduction of spinors, new currents and their algebra

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Abstract

A specific mapping is introduced to reduce the Dirac action to the non-relativistic (Pauli - Schrödinger) action for spinors. Using this mapping, the structures of the vector and axial vector currents in the non-relativistic theory are obtained. The implications of the relativistic Ward identities in the non-relativistic limit are discussed. A new non-abelian type of current in the Pauli - Schrödinger theory is obtained. As we show, this is essential for the closure of the algebra among the usual currents. The role of parity in the non-relativistic theory is also discussed.

1. Introduction

The low energy effective description of a system usually requires the study of a non-relativistic (NR) field theory. In general, however such theories and their symmetries are difficult to handle due to the occurrence of a universal time so that a systematic covariant formulation is no longer available. Possible ways are to construct the galileo invariant wave equation adopting Dirac's procedure [1] or, alternatively, to abstract the NR limit of the corresponding relativistic theory

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SUPPLEMENT ARTICLE

Elimination or Resurgence: Modelling Lymphatic Filariasis After Reaching the 1% Microfilaremia Prevalence Threshold

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The low prevalence levels associated with lymphatic filariasis elimination pose a challenge for effective disease surveillance. As more countries achieve the World Health Organization criteria for halting mass treatment and move on to surveillance, there is increasing reliance on the utility of transmission assessment surveys (TAS) to measure success. However, the long-term disease outcomes after passing TAS are largely untested. Using 3 well-established mathematical models, we show that low-level prevalence can be maintained for a long period after halting mass treatment and that true elimination (0% prevalence) is usually slow to achieve. The risk of resurgence after achieving current targets is low and is hard to predict using just current prevalence. Although resurgence is often quick (<5 years), it can still occur outside of the currently recommended postintervention surveillance period of 4–6 years. Our results highlight the need for ongoing and enhanced postintervention monitoring, beyond the scope of TAS, to ensure sustained success.

Keywords. lymphatic filariasis; resurgence; elimination; modelling; breakpoints; thresholds; postvalidation surveillance.

Elimination of lymphatic filariasis (LF), a filarial nematode infection that falls under the umbrella of neglected tropical diseases, has been on the global agenda since publication of a 1993 report by the International Task Force for Disease Eradication that identified it as 1 of 6 human diseases deemed potentially eradicable with current tools [1]. This led to the adoption of World Health Organization (WHO) resolution 50.29 in 1997, calling for the elimination of LF as a public health problem, with mass drug administration (MDA) as the main strategy. WHO launched the Global Programme to Eliminate Lymphatic Filariasis in 2000 and the resulting global initiative has seen unprecedented international scale up [2].

Elimination as a public health problem (EPHP) is operationalized for LF by the WHO as passing a series of transmission assessment surveys (TAS) that were initially designed to test for a microfilariae (mf) prevalence of less than 1% in areas where *Anopheles* or *Culex* are the main vector; where *Aedes* is the main vector this is 0.5% [3]. As new diagnostics have become available, the current measure used is an antigenemia prevalence of 2%, as a conservative proxy for the historical 1% mf prevalence. Current MDA guidelines advise a minimum of 5 rounds of treatment before a pre-TAS is used to determine whether a first full TAS should be conducted, known as TAS-1. MDA can be stopped if TAS-1 is passed. Two subsequent surveys must also be passed before EPHP can be validated, TAS-2 and TAS-3, each within 2–3 years of the previous assessment.

Reaching <1% mf prevalence was expected to naturally lead to elimination of transmission, following the example of epidemiological studies in China from the 1990s [4]. As of 2017, 11 of the 73 countries listed by WHO as endemic for LF have been validated for EPHP, with 10 more under postintervention surveillance and 46 currently delivering ongoing MDA [5]. The required treatment duration can be considerably longer than the initially anticipated 5–6 years, possibly due to unfavorable transmission or suboptimal program performance [6]. Ten countries have yet to begin MDA [2, 6].

However, recent evidence suggests that the TAS is not capable of detecting ongoing transmission; an example is the low-level persistence in some regions of Sri Lanka despite passing TAS and validation of EPHP in 2016 [7]. These findings prompt concerns that halting interventions could result in

[a]J. M. P. and E. L. D. contributed equally.

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PLOS | NEGLECTED TROPICAL DISEASES

RESEARCH ARTICLE

Economic performance and cost-effectiveness of using a DEC-salt social enterprise for eliminating the major neglected tropical disease, lymphatic filariasis

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Data Availability Statement: All relevant data is provided in the manuscript. The codes used in this paper are freely available on Github. https://github.com/EdwinMichaelLab/DEC_Salt_Haiti_LF.git.

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Abstract

Background

Salt fortified with the drug, diethylcarbamazine (DEC), and introduced into a competitive market has the potential to overcome the obstacles associated with tablet-based Lymphatic Filariasis (LF) elimination programs. Questions remain, however, regarding the economic viability, production capacity, and effectiveness of this strategy as a sustainable means to bring about LF elimination in resource poor settings.

Methodology and principal findings

We evaluated the performance and effectiveness of a novel social enterprise-based approach developed and tested in Léogâne, Haiti, as a strategy to sustainably and cost-efficiently distribute DEC-medicated salt into a competitive market at quantities sufficient to bring about the elimination of LF. We undertook a cost-revenue analysis to evaluate the production capability and financial feasibility of the developed DEC salt social enterprise, and a modeling study centered on applying a dynamic mathematical model localized to reflect local LF transmission dynamics to evaluate the cost-effectiveness of using this intervention versus standard annual Mass Drug Administration (MDA) for eliminating LF in Léogâne. We show that the salt enterprise because of its mixed product business strategy may have already reached the production capacity for delivering sufficient quantities of edible DEC-medicated salt to bring about LF transmission in the Léogâne study setting. Due to increasing revenues obtained from the sale of DEC salt over time, expansion of its delivery in the population, and greater cumulative impact on the survival of worms leading to shorter

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19. The Ethics of Buddhist Philosophy and its Applicability to Modern Society

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Siddhartha Gautama Buddha was an ancient Indian philosopher and spiritual leader born in northern India in the sixth century B.C. The Buddha sought to evolve and propagate a social code of conduct applicable to everyone. Ethics basically is the study of principles relating right and wrong conduct. The basic concepts and fundamental principles of ethics is to develop decent human conduct. It includes study of universal values such as the essential equality of men and women, human and natural rights, obedience to the law of land, concern for health and safety and increasingly, also for the natural environment. Ethics are important and lasting beliefs or ideals shared by the members of a culture about what is good or bad and desirable or undesirable. In the philosophy of the Buddha, we have an analytical study of ethical concepts and theories as well as positive recommendations to lead a way of life.

