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*Changing Perspectives of Language, Literature,
Science and Social Science*

Chief Editor

Dr. R. V. Bhole

'Ravichandram' Survey No-101/1, Plot
No-23, Mundada Nagar, Jalgaon (M.S.)

Dr. Mahadeo Walunj

Principal

College of Arts, Bhigwan, Indapur, Dist.
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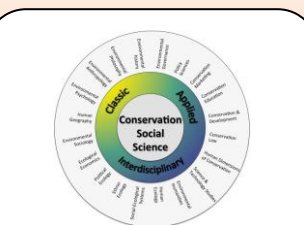
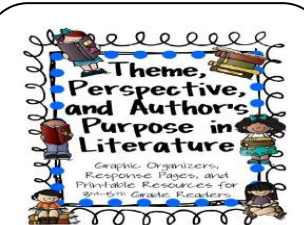
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A Study on Performance of Recovery Channels of Non-Performing Assets of Scheduled Commercial Banks in India in the Last Decade.

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Abstract:

In a developing country like India, there is a strong requirement for healthy and sound banking and financial system. In recent years Indian banking system witnessed many financial crises. The main reason for this financial crisis in the Indian banking industry is the increasing number of Non-Performing Assets. The financial system and banking industry are the backbones of the Indian Economy but rising numbers of NPAs gave a serious wound on the backbone of the Indian Economy. The study attempts to examine the performance of different recovery channels like Lok Adalats, Debt Recovery Tribunals, and SARFAESI Act in recovering the NPAs of public sector banks, private sector banks and foreign banks (Scheduled Commercial Banks) in India. The data has been analyzed by statistical tools such as percentage, average and analysis of variance (ANOVA). The study observed that the performance of Lok Adalats is considerably low compared to the other recovery channels and the performance of the SARFAESI Act is more effective.

Key Words: *Non - Performing Assets, Scheduled Commercial Banks, Lok Adalat, Debt Recovery Tribunals (DRTs) and SARFAESI Act*

Introduction

The lifeline of any modern economy is the banking sector. The success or failure of any economy is depending on how well a banking system performs. Banking institutions are creators and providers of credit. It is one of the financial institutions [intermediaries] of the financial system which performs a vital role in accepting deposits for lending to the various sectors of the economy. The performance of the bank is evaluated based on the profitability and the quality of assets. Good quality of assets refers to the efficient functioning of banks. The increasing number of non-performing assets weakens the banking sector and affects the entire economy badly. NPAs are problematic for banks since they depend on interest payments for income. NPA refers to a loan that is in threat of default. Once the borrower has failed to make payment of interest or principal for 90 days the loan is considered to be a non-performing assets.

Recovery Channels

The government of India and Reserve Bank of India have taken steps in direction of reducing and recovering NPAs through various recovery channels and minimize the burden of NPAs.

2.1. One Time Settlement Schemes

For solving an issue of NPAs banks have been advised to arrange one time settlement. In March 2000 The RBI issued guidelines for OTS scheme. All cases on which the banks have initiated action under the SRFAESI Act and also cases pending before Courts/DRTs/BIFR, subject to decree being obtained from the Courts/DRTs/BIFR are covered. However cases of wilful default, fraud and malfeasance aren't covered. As per the OTS scheme, for NPAs up to Rs. 10 crores, the minimum amount that ought to be recovered should be 100% of the outstanding balance within the account.

2.2. Lok Adalats

Lok Adalats were constituted under the Legal Service Authority Act, 1987. They help banks to settle disputes involving account in “doubtful” and “loss” category, with outstanding balance of Rs. 20 lakh. Debt recovery tribunals are empowered to arrange Lok Adalat to make a decision on cases of NPAs of Rs. 10 lakh and above. This mechanism has proved to be quite effective for quick justice and recovery of small loans.

2.3. Debt Recovery Tribunals (DRTs)

The DRTs are established by the government of India under the Recovery of Debts due to Banks and Financial Institutions Act of Parliament (Act 51 of 1993) for expeditious adjudication and recovery of debts due to banks and financial institutions. There are two types of tribunals establish under this act [i] Debt Recovery Tribunals (DRTs), and [ii] Debt Recovery Appellate Tribunals (DRATs). The Debt Recovery Tribunal is additionally the appellate authority for appeals filed against the proceedings initiated by secured creditors under the SARFAESI Act.

2.4. SARFAESI Act [2002]

Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act enacted by the government of India in 2002. Securitization may be a relatively new concept that's taking roots in India lately. SARFAESI Act deals with securitisation, asset reconstruction and security enforcement. The main

objective of SARFAESI Act is to strengthen the banks' right of recovery and to make a way for rapid recovery of NPAs.

Literature Review

Dr. Krishna Banana, V Rama Krishna Rao Chepuri (2016) in their study on Role of recovery channels in managing Non-Performing Assets in Scheduled Commercial Banks reveal that the performance of SARFAESI Act is more superior to the other recovery channels during the study period 2008-09 to 2014-15.

Singh V. R. (2016) has reviewed that gross NPA and net NPA of scheduled commercial banks have increased during the study period and NPAs reduce the earning capacity banks. The study also covers the performance of different recovery channels of NPAs among which SARFAESI Act is the most effective channel of NPA recovery.