In this context the present article would seek to find out the main principles of ethics that have been enunciated in the Buddhist philosophy. The main focus of the paper will be on human ethics and values as have been propagated by the Buddha to uplift the moral values of human mankind. In this connection the article would seek to see the applicability of the ethics of the Buddhist philosophy to the technologically developed complex modern society of today. Here the 'applicability' means how the ethical values of Buddhist philosophy can pose as a panacea to all the ills and evils of modern human society.

The Buddhist ethics has an close connection with social philosophy as well. Values have major influences on a person's behaviour and attitude and serve as broad guidelines in all situations. The Buddha introduced the idea of placing a higher value on morality and the equality of people. Buddhist values have inculcated a respect for the environment and a realistic attitude towards the importance of material things, an attitude which sees the folly of plundering and extravagantly wasting what cannot be replaced. Buddhism has not encouraged ideas o dominance of man on environment and on his fellowmen.

The Indian term for ethics or morality used in Buddhism is **'Śīla'**. **'Śīla'** in Buddhism i one of three sections of the **'Noble Eightfold Path'**, and is a code of conduct that embraces straint with the principal motivation of being non-violent,

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Feminist Discourses and the Study of Religion

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Abstract:

The main strategy of this paper is to analyze and examine with critical outlook about feminist discourse and the study of religion. Feminism is vibrant theory which voices in favor of women rights at par with male rights. Feminism in general goes against religious sanctions. Ironically, the impact of religion is colossal even to women. It reveals that majority of women are the pathfinders of religious matters. They assemble at large in Christian Church, religious temple. Thus nobody can deny the impact of religion in feminist discourse. This paper attempts to substantiate at length the role of religion, conventional or new, in feminism. Feminism does not bear any sense if it contradicts with religion. In fact true religion guides feminist discourse in proper manner.

Key words: ***Feminism, Religion, women right, Christianity, conventional religion.***

Prologue of the paper

Feminism still is an ongoing discussion and debate in the arena of philosophers as well as intellectuals. Many would say that this issue does not bear any sense and other would say that even in the twenty first century interactions of feminism deserves worthy. Of course, there are various perspectives in feminism of which religion is the central. The main strategy of this paper is to explain and examine feminist interaction in the study of religion. There is no question of doubt in saying that religion is *all about of human life*. Many would conceive religion as a way of life. Some other would say that religion is culture. [i]As a result of that the influence of religion in human life is colossal. A man perhaps can survive without science but he cannot survive without religion. Religion as such determines the value or meaning of life in the true sense of the term. People do engage with religion since "religions are both in and of the social, and therefore will always, and already, reflect the mores, ideas, concerns, orientations, and ethos of the social body they emerge from or are adapted to." [ii] Therefore, one may conceive religion as counter-discourses to respective social bodies. Anyway the study of religion has been an important discipline when we are going to discuss about feminist thought. This does not make sense to say that the study of religion is devoid of feminists. In the recent studies, it is reflected that the feminist theories in the field of the study of religion have tended to be ignored. The resistance of feminist analyses in the study of religion is not difficult to comprehend. In fact, recent feminists suggest that the so-called *dogmatic religion* appears as a stumbling block before women empowerment. It is reflected mainly in the third world countries where the role and dictation of religion take the upper hand in everyday life. Country like India is the hub of spiritualism where there is a religious way of life. If we go through the main religious scripts of Indian literatures, we find it clearly and distinctly religious prescriptions for women. Modern feminism talks with regard to common sense and reason but the so-called religious prescriptions recommended by Indian religious scriptures are based on spiritualism and divinity. It is purely internal. It is a sort of divine revelation which remains incoherence with modern materialistic interpretation of science and common sense. This is where religious conflicts appear.

The message of Feminism

What then is feminism? In this regard we have to explain two feminist terms, such as, *androcentrism* and *misogyny*. Androcentrism proposes to be gazing from 'human' eyes at 'human' subjects but its understanding and interpretation of human is primarily *male and masculine*. Here the term 'man' is said to be inclusive of both men and women conceptually. However, in practice man represents only the male of the species and not the female. Thus there lies the problem. Even in the linguistic and conceptual levels, the domination and subjugation of women by men is clearly visible. If we use the word woman instead of the word human we can see that the term woman refers to a specific group and cannot include men even though we have the general perception that all humans are equal. Thus, as per as androcentrism is concerned men or the male represent as the model of the human species. Accordingly, it can be said that the masculine 'generic' does not really function as a generic, but rather as *an exclusionary category*.[iii] Thus in conceptual and language levels there we find gender exclusive language validates the experience and viewpoint of one sex over the other. Male sex enjoys the privileges with the universal and in this regards all others are marginalized in the moment when they are particularized. This actually creates a huge gulf between male and female. The universal point of

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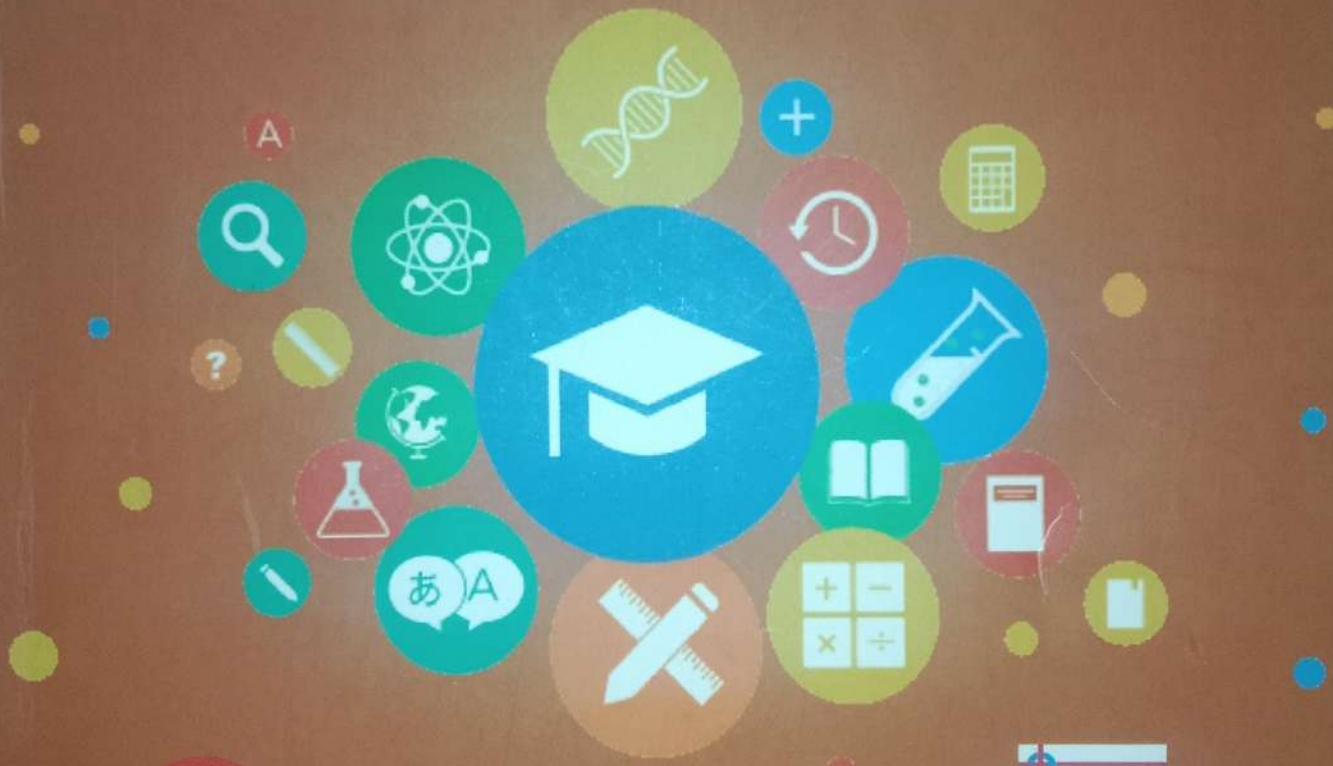

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Devadasi - A System of Violence on Dalit Women

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Abstract : Dalits have had lowest social status in the traditional Hindu social hierarchical structure. They are often victims of civil, political, economic, social and cultural violations, including sexual abuse and violence. From this community a lot of dalit women primarily live in South Asia, mainly in Bangladesh, India, Nepal, Pakistan and Sri Lanka. Dalit women sometimes have to face brutality at higher rates in form of forced prostitution such as "devadasi" system. This system is prearranged specifically for Dalit Women and it is an old and gruesome religious practice whereby parents sacrifice their daughter for a temple deity and she ties the knot with that deity. The marriage happens before the girl reaches puberty. Behind this religious scene actually these young girls are used to push into prostitution various state governments have enacted laws to stop such practices, but the tradition remains entrenched in some parts of the country, especially some southern states. Our paper will get involved in describing their lives and their miserable conditions. In ancient times after becoming devadasis, these young women used to take care of the temple, help out with other rituals of temple and perform dances during ceremonies. But during medieval periods, unfortunately the affluent society started having lust for these devadasi's. They (devadasis) served or rather sexually satisfied the priests and inmates of the temple and local lords and other men of money and power in the village. Still now there are some deprived devadasis in some areas where they are leading their life with past miserable memories and silently they are being subjugated. A sustainable solution to eradicate the practice of devadasis requires empowering these women such a way so that they can speak up about their issues. All policy makers, NGOs, leaders need to identify the remaining devadasis in present time and provide them with the means to economically empower themselves.

Key Words : Hindu Caste System, Dalit Women, Devadasis, Memories, Solution to the Problem.

Introduction

Sexual exploitation of children is a serious and widespread problem in India and it is also an international epidemic. But most of the cases related to sexual abuse go underreported and eventually they do not get any protective and therapeutic assistmnce.ain some cases young girls are persuaded or forced into exchanging sexual activity for money, gifts or status. Sexual exploitation of minors is perhaps a worst thing in India. In fact India suffers from an extremely high rate of sexual exploitation of minors.

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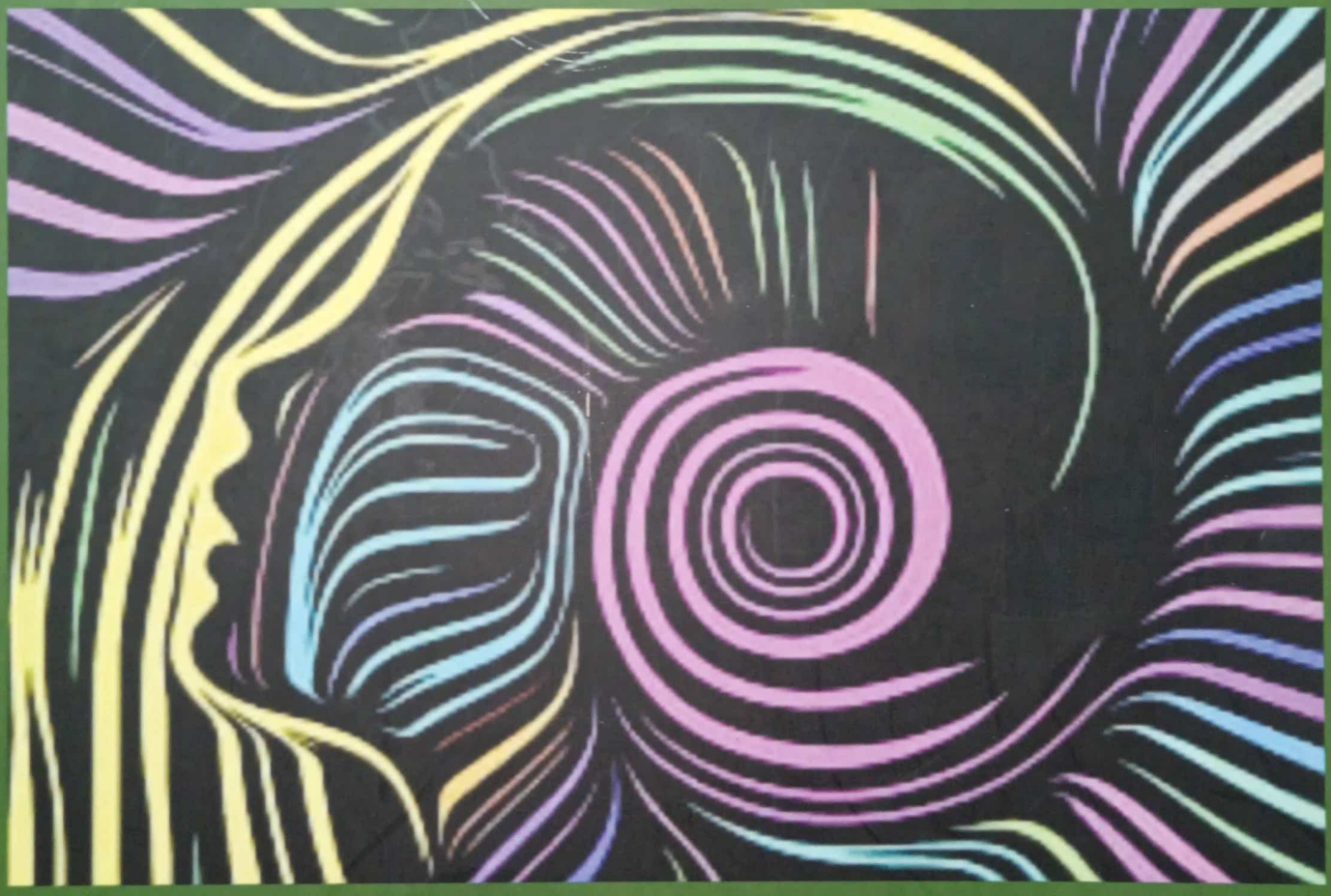