U.Padmavathi, N.Srivani, and B.Madhavi (2017) conducted A Study on Performance of Debt Recovery Channels in Management of NPAs of Scheduled Commercial Banks in India in which they evaluate the recovery mechanism of NPA. Recovery of NPAs through SARFAESI Act is more effective than DRTs and Lok Adalat during 2013 to 2016.

Dheenadhayalan V. (2019) conducted a study on The Performance of Recovery Channels in Managing Non-Performing Assets in Scheduled Commercial Banks in India in which he found that the SARFAESI Act were the major contributing item in the NPAs recovery system followed by DRTs and Lok Adalats in India during the study period 2006-07 to 2016-17.

Objectives of the Study

1. To find the preventive as well as remedial measures to overcome the increasing problem of NPA.
2. To study the performance of recovery channels of NPAs.
3. To compare the performance of Lok Adalats, DRTs and SARFAESI Act with each other.

Hypothesis of the Study

H_0 = There is no significance difference in the performance of various recovery channels of NPAs of scheduled commercial banks in India during the study period.

H_1 = There is significance difference in the performance of various recovery channels of NPAs of scheduled commercial banks in India during the study period.

Methodology

Sample of the study

Three recovery channels i.e. Lok Adalat, Debt Recovery Tribunals, and SARFAESI Act are selected for the study of recovery mechanism of NPAs.

Period of the Study

The present research work was carried out for the period of consecutive ten years starting from 2010-11 to 2019-20.

Type of the Study

Research is based on descriptive study.

Data Collection

Data used in the paper is secondary in nature, which is collected from Reserve Bank of India (RBI) website, and from review of Literature.

6.5 Data Analysis Tools

For the data analysis, various statistical tools and techniques like percentage analysis and average (mean) used in this study.

One-way analysis of variance (ANOVA) is used for testing the hypothesis in this study.

Data Analysis

Table 1: Showing Gross NPAs of different categories of Banks [In billions]

Year	Public Sector Banks	Private Sector Banks	Foreign Banks	Total	Growth Rate
2010-11	746.64	182.41	50.69	979.73	-
2011-12	1,178.39	187.68	62.97	1,429.03	46%
2012-13	1,650.06	210.71	79.77	1,940.53	36%
2013-14	2,282.74	245.42	115.65	2,643.81	36%
2014-15	2,784.68	341.06	107.61	3,233.35	23%
2015-16	5,399.56	561.86	158.05	6,119.47	89%
2016-17	6,847.32	932.09	136.29	7,917.91	29%
2017-18	8,956.01	1,293.35	138.49	10,396.79	31%

2018-19	7,395.41	1,836.04	122.42	9,364.74	[-10%]
2019-20	6,783.17	2,095.68	102.08	8,998.03	[-4%]

(Source: RBI, report on trend and progress of banking in India of different years)

Analysis

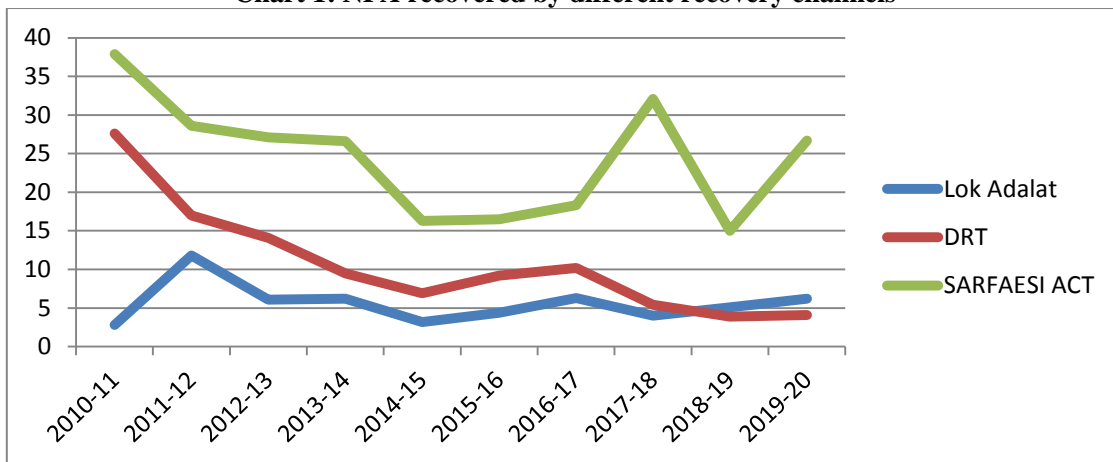
The above table depicts that there is continuous rise in the amount of gross NPAs of scheduled commercial banks during 2010-11 to 2017-18. The amounts of gross NPAs are much higher in public sector banks followed by private banks and foreign banks. We can observe here that the percentage growth rate of gross NPAs shows that there is a drastic change i.e. from 23% in 2014-15 to 89% in 2015-16 in scheduled commercial banks. There is a negative growth rate in gross NPAs in last two years of the study i.e. (-10%) in 2018-19 and (-4%) in 2019-20 which is a good indication.