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Analysis of Best Practices-With Reference To Different Institutions

Dr. Laxmi Saha

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Abstract : The mission of higher education department is to expand the access and qualitative improvement in the higher education by providing opportunities with equity to all and specially to the vulnerable sections, by initiating new policies to strengthen research and innovations, by promoting the quality of higher education by investing in infrastructure, faculty and improving governance and institutional restructuring by the inclusion of deprived communities etc. To meet these various goals new practices and innovation are being adopted by the higher education institutions (HEIs). The department of higher education has been given various grants, facilities and benefits to develop the higher educational institutions. The institutions are being given accreditation by NAAC on the basis of its performance. NAAC has provided 100 points to innovations and best practices.

Keywords : NAAC, Globalization, Educational Institutions

Introduction

Though India is having one of the largest education system in the world, it now is facing new challenges of new era with changing dimensions. Therefore, the educational institutions are adopting various mechanisms to sustain in the tide of globalization. The world class famous institutions use technology for giving need based quality education to all. The goal of these institutions is not only to reach the masses but to give adequate knowledge for implementing all those in their future lives. That is why the famous universities of the world are providing knowledge to the students with the help of technology. The use of technology has helped students to enhance their skills using various digital learning process and it has changed the face of education and provided more opportunities to the students. Technology increased students' engagement and motivation towards learning. The main use of technology is to have online classes and it also enables students to gain need based quality education. The best Universities of abroad embraced the "flipped classroom" format where students get video lectures which they can use at home and in their classrooms they apply their knowledge solve problems and discuss examples. Naturally these online video classes give extra knowledge to them. The top class Universities make their video lectures available to the world through online so that any one from anywhere can access to those all and other countries are also being encouraged with these policies.

India has developed well system of higher education following the process of modern Universities. But the ultimate goal of reformations is yet to meet. The outcome of higher education agencies is

Institutional social responsibility, its outcome: Students developed organisational skills, improved communication, initiative for conducting events, common room, day care centre increased satisfaction levels of female staff.6

Conclusion :

After seeing the different grades and scores of different colleges it has now become clear that colleges who undertake best practices have positive impact on their assessment and accreditation process earning them expected scores and grades.Some best practices have global effect and it helps to increase the overall fame of aninstitution. These practices add extra value to students' life and it also helps to make them socially and morally aware.

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FULL LENGTH ARTICLE

Interrelationship using molecular markers amongst varieties of *Plantago ovata*. forsk, Plantaginaceae

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Plantago ovata Forsk. known, as isabgol in India is an important medicine for all kinds of digestive ailments, and has a wide demand the world over. It is widely recommended in the treatment of constipation, dysentery, and stomach ulcers. The plant is also important as fodder, in ice cream making and also as a common gelling agent. The jelly - like mucilage (Arabinoxylan) is produced when psyllium is soaked in water. The measurement of genetic diversity in plant germplasm has been revolutionized by the use of molecular markers. Several methods enable the genetic characterization of cultivars. Various methods have been developed for the identification and typing of prokaryotic and eukaryotic organisms at the DNA level (RAPD; a PCR based technique, RFLP; based on unique patterns of restriction sites etc.). These methods differ in their ease of use, cost, and reproducibility of results. The ideal genotyping method produces results allow unambiguous comparative analyses and the establishment of reliable databases. Among the newest and promising methods is amplified fragment length polymorphism (AFLP) analysis and Internal Transcribed Spaces (ITS) are important. The present authors have used five different varieties of *Plantago ovata* to draw the genetic relatedness through AFLP studies along with data obtained from Internal Transcribed Spacer (ITS) studies. Their data proved to be in accordance with earlier work done using random amplified polymorphic DNA (RAPD) by the same lab. The molecular technique on specific sequenced based data proved to be trustworthy, appropriate and more detailed characterization for ascertain the taxonomic relationships.

Key Words: Internal Transcribed Spacer (ITS), external transcribed sequence (ETS), non-transcribed spacer (NTS), amplified fragment length polymorphism (AFLP), Basic Local Alignment Tool (BLAST).

INTRODUCTION

Isabgol, the common name in India for *P. ovata*, comes from the Persian words *isap* and *ghol*, meaning "horse ear," which describes the shape of the seed. India dominates the world market in the production and export of psyllium. *Plantago ovata* is an important medicine for many kinds of digestive ailments and has a wide demand the world over. It is widely recommended in the treatment of constipation, dysentery, and stomach ulcers.

Molecular markers that present at specific locations of the genome are specific fragments of DNA that can be identified within the whole genome. Individuals can