Table 2: Comparison of different recovery channels in recovering NPAs (in %)

Year	Lok Adalat	DRT	SARFAESI ACT
2010-11	2.8	27.6	37.9
2011-12	11.8	17	28.6
2012-13	6.1	14.1	27.1
2013-14	6.2	9.5	26.6
2014-15	3.2	6.9	16.3
2015-16	4.4	9.2	16.5
2016-17	6.3	10.2	18.3
2017-18	4	5.4	32.1
2018-19	5.1	3.9	15
2019-20	6.2	4.1	26.7
Average	5.61	10.79	24.51

(Source: RBI, report on trend and progress of banking in India of different years)

Chart 1: NPA recovered by different recovery channels



Analysis

The above table and chart display the recovery of NPAs by banks through various recovery channels and performance of different recovery channels. In the year 2010-11 Lok Adalat recovered only 2.8% amount of total NPAs. DRTs recovered 27.6% amount of total NPAs. Recovery through SARFAESI Act was 37.9% which was remarkable. In next year 2011-12 the performance of Lok Adalat improved and it recovered 11.8% amount of total NPAs. But on the other hand the percentage of recovery of NPAs by DRTs and SARFAESI Act reduced and reached to 17 and 28.6 respectively. Performance of Lok Adalats and DRTs are not up to the mark after 2011-12. In case of SARFAESI Act the recovery rate is continuously declining during 2011-12 to 2014-15 and reached to 16.3%. In the year 2017-18 recovery rate through SARFAESI Act is 32.1% which is far better than last few years recovery rate. The average recovery of NPAs is also highest in case of SARFAESI Act compared to Lok Adalats and DRTs. From the above table and chart we can say that percentage of amount recovered through SARFAESI Act is highest and performance of SARFAESI Act is notable and impressive among three selected recovery channels in recovering the NPAs during the study period.

Hypothesis Testing

H_0 = There is no significance difference in the performance of various recovery channels of NPAs of scheduled commercial banks in India during the study period.

H_1 = There is significance difference in the performance of various recovery channels of NPAs of scheduled commercial banks in India during the study period.

ANOVA TABLE

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1907.603	2	953.8013	24.27508	9.27326E-07	3.354130829
Within Groups	1060.867	27	39.29137			
Total	2968.47	29				

Interpretation

The above ANOVA table shows that the calculated value of F is 24.27508 which is more than the table value of 3.3541 at 5% level of significance with d.f. being $v_1 = 2$ and $v_2 = 27$ and hence could have arisen due to chance. This analysis does not support the null-hypothesis. Hence, we have to accept alternative hypothesis. Therefore, we may conclude that there is a significance difference in the performance of various recovery channels of NPAs of scheduled commercial banks of India during the study period.

Recommendations

- Lok Adalats should focus on improvement of their performance faster recovery as their average recovery is only 5.61% during the study period.
- DRTs should also have to strengthen its policies and recovery mechanism as in past few years the recovery is very poor and the average recovery percentage is only 10.79%.
- Government should focus on performance of Lok Adalat and DRTs as they are underperform in recovery of NPAs and reduce the burden of SARFAESI act as nowadays banks are highly resorting to SARFAESI Act for the management of NPA.

Limitations Of The Study

- The study of recovery of non - performing assets of SCBs through various recovery channels is limited from 2010-2011 to 2019 – 2020.
- The whole study is based on secondary data collected from the website of RBI and different publications published by RBI.

Conclusion

From the research work we can say that the Non-Performing Assets have always created a big problem for the banks in India. Rising NPAs are just not only problem for the banks but it is problem for the economy too. This study shows that amount of NPA is quite very high in public sectors banks. To reduce the NPAs various steps have been taken by government but this problem remain as it is. The study shows that SARFAESI Act is successful in recovering of NPAs of scheduled commercial banks in India compared to Lok Adalats and DRTs.

References

1. Banana, K. & Rao Chepuri, V.R.K. (2016). Role of recovery channels in managing Non-Performing Assets in Scheduled Commercial Banks. *International Journal for Innovative Research in Multidisciplinary Field*, Vol. - 2, Issue - 10, page no. 355-359.
2. Dheenadhayalan, V. (2019). A Study on the Performance of Recovery Channels in Managing Non-Performing Assets in Scheduled Commercial Banks in India. *International Journal for Research in Engineering Application & Management (IJREAM)*, Vol. - 04, Issue - 10, page no. 423-428.
3. Padmavathi, U., Srivani, N. & Madhavi, B. (2017). A Study on Performance of Debt Recovery Channels in Management of NPAs of Scheduled Commercial Banks in India. *International Conference on Recent Trends in Engineering Science and Management (ICRTEESM)*, 12th -13th August 2017, page no. 435-445.
4. Pathak, B. (2018). *Indian Financial System. (5th ed.)*. India: Pearson.
5. Rao Chepuri, V.R.K., Emmaniel, R. & Kumar, P.V.V. (2017). Role of Lok Adalat in managing Non-Performing Assets in Scheduled Commercial Banks. *International Journal for Innovative Research in Multidisciplinary Field*, Vol. - 3, Issue - 2, page no. 105-109.

6. Saluja, R. & Lal, R. (2010). *Comparative Analysis on Non-Performing Assets (NPAs) of Public Sector, Private Sector and Foreign Banks in India. International Journal of Research in Commerce & Management (IJRCM), Vol. - 1, Issue No. - 7, page no. 80-88.*
7. Singh, V. R. (2016). *A Study of Non-Performing Assets of Commercial Banks and it's recovery in India. Annual Research Journal of SCMS, Pune, Vol. - 4, March 2016, page no. 110-125.*

WEBSITES

1. <https://www.rbi.org.in/Scripts/PublicationsView.aspx?id=19791>
2. <https://www.rbi.org.in/Scripts/AnnualPublications.aspx?head=Trend%20and%20Progress%20of%20Banking%20in%20India>

Consumer Preference towards Eco-friendly Products in Coimbatore city

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Abstract

There has been a radical shift in consumer behavior towards a green lifestyle. Environmentalists were involved in massive green marketing campaigns trying to reduce the impact of plastic products to the environment. However, the problem is prevalent and evolved continuously. This paper furnishes a vital overview on the current environmental issues caused by plastic bags being used by hypermarkets and supermarkets and retail shops. Consumer preferences and their perceptions on the use of eco bags were the highlights of this research. A total of 78 respondents were surveyed who are the local retailers in the City of Coimbatore. A quantitative research design was used in this paper. The study revealed that consumers have the highest perception on the use of Eco Bags in terms of environmental benefits. High level of consumer awareness about Eco Friendly bags as part of the green marketing campaign was found out. Further, research showed that consumers have no doubts of accepting the new marketing campaign as public acceptance exhibited a result of high level. The green marketing efforts of businesses generates substantive insights from the perspective of the consumers, as such, it is imperative that these efforts be intensively carried out and endlessly promote the green marketing efforts as the consumers affirmed their support by putting a greener value to it.

Key words – Consumer Behavior, Consumer Preferences, Perceptions

Introduction:

Ecology has been greatly disturbed due to the indiscriminate use of plastics that do not decompose for a long period of time. Environmental consciousness had been a concern of the past decades; in fact, ecological problems were marked as early as 1980 which include: global warming, greenhouse effect, pollution and climate change and these are present in the industrial environment. At present, environmental problems and the effects of climate change is apparent and environmentalism has fast emerged among consumers and started demanding eco-friendly product especially in developed countries. Eighty percent of Indian consumers prefer eco-friendly brands for they believe that these products are less harmful to the environment. The highly negative environmental effects of plastics, the demand for eco-friendly products created necessary pressure to guarantee a cleaner ecosystem. Thus, consumers showed great interest in green products since its performance was significantly affected by environmental beliefs. In view of the foregoing reason, the researcher was prompted to conduct a study regarding this issue to understand the perception of local consumers and consider this gap to evaluate the preferences of consumers on the use of eco-friendly bags in shopping.

Objectives of The Study:

Primary Objectives:

To study customers preference towards Eco-friendly plastic bags.

Secondary Objectives:

To find out the factors that influence on customers, when they are purchasing Eco-friendly plastic bags.

To find out the customers satisfaction level towards Eco- friendly plastic bag.

Scope of the study:

Eco-friendly plastic bags are very essential to reduce global warming. Eco-friendly plastic bags have gained importance as the world looks for way to reduce the soil pollution.

Limitations of the study:

The study is limited to the customers using Eco-friendly plastic bags in Coimbatore city only.

The accuracy of the analysis and conclusion drawn entirely depends upon the reliability of the information provided by the customers.

Review Of Literature:

Karipidis et al. (2010) studied consumers' purchasing behaviour and their willingness to pay for eco-certified food products. Results of the study reported that the level of awareness about the production conditions, eco-mark experience, credence attribute associations, household income and occupation were the major factors determining consumers' intention to purchase eco-certified product. Further the study also advocated that the most preferred retailer could add value to the purchasing decision of consumers regarding eco-certified products.

Goldsmith and Goldsmith (2011) discussed the role of social influence in sustainable household

behaviour. Supporting the social influence theory, the author postulated the dominant role of family members, neighbors and other social groups in shaping individual behaviour. Study also discussed that individual behaviour depends to a large extent on approval or disapproval of the behaviour by social groups.

Zhu (2013) explored the effect of green advertising on consumer purchase intention of green products. A sample of 313 students was selected from Shanghai, China and the data was analyzed using regression analysis. The study proposed a conceptual framework to establish the relationship between green advertising and consumer purchase intention to buy green products. Findings revealed that credibility of the claims made by the green ads and consumer attitude towards the green ads significantly affected consumer intention to purchase green products.

Methodology:

The study is descriptive in nature. The data were collected using the primary and secondary data collection methods. Primary data was collected using questionnaire from customers using eco-friendly plastic bags and secondary data from books, journals and websites. Citizens of Coimbatore city are the population of the study. The sampling size of the study is 79 respondents of citizens of Coimbatore city. Convenient sampling method was used for the study. Collected data was tabulated, edited and analyzed. Simple percentage and chi- square test were used to analyze the data and results were interpreted.