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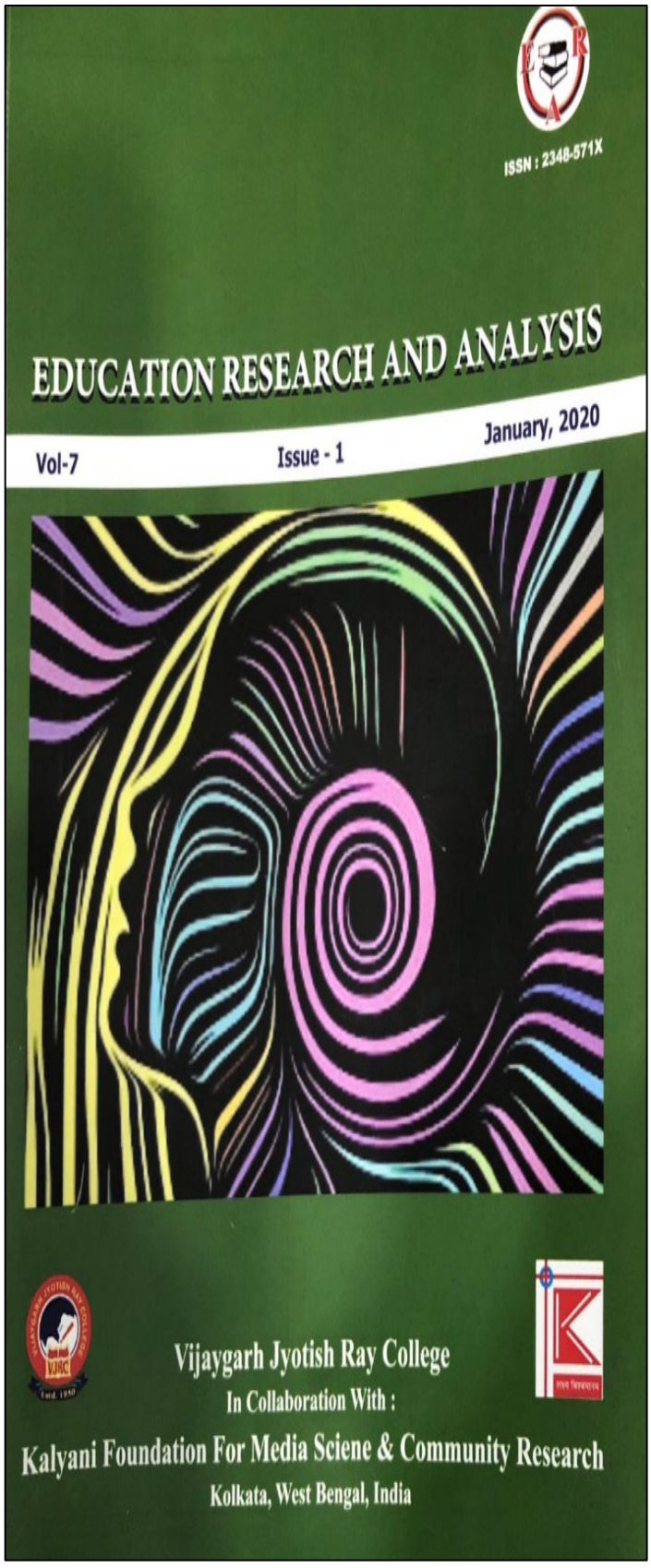

BEST Practices for a Better Future

Urmi Roy

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Abstract : Many different types of practices are used to maintain the quality of an Institution. Best practice or method gives better result to any other alternatives. Any institution should follow best practices to maintain quality of the students as well as of the institutions. The assessment of student achievement is the basis of effective teaching and learning. Maintaining the quality of an institution not only means the educational quality of the students but also the environment of the institution. A person working in an organization, will gain inspiration for the environment of the workplace that should be maintained and can be improved by following possible best practice. All the departments should follow few protocols continuously to improve their environmental performance. Organizations should follow new modifications to get inspiration for their environmental work and to protect the environment.

There are few practices which can be followed in regular basis to get better environment at college or teaching institutions. Any teaching institution should follow techniques to save energy and remodel their laboratories to make it more energy efficient. There are different approaches which can be considered as best practices like waste recycling, water conservation, paper saving etc. These practices will guide the students and members of the colleges for the continuous improvement in environment within the college and also the community.

Keywords : Best Practices, Environment, Saving Paper, Saving Electricity and Saving Water, Recycling.

Introduction

Education helps people and societies with the equipped skills, knowledge and perspectives to live in a changing world. Quality education is a key element for the overall development of the educational institution. 2005 to 2014 have been declared as the Decade of Education for Sustainable Development (the UN). But there have been very few studies on the costs and benefits of different forms of education within the fields of environmental conservation and sustainable development. There are very limited number of projects quantified for the conservation and sustainable development of educational institutions. Without quantitative data it is almost impossible to translate theoretical research concepts into practical actions. The conservation and sustainable development strategies need practical implementations tosucceed.

The funding for conservation is limited. So it is very important to deciding where to invest, how

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Original Article

Deregulation of *H19* is associated with cervical carcinoma

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ARTICLE INFO

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ABSTRACT

CACX is one of the most common cancer affecting women world-wide. Here, expression microarray analysis revealed 8 over-expressed transcribed pseudogenes (*GBP1P1*, *HLA-DRB6*, *HLA-H*, *SLC6A10P*, *NAPSB*, *KRT16P2*, *PTTG3P* and *RNF126P1)*, down-regulated 7 lincRNAs (*H19*, *MIR100HG*, *MEG3*, *DIO3OS*, *HOXA11-AS*, *CD27-AS1* and *EPB41L4A-AS*) and 6 snoRNAs (*SNORD97*, *SNORD3A*, *SNORD3C*, *SNORD3D*, *SNORA12* and *SCARNA9*) as DEncGs (log2 fold-change ≥ ± 1.0) in CACX. Consequently, down-regulation of lincRNA *MEG3* and over-expression of pseudogenes, *GBP1P1* and *PTTG3P* in the microarray analysis were found concordant with the real-time quantitative PCR results upon validation. Then, Ingenuity® Pathway analysis (IPA®) analysis with deregulated DEncGs identified functionally important gene, *H19*. Further, validation (n = 52) of expression confirmed frequent downregulation of *H19* with significant association with its deletion (LOH) and promoter methylation (n = 128) in CACX. Moreover, clinicopathological analysis found Indian CACX patients (n = 26) with alterations of *H19* by deletion or, promoter methylation with concomitant low expression have poor prognosis.

1. Introduction

Carcinoma of the uterine cervix (CACX) is the third most commonly diagnosed cancer and the fourth leading cause of cancer deaths in female worldwide [1]. In developing nations like India, CACX accounts for approximately 1,22,844 new cases and 67,477 deaths annually [2]. Infection of high-risk human papilloma virus (hrHPV) is the primary causal agent of CACX, though other etiological factors like oral contraceptives, early marriage, multiparity, sexual promiscuity, etc. also contribute to the development of CACX [3]. But long latency period of tumor development after hrHPV infection indicates involvement of additional genetic and epigenetic alterations leading to deregulation of cellular pathways [4]. These alterations affect both protein-coding and non-protein coding genes [4–6].

Non-coding RNAs (ncRNAs) can be classified as long (> 200 nt) and short (< 200 nt) ncRNAs [7,8]. The small ncRNAs is represented by RNA families like microRNAs (miRNAs), short interfering RNAs (siRNAs), piwi-interacting RNAs (piRNAs), small nuclear RNAs (snRNAs), small nucleolar RNAs (snoRNAs) and small cajal body specific RNAs (scaRNAs). While the long ncRNAs were broadly classified into long non-coding RNA (lncRNA), long intergenic non-coding RNA (lincRNAs), very long intergenic non-coding RNA (vlincRNA), macro RNA, promoter-associated long RNA (PALR), and sometimes circular RNAs (circRNAs), natural antisense ncRNAs (asRNAs, NATs) and transcribed pseudogenes [7,8]. Beyond the obvious limelight on protein-coding genes, recent research on these non-coding transcripts showed they are also equally functional and can emerge as a major source of molecular biomarkers and therapeutic targets in several cancers including CACX [9]. Among the ncRNAs, deregulations of miRNAs in CACX have been heavily studied butmolecular status of other classes of

Abbreviation: CACX, cervical cancer; LincRNA, long intergenic non-coding RNA; DEncGs, differentially expressed non-coding genes; snoRNAs, small nucleolar RNAs; LOH, loss of heterozygosity; PCR, polymerase chain reaction

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Vijaygarh Jyotish Ray College
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Kalyani Foundation For Media Science & Community Research
West Bengal, India.

Roof Top Rainwater Harvesting

Mahua Bhattacharya
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Abstract : In consonance with the present day objective of attainment of quality in higher education in diversified manners through adoption of various new concepts and in order to in-still confidence, ingenuity and creativity amongst all associated with the institution, lot of good practices are being adopted by different institutes which add admirable values. NAAC encourages these efforts of innovativeness in devising concepts and their implementation.

The rapid increase in population and intensification of urbanisation and industrialisation, rapid depletion and decline of storage of freshwater has become a major and serious challenge worldwide and it is now an urgent need to formulate new water management strategies to devise ways for other sources of water in addition to the existing resource. The use of water collected from Rainwater Harvesting is one of such areas that can be of additive value to our requirement of freshwater. At present we only use 36% of total runoff. Rainwater harvesting means collection of rainwater for effective use instead of going it as waste as runoff. This can be done in any area, both at individual and community level.

Keywords : Catchment, Collection System, Utilisation System

Introduction :

The greatest challenge that we confront during our time is the rapid decline in the availability of fresh water and if we are not aware of this threat, in future there will be scarcity of water .This is definitely a major constraint for future development.

Increase in population , urbanisation, industrialisation at a faster pace and more and moreareacoverageforirrigatingtheagriculturallandstoincreasefoodproductivity are the major reasons for higher quantity of use of freshwater. India's urban population will grow to about 52% by 2050. So there will be enormous pressure on the resource of water due to escalatingdemand.

Water as resource:

To understand the gravity and severity of the present nature of crisis in India we need to go through the following information: (considering area)

1.	Total Surfacewaterresources	1880 km^3
2.	Total usablegroundwaterresources	418 km^3
3.	Total usable surfacewaterresources	690km^3
4.	Total usable waterresource (2+3)	1108 km^3

Source : Central Water Commission

Impleting Best Practice Among College Students Through 'MEDITATION'

Dr. Samiparna Rakshit

[Assistant-Professor of History, Vijaygarh Jyotish Ray College, West Bengal, India]

Abstract : This paper enumerates an example of best practice that will help in constituting excellence in college teaching. This instance of best practice will represent thebroad range of effective action that a teacher should follow, and would make requisite conditions that teachersestablish, to facilitate learning. This would help to serve more as a reference to the scope of excellent teachingtechniques than as a source of enlightenment.

Keywords : Meditation as Best practice, Historical Sanction of Meditation, Utility of Mediation, Scientifically Proven Facts of Meditation

Introduction

Best practices benchmarking is the initiative of the National Assessment and Accreditation Council (NAAC). It also sets the stage for a discussion of the identification, sustenance, dissemination and adaptation of best practices and of theirtransference from one system to the other. Benchmarking is an increasingly popular tool in industry and is used extensively byboth manufacturing and service organisations.In order to be applied effectively to education, benchmarking may be seen as anongoing systematic means for determining the best practices of the best-in-classinstitutions, and using the information as basis for goals, strategies andimplementation. More simply best practices benchmarking for quality enhancementwould be 'finding and implementing the best practices which would lead to significantimprovement in the quality of educational provisions'.1

Establishing benchmarks through best practices is not a new concept in highereducation in the foreign countries. It has already been tried by the Association of Commonwealth Universities(ACU). In 1996 Commonwealth Higher Education Management Service (CHEMS),a sub system of ACU launched an international "University ManagementBenchmarking Club" for universities from the Commonwealth.2

Climate Setting of a Class

Before going into narration of the adverse situation a college teacher usually faces in a huge class I would opt for explaining the term 'Climate Setting'. 'Climate Setting' is a very much familiar term among the educationists nowadays. It means to regulate the physical and mental climate of the students before starting off the teaching process. A large portion ofteaching effectiveness involves setting the stage. We should solve comfort issues first and make the learning path smoother. Research shows that successful teachers spend 10%of classroom time optimizing the arrangement of the physical

Some Innovative and Best Practices for Colleges with Respect to Environmental Consciousness and Sustainability

Dr. Saswati Gayen

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Abstract : Environmental pollution is the unfavourable alteration of our surroundings, wholly or largely as a by product of man's actions, through direct or indirect effects of the changes in the energy pattern, radiation levels, and chemical and physical constitution and abundance of organisms. Environmental pollution is a global problem and is common to both developed as well as developing countries, which attracts the attention of human beings for its severe long-term consequences. The decline in environmental quality as a consequence of pollution is evidenced by loss of vegetation, biological diversity, excessive amounts of harmful chemicals in the ambient atmosphere and in food grains, and growing risks of environmental accidents and threats to life support systems. It should be the responsibility of every institution to enhance learning by students and faculty of the environment in which they live and to improve the quality of the environment of their campus and the communities around them. Whether motivated by enforcement actions, or own consciousness colleges and universities are spending more resources than ever before to comply with their environmental, health and safety obligations as well as explore their opportunities to improve environmental performance and sustainability. A green and pollution free campus provides an ideal environment for student and the employees to work with. This review paper will focus on the various best practices that can be implemented by higher education institutes for management of environmental issues and move the institution towards sustainability. Some innovative and best practices implemented by institutions across India are also discussed.

Keywords : Environment, Pollution, Sustainability, Best Practices.