Data Analysis:

The information related to the profile of the respondent and the awareness towards the courses in online learning tools are depicted under the table below

Table : 1 Respondents profile and Opinion on telecommunication

Sr. No	Variable	Category	Number of Respondents	Percentage (%)
1	Age of the respondents	18-25	4	5
		26-35	20	25
		36-45	28	36
		45 and above	27	34
2	Gender	Male	75	95
		Female	4	5
3	Monthly Income of the respondents	Rs10000-Rs20000	19	24
		Rs20000-Rs 30000	27	34
		Rs30000-Rs50000	27	34
		More than Rs50000	6	8
4	Education of the respondents	UG	31	39
		PG	5	6
		School level	43	55
5	Marital Status	Married	58	73
		Unmarried	21	27
6	Involve in taking initiative to reduce usage of plastic bags	Yes	79	100
		No	0	0
7	Views on disposal of Plastics	Recycle	29	37
		Preserve	3	4
		Destroy	47	59
8	Views on complete ban on Plastic	Yes	59	75
		No	20	25

The simple percentage analysis converts the raw data into a meaningful way helping better understanding. Majority of the respondents are in the age group belong to the age group of 36- 45 years, and most of the respondents are Male. The respondents (55%) have completed their school education which has led them to the understanding in use of eco- friendly plastic bags. All the respondents opine that there should be some efforts to reduce the usage of plastic bags through destroying them at safer places. 25 % of the sample respondents opine that there should a strict and complete ban on the usage of Plastic bags.

Chi- square test:

To test the relationship age of the respondents and the method chosen for suggesting disposal of plastic bags

Null Hypothesis (H0): There is no association the age of the respondents and the method chosen for suggesting disposal of plastic bags.

Alternative hypothesis(H1): There is association the age of the respondents and the method chosen for suggesting disposal of plastic bags.

Table : 2 Chi-square test

Calculated value/ chi square value	Degree of freedom	Probability level	Critical chi- square value
66.62	6	0.05	12.59

The calculated value, 66.62 is more than the critical chi-square value, 12.59, null hypothesis is not accepted. Hence, there is association between the age of the respondents and their suggestions to disposal of plastic bags.

Findings:

It is found from the study that most of the respondents do not carry their bags to shops for purchase which in turn creates a necessity for using the bags. The respondents are of the opinion that there is an adverse effect in the environment due to the use of the plastic bags also affecting the various cattle and animals on the road sides. The burning of the plastic for disposal also provides severe health issues among the public. Majority of the respondents feel that the plastic bags should be destroyed once for all saving the society and the environment.

Suggestions:

The study is aimed at analyzing the customer preference towards eco-friendly plastic bags with the sample of 79 members, which has helped in getting an overall view of the customer's preference towards eco-friendly bags. It was evident from the study that most of the customers prefer eco-friendly plastic bags. However some of the customers do not prefer.

Based on the study following suggestions are proposed.

Respondents are feeling that using Eco- friendly plastic bags is good but it is not affordable in every shop.

1. Respondents are feeling that using Eco- friendly plastic bags is good because of the quality.
2. First of all company must change packing style of the product with eco- friendly plastics.
3. Research found that there are few respondents still dissatisfied with pricing of the eco-friendly plastic bags, so if company reduces their pricing definitely it will help to sell more bags.
4. Few respondents are not satisfied with the eco-friendly plastic bags. Hence proper care may be taken to enhance the eco-friendly plastic bags.

Conclusion:

As the detrimental effects of plastics continue to disturb the planet, consumers, especially urban dwellers were now willing to take suitable measures to mitigate the environmental problems. The campaign on the use of Eco-friendly bags drew a significant interest among the local consumers. This was due to the high concerns of the consumers for a greener lifestyle. Statistically, the level of consumer awareness on this campaign found to be high. Consumers appear to have an even knowledge about the campaign so as with the environmental consequences of using plastic bags. This study also infers that the perceived environmental benefits of Ecofriendly bags are at high level. In deciding whether to use plastic bag or a tote/Eco-bag, consumers would tend to consider the environmental advantage of an Eco-bag. Although the bag entails costs, but consumers still showed interest and they perceived themselves to be ready to pay for its price to reduce pollution and support to the environment. The high level of perception about the price of Eco-bags is a good claim that consumers are putting a greener value to this bag. Basically, the consumers considered the opportunity cost of cellophanes, in this case. The society, at large is ready to accept the challenge of protecting the environment as public acceptance is at high level as well. Consumers never doubted to welcome the campaign. Hence a study has been under taken to know the customer preference towards eco-friendly plastic bags..

References:

1. *Research methodology – methods and techniques (Second revised edition) – CR. Kothari, 1990 – 1985, New Age International(P) Ltd., Publishers published by New Age International (P) Ltd., Publishers.*
2. *A Framework for Marketing Management, A Fourth edition, by Kotler, Philip; Keller, Kevin., published by Pearson Education, Inc, publishing as Prentice Hall, Copyright © 2009.*
3. *Marketing Management – Pillai, R.S. N and Bagavathy – S. Chand & Company Pvt.Ltd (An ISO 9001: 2008 Company), Ram Nagar, New Delhi – 110 055.*
4. *Mayank, B & Amit, J (2013), 'Green Marketing: A Study of Consumer Perception and Preferences in India', Electronic Green Journal, 1(36).*
5. *Jain, SK & Kaur, G (2004), 'Green Marketing: An Attitudinal and Behavioral', Sage Publications, 187–205,*