Introduction

With higher education becoming an international service, there is a growing concern in the world about its quality, standards and recognition. India has one of the largest and diverse education systems in the world. Privatization, widespread expansion, increased autonomy and introduction of Programmes in new and emerging areas have improved access to higher education. At the same time, it has also led to widespread concern on the quality and relevance of the higher education. To address these concerns, the National Policy on Education (NPE, 1986) and the Programme of Action (PoA, 1992) spelt out strategic plans for the policies, advocated the establishment of an independent National accreditation agency. Consequently, the National Assessment and Accreditation Council

The Best Practice in Higher Education and The Empowerment of ICT in Teaching- Learning system

Dr. Sampa Debnath

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Abstract : The responsibility of Higher Education Institutes (which include University and College) is to provide higher level education by enhancing the scope of study after completion of basic level of education. To carry out this responsibility, the higher Education Institute (HEI) should adopt some innovative practices which can initiate value education and the awareness of social responsibility and good citizenry. These good practices are called best practices. The best practice benchmarking is essential for systematic implementation of best practice in the institution and up gradation of quality initiation. Quality has become the mile stone of education in the 21st Century in the context of new social realities. Quality in higher education is a multi-dimensional, multilevel, and a dynamic concept. Ensuring quality in higher education is amongst the foremost challenges being faced in India today. Identification of best practice which is suitable for specific HEI, is very much important. The best practice depends upon the background of the HEI.. In this 21st century "Empowerment of Information and Communication Technology (ICT) in teaching–learning System" is one of the good practice. Due to smooth implementation technique by the HEI and wide acceptance by the students, this technique is becoming more and more popular day by and wide acceptance of ICT in teaching-learning system results the maintenance the quality. The role of best practice is to focus the quality sustenance and enhancement and management, faculty have a critical role in implementation of best practice. Finally, students, for whom the whole system is designed, should desire and demand the best.

Keywords: Best Practice, Higher Education, ICT

Introduction :

Information and communications technology (ICT) is an extensional term for information technology (IT) that stresses the role of unified communications[1] and the integration of telecommunications (telephone lines and wireless signals) and computers, as well as necessary enterprise software, middleware, storage, and audio-visual systems, that enable users to access, store, transmit, and manipulate information. ICT can be accessed via internet. Information and communication technology (ICT) has changed many aspects of the way of our

Approaches and Methodologies of Best Practice in Research, Consultancy and Extension in Higher Education

Dr. Shilajit Barua

[Assistant Professor, Dept. of Microbiology, Vijaygarh Jyotish Ray College, West Bengal, India]

Abstract : Academic system in our country had assumed research and teaching as mutually exclusive activities. Such bifurcation was because, research here is considered to be an intellectual isolation by certain group of academicians and placed above teaching with respect to academic status. The National Assessment and Accreditation Council (NAAC)had aptly identified the integral connection between teaching, research, research extension and consultancy. Throughout the world, in renowned academic institutions, teaching, research extension and consultancy has been considered as a platform for research, wherein, research-industry linkage, research-service amalgamation and researcheducation technology inter-dependence are increasingly realized. Such approach could be the foundation of development in developing countries like India. Furthermore, considering fast development in all sectors of human activities it will be deleterious for research to stagnate in confinement. This article focuses on the aspects of best practices in research, consultancy and extension in higher education.

Keywords : Best practice, Research, Consultancy, Extension.

1. Introduction

Progress and development of a nation depends on the standard of excellence set by its institutions of higher learning, because centers of academic excellence are measure of human development which speeds up national growth by generating creative talents. Democratizing excellence through adopting best practices brings out quality enhancement that contributes to advancement of the society. It has become essential to adapt best practices in research to make it comparable to global standards.

Like research, consultancy and extension are also of equal importance. Gone are the days when necessity was the mother of all inventions. Globalization, liberalization and privatization have now made many inventions celebrated as mothers of new necessities. Therefore, successful societies now are those who can adapt themselves to changing lifestyles and technologies. Information, innovative knowledge, creative skills and wisdom are nowadays considered as pillars of national development. Abilities in earning consultancies are being measured as measure of efficiency of research and extension.

An ideal higher educational institute and associated personels should contribute to building of new knowledgebase and disseminate to its end users, i.e, anexcellent teacher has to be a good

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Kolkata, West Bengal, India

CONTENT

Premarital Blood Screening: A Newspaper Analysis and Survey among the Young People in West Bengal

Sumitra Banerjee

[Faculty, College of Nursing, Medical College and Hospital Kolkata Govt. of West Bengal]

Dr. Arnab Kumar Banerjee

[Assistant Professor, Dept of Journalism & Mass Communication, Vijaygarh Jyotish Ray College, West Bengal, India]

Abstract : b-Thalassemia is one of the major genetic disorders and present almost in every community. Thalassemia is caused by a genetic inability to make normal amounts of hemoglobin and it is transmitted genetically from parents to their children. Failure to synthesize the á or â chains of hemoglobin in balanced amounts results to hemolysis, anemia, and splenomegaly. There are about 240 million carriers of â-thalassemia worldwide, and in India alone, the number is approximately 30 million. The average *prevalence of â thalassemia* carriers is 3–4% in India and in West Bengal 3.92%. Every year, about 6 percent of the adult population in India are infected with sexually transmitted infections and reproductive tract infections (STIs/RTIs). Between the years 2007 and 2017, a total of 34.9 million episodes of sexually transmitted infections and reproductive tract infections (STIs/RTIs) were treated. As per the NACO report 2017, National adult (15–49 years) HIV prevalence in India is estimated at 0.22% . The total number of people living with HIV (PLHIV) in India is estimated at 21.40 lakhs and in West Bengal the figure is 1.44 Lakh in 2017. Awareness of the people regarding Premarrrital Blood Screening may contribute to the decrease of the above mentioned disease load. The present study was done on Premarital Blood Screening: A newspaper analysis and survey among the young people in West Bengal to assess knowledge, attitude and scientific temperament regarding Premarrrital Blood Screening .

Key Words : Premarital Blood Screening, Knowledge, Scientific Temperament, Matrimonial Advertisement

Introduction

Genetic diseases like Thalassemia, Sickle cell disease etc are very common in developing country like India. India has a huge burden with an estimated 100,000 patient with Beta thalassemia syndrome and 150,000 patient with Sickle cell disease, but few among them are optically managed . In 2017, 88,000 people in India were newly infected with HIV. There were 34,000 new infection among women and around 3700 among children (0-14 yrs). So prevention and control of HIV is very important to control HIV epidemic in India.Premarital blood screening is defined as conducting

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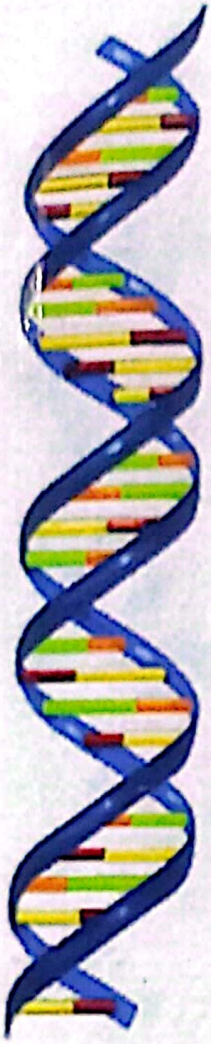

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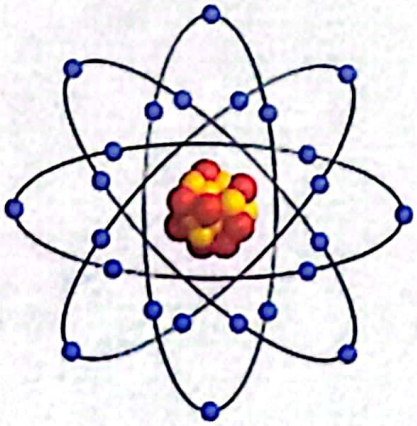

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CONTENTS

PART I

PART II

Section A

Real Time RT- PCR: The First Platform for Corona Virus Detection

Munmun Chatterjee*
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Abstract

For the detection of Corona virus present in human being, there are mainly two types of clinical tests available till date – Firstly, RT-PCR and Secondly, the Serological or Antibody test. RTPCR is the most common test to identify people currently infected with SARS-CoV-2. It works by detecting a segment of the virus's genetic material (RNA) present in nasal or throat swab of a suspected person. The accuracy of clinical test is determined by sensitivity and specificity. Sensitivity denotes the ability of a test to detect true positive where as specificity focuses on accurately identify people without the disease i.e. true negative. In this aspect, RT-PCR is considered as the gold standard for detecting many viruses in ideal condition where as antibody test takes about 1-2 weeks to detect the patient positive because antibody against SARS-CoV-2 or any other infection cannot be synthesized in patient's body immediately after infection.

Keywords:

SARS-CoV-2, RT-PCR, Serological test, RNA, Specificity, Sensitivity

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Luminescent rhenium(I) complex of azo ligand based on quinoline: Synthesis, characterization and computational investigations

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Reaction of 7-(quinolin-8-yldiazenyl)quinolin-6-ol, HL, (where H represents the dissociable proton upon complexation) based on quinoline with $[Re(CO)_5Cl]$ in toluene afforded brown colored product of composition $[Re(CO)_3L]$. The mononuclear Re(I) complex has been characterized unequivocally. Molecular structure of the complex *fac*-$[Re(CO)_3L]$ has been confirmed by single-crystal X-ray diffraction. The complex exhibited excellent photoluminescence behavior in solution state. The ground and excited-state geometries and absorption properties of the Re(I), complex has been further examined by DFT and TDDFT methods.

Keywords: Mononuclear Re(I) complex, X-ray structure, Photoluminescence, Life time, Computational studies

The synthesis and photophysical investigation of the transition metal complexes of heavier metal ions with d^6 electronic configurations, such as rhenium(I)[1], ruthenium(II)[2], osmium(II)[3], rhodium(II)[4] and iridium(III)[5] are still an active area in the field of photo-induced molecular devices[6-9]. This is due to their extensive applications in the field of energy conversion[10,11], sensing[12-14], and molecular electronics[15-17]. Apart from the other heavy metal complexes, Re(I) complexes of general formula *fac*-$[Re(CO)_3]^+$ are of growing interest due to their excellent luminescent properties and the origin has been attributed to the triplet metal Re(I) to ligand charge transfer (^{3}MLCT) excited state. More interestingly, the Re(I) complexes have potential efficacy owing to their unique combination of chemical stability, strong visible absorption, excited state reactivity, photo-redox chemistry and catalytic properties. The behavior of Re(I) complexes had attracted attention to exploit these materials for solar energy conversion, light emitting devices, electron transfer reaction, reduction of CO_2 in a homogeneous solution as well as at the electrode surfaces, chemi- or electro chemiluminescence detectors and in the field of bioimaging[18-27]. In this perspective, the utilization of chelating ligand having quinoline nitrogen as donor atom represents an important target when coordination of rhenium(I) metals is taken into consideration. The distinct coordinating ability of the nitrogen of the chromophoric quinoline ring induces the formation of the stable metal complex with a concomitant increase in their luminescent properties. The photophysical properties can be fine-tuned by modifying both the metal center and the ligand structure[28].

Keeping the aforementioned observations in mind, we have designed and synthesized mononuclear rhenium(I) quinolato complex with a tridentate (N, N, O donor) ligand having azo(N=N) function. The complexes are characterized by IR, UV-vis, ^{1}H NMR spectroscopic techniques. The complex formation has been authenticated on the basis of single crystal X-ray studies. The photophysical properties of the complex were also investigated. The ligand as well as the complex has different emissive nature and shows remarkably different quantum yield compared to the similar type of chromophoric moiety established by the author[29] earlier. It is interesting to note that the introduction of a nitrogen center in place of a carbon bought a huge jump in the quantum yield of the complex. To get a better insight into the geometry and the electronic structure, geometry optimization of the ground state and optical properties of this complex, density functional theory (DFT) and time dependent density functional theory (TD-DFT) studies have also been included.

Materials and Methods

$[Re(CO)_5Cl]$ (98% used) was purchased from Aldrich Chemical Co. All the chemicals and solvents

Gender Impact on Intergenerational Transfer of Education in India

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Abstract: Mobility is one of the pillars in the process of development. This lack of mobility means that many sections of the society are unable to reap the benefits of the phenomenal levels of economic growth of the country. Economists have looked at the persistence as a channel through which the inequality is transmitted across generations. In absence of mobility over generations, the gains from growth accrue disproportionately across the population and in particular some sections of the population are unable to take advantage of the opportunities that the growth process in the country has provided. For the benefits of the growth process to be distributed in a much more egalitarian manner, the population needs to be mobile, specially, in terms of increasing the level of educational attainment across generations. While the issue of intergenerational mobility in educational attainment has received some attention in other countries, the issue has received surprisingly little attention in the context of India. The absence of intergenerational educational mobility among the socially excluded classes in the developing countries in comparison to certain advanced groups is another manifestation of long-standing discrimination in terms of capability formation (educational attainment). India serves as an excellent case study because of the presence of diverse social groups and a long history of gender discrimination between them. In the present paper, we examine the extent of intergenerational mobility of education from father and mother to son and daughter, in term of educational attainment, respectively. We use India Human Development Survey (IHDS), Round II (2011-2012) dataset to examine the extent of educational mobility over generations in India across gender. In this regard, we would further like to see which factors turn out to be significant in the transfer mechanism.

JEL Classification: O12 ,J21 ,C31

Key Words : Intergenerational Transfer, Education, Gender, Social Groups, India

Introduction

India's rapid economic growth since the 1980s has been accompanied by increasing inequality in *outcomes*, raising widespread concern that it may be a reflection of growing inequality in *opportunities*. Inequality in opportunities across people – when different groups have unequal chances of acquiring assets, earn unequal returns to assets (for similar effort), or have unequal access to basic services —