NAAC A Private Society

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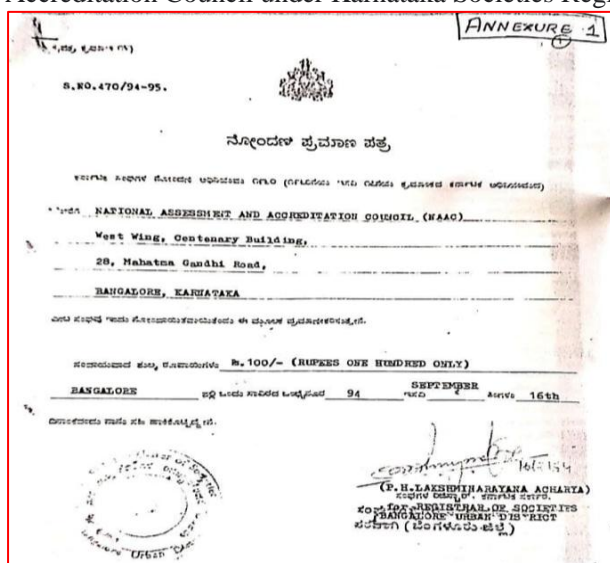
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Abstract :

NAAC means National Assessment and Accreditation Council, NAAC is a private society established and registered in Bengaluru on the date of 16th September 1994, at Bengaluru. The UGC, Chairman, Secretary, HRD Minister Secretary, and others the then scholars founder member of the society. NAAC since last 27 years to up to date doing Assessment and Accreditation work in higher education in India. NAAC giving grades after assessment to higher educational institutions, colleges, universities in India. NAAC still date keeping monopoly in Assessment and Accreditation field. NAAC saying and published on a website that NAAC is an autonomous body of UGC, but as found in RTI and Rajyasabha Bills shown that NAAC is a private society.

Introduction :

To encourage self-evaluation, accountability, autonomy, and innovations in higher education; To undertake quality-related research studies, consultancy, and training programs, and To collaborate with other stakeholders of higher education for quality evaluation, promotion, and sustenance. For these types of objectives achievements, The UGC and the then Scholars of India think assessing the higher educational institutions in India. Before in India from 1974 Singapore starting assessing the higher educational institutions in their own country. Also in America and Europe the concept of assessment and accreditation doing by private organizations or societies. The UGC thinks about how to implementing assessment and accreditation as per National Education Policy 1986 recommendations. Assessment and accreditation work is a broad concept and the then period that newly to Indians, especially higher educational institutions. In the then period anyone, nothing takes any serious about this concept. The selected scholars think their level to implementation this assessment and accreditation concept. The Scholars and The then UGC Chairman, Secretary, HRD Minister Secretary founded and registered a private society of National Assessment and Accreditation Council under Karnataka Societies Registration Act 1960 and 1961 at Bengaluru.

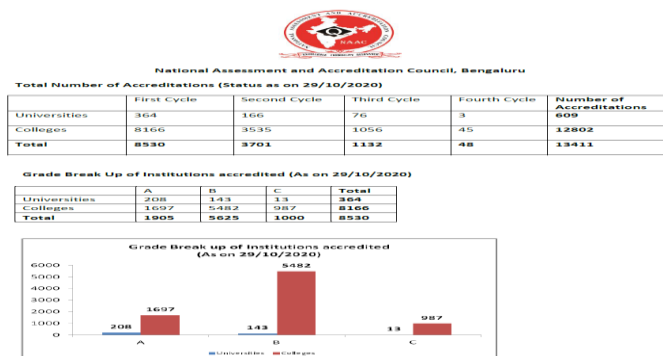


S.No.	Name	Occupation
1.	Prof. G. Ram Reddy	Chairman, U.G.C.
2.	Prof. N. C. Mathur	Vice-Chairman, U.G.C.
3.	Shri. S. V. Giri	Secretary (Edn), HRD
4.	Prof. D. P. Singh	Member, U.G.C.
5.	Prof. Bashiruddin Ali	Member, U.G.C.
6.	Prof. A. S. Nigavekar	Member, U.G.C.
7.	Prof. K. B. Powar	Secretary-General, A.I.U.
8.	Shri Inderjit Khanna	Secretary, U.G.C.
9.	Prof. N. R. Shetty	Vice-Chancellor, Bangalore Univ.
10.	Dr. D. P. Hira	Director, Adm. U.G.C.
11.	Dr. V. Krishna Moorthy	Consultant, U.G.C.

The following members are founder members of the NAAC.

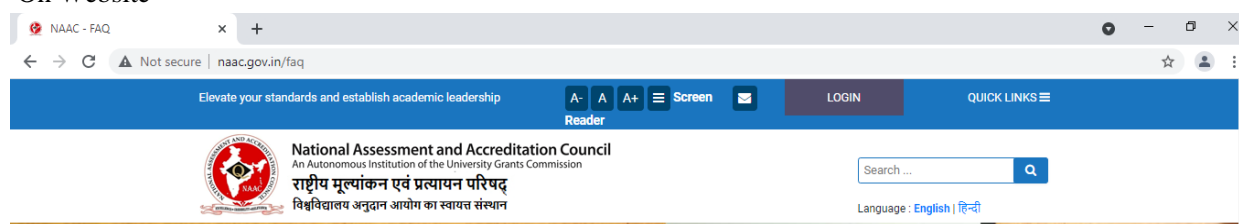
The Present Chairman of the UGC Dr. D. P. Singh is one of the founder members of NAAC.

After the establishment of the NAAC tremendous changes in higher educational institutions, colleges and universities. Because of NAAC in higher educational institutions, colleges and universities set up buildings as per UGC rules, regulations and norms, and follows rules and regulations. The Government of India making compulsory assessment and accreditation process in higher educational institutions, colleges, and universities of India also one rule is made compulsion that if any higher educational institution denies to implementation assessment and accreditation process stop to provide grants to them. So, higher education institutions accept the assessment and accreditation process and follow the rules and regulations of NAAC.



As the above report has shown that NAAC till date assessing and accredited up to 29.10.2020 After all, this one thing is that NAAC itself always saying that **'An autonomous Institute of the University Grants Commission** this statement NAAC published its website and also letterhead. Like below.

On Website



On Letterhead



The Researcher focus on the words or statement of NAAC's **'An autonomous Institute of the University Grants Commission**. The researcher asked the UGC under RTI like below

To,
PIO, UGC, NEW DELHI.

Date: 06.11.2020

APPLICANT : MR. GOVARDHAN KRUSHNAHARI DIKONDA
NEAR GANESH TEMPLE, SANMATI NAGAR,
MADHA, TAL. MADHA, DIST. SOLAPUR – 413209

Information Provide:

- 3) Please provide the letter/certificate issued by the UGC to NAAC as autonomous body. And also the copy of norms and regulations of being getting a society/trust/company recognised as autonomous without any affiliation.


Under the RTI the researcher got the answer as like below.

Online RTI Status Form

Note:Fields marked with * are Mandatory.

Enter Registration Number	UGCOM/R/E/20/08955
Name	GOVARDHAN KRUSHNAHARI DIKONDA
Date of filing	06/11/2020
Public Authority	University Grants Commission (UGC)
Status	REQUEST DISPOSED OF
Date of action	04/12/2020
Reply :-	No such documents are available as UGC has not issued any such certificates to the mentioned institutions.

Final Status of UGCOM/A/E/20/02239

Applicant Name	GOVARDHAN KRUSHNAHARI DIKONDA
Date of receipt	22/12/2020
Request Filed With	University Grants Commission (UGC)
Text of Application	please correct information as per application with details if the answer is correct please in hard copy with correct reference
Request document (if any)	
Status	APPEAL DISPOSED OF as on 18/01/2021
Date of Action	18/01/2021
Remarks	Reply :- REPLY TO ALL THE 3 POINTS ASKED IN THE RTI. 1. No such certificate have been issued by UGC to the Mentioned isntitutions. 2. No such certificate has been issued by UGC 3. No such certificate was issued by UGC.

Besides this in 2010 in the 238th report of the Rajysabha denied that the NAAC autonomous body of UGC

5.12 The Department's reply on the issue was that "NAAC and NBA were autonomous bodies, "however, they are not and cannot have statutory authority and status until created by legislation. Moreover, the way things are visualized in the Bill, these bodies may continue to function as accreditation agencies but in their new avatar as accreditation agencies registered and authorized by the National Accreditation Regulatory Authority (NARA) the National Accreditation Regulatory Authority will be a creature of the impending legislation and mere conversion of an existing accreditation body may not serve the objectives proposed for NARA."

As the above statement of the report of the Rajysabha NAAC is not any statutory authority and as per RTI answer not having any 'An autonomous Institute of the University Grants Commission', So, NAAC is a private Society.

Conclusion:

Due to recommendations of 1986 Education Policy assessment and accreditation concept was implemented. For this concept implementation, the then scholars or academic consultants took initiative and founded as well as registered a society like NAAC under the Karnataka Society Act 1960 and 1961. The founder members of the then scholars or academic consultants think that how keeping this society monopoly and curb on higher educational institutions long-life, so, they saying it that **an autonomous Institute of the University Grants Commission and HRD minister initiative**. After all, this type of itself saying by NAAC report of the Rajysabha NAAC is not any statutory authority also the researcher got under RTI that UGC cannot be giving any such status and certificate. So, as per authorized documents we can say NAAC is purely a private society.

Reference:

1. RTI filed by Mr. Govardhan Dikonda on 6.11.2020
2. RTI Answer by UGC of Mr. Govardhan Dikonda on 4.12.2020
3. First Appeal RTI filed by Mr. Govardhan Dikonda on 22.12.2020
4. First Appeal RTI Answer by UGC of Mr. Govardhan Dikonda on 18.01.2021
5. the 238th report of the Rajysabha, 2010
6. <http://www.naac.gov.in/> Date 8.06.2021 time 4.15 p.m.
7. <https://en.wikipedia.org/> Date 8.06.2021 time 4.35 p.m.

An Investigation of Zooplankton Diversity in Anjaneri Dam, Nashik (M. S.), India

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Abstract

Zooplanktons are very sensitive group of organisms because they respond even at a small environmental changes. They act as indicator for pollutions and plays a key role in aquatic food webs because they are primary consumers and are food for other invertebrates, vertebrate including fishes. Most of the zooplankton species are cosmopolitan in nature. In the present investigation, authors studied diversity of different zooplanktons in the water of Anjaneri dam during February 2015 to January 2017. In the study period, total 54 species of different zooplanktons were recorded and are categorized into four major groups viz. Rotifera > Cladocera > Copepoda > Ostracoda. Rotifera was the major group comprising 48 % of total number of zooplanktons recorded with respect to diversity.

Key Words- Investigation, Zooplankton, Diversity, Anjaneri, Dam, Nashik

Introduction

Planktons are the most important and main components of aquatic food chain and also very sensitive floating community, which is primarily affected by anthropogenic impacts. Thus any undesirable change in aquatic ecosystem affects diversity as well as biomass of this community. The quantification of plankton's productivity helps to understand conservation ratio at different trophic level and resources as an important input for correct management of water body. Study of Plankton is beneficial in the prediction of long-term changes in a pond ecosystem, because these communities are highly sensitive to environmental variations. The occurrence and abundance of zooplankton depend on productivity of water body which in turn is influenced by biotic and abiotic factors. They link the primary producer, phytoplankton with higher large trophic level organisms. Zooplankton community affected by physicochemical changes occur in the water body. Zooplankton plays a key role in aquatic food chain (Sharma, 1998). Due to these reasons zooplanktons have brought the attention of many researchers all over the world. Many lakes and ponds are important to nearby areas as sources of fresh water supply for various reasons such as household purpose irrigations, and commercial fishing. Therefore, major environmental fluctuations may have affected economy and social implications of the local population. Through the study of these important lakes and ponds could aid in preparing for these human impacts, as well as improving our understanding of how climatic change may affect these high latitude freshwater bodies (e.g., Vincent and Hobbie, 2000).

Though, numerous studies are taken place in the field of hydrobiology on the different water bodies of India and most specifically in Maharashtra, some of the most important water bodies remained unexplored regarding their Hydrobiological point of view. Anjaneri dam of Nashik district is one of such a dam remained unexplored, so authors concentrated on it and conducted a systematic study on the dam water.



Material and Methods

1 Study area Anjaneri is an earth fill dam located at Anjaneri village near Nashik –Tryambakeshwar highway. The location of the dam is about 750 meters from mean sea level and is located at 19^o 56' 20" latitude and 73^o 55' 36" longitudes. This water body was constructed by using soil in the year 2006. The total storage capacity is 3242 cu. M. From the foundation its height is 28.19 m and length of entire project is 715 m. It Posses water throughout the year.

Satellite View of Anjaneri dam

- 2. Zooplankton Collection, Preservation and Identification-** The study of zooplankton was carried out by the monthly collection of water samples of the selected water from three sampling sites (W₁, W₂ & W₃) for the period of two years. Water sampling done once in each month between 7:00 am to 11:00 am. The water samples for zooplankton were collected by filtering 100 liters of surface water through net of bolting silk cloth No. 25 having mesh size 63 micrometer.

- 3. Preservation of plankton**

The collected plankton samples are preserved in 4% formulation in 100 ml bottles. A label is affixed to the bottles indicating the site number, date of sampling, water temperature, transparency, pH etc. The

Lugol's iodine solution is added in each bottle and is kept in dark for 24 hours to settle down the plankton. After 24 hours the supernatant is removed with the help of pipette and plankton (sediment) is collected. The sediment plankton is diluted by adding few ml of diluted water. The plankton samples are again preserved in Lugol's iodine solution for further investigation.

4. Concentration of sample

The concentration of sample is done by sedimentation technique. The sample was concentrated in series of steps by quantitatively transferring the sediment from the initial container to sequentially smaller one. The setting chamber was filled without forming vortex and kept over a vibration free surface. The supernatant was siphoned out.

5. Mounting and preparation of slides

0.1ml of each sample is taken on separate glass slides and cover slip was kept over the sample by rinsing the cover slip with an adhesive (clear nail polish) to prevent evaporation. For semi-permanent slides glycerin was mixed with sample, as the sample age evaporates, leaving the organisms embedded in glycerin.

6. Identification

The planktons were identified using methodology by APHA (1981) and Kodarkar (1992). The preserved samples were studied for the diversity of zooplanktons under the research binocular microscope by using standard keys and literature (Pennak, 1953, Altaf, 2004, and Kodarkar et. al.2006).

Result And Discussion

Zooplankton Diversity- In Anjaneri dam, the zooplanktons are observed in different four groups viz. rotifera (26 species), Cladocera (17 species), copepoda (10 species) and Ostracoda (01 species) as shown in table No.1. It is clear that; rotifera is the dominant group of zooplanktons in Anjaneri water body. Total 54 species of zooplanktons have been observed during the study period from three sampling sites (A₁, A₂ and A₃). From sampling site A₁, total 46 species were recorded. 41 species are recorded from site A₂ and site A₃ showed total 36 species of zooplanktons. Data is given in table No. 20 & 22.

Many researchers also recorded nearly similar results throughout the country R. Anbalagan et.al (2019) according to their research on Freshwater zooplankton biodiversity and physico chemical parameters of Mayanur dam, Tamil Nadu. They observed that, total 22 species of zooplankton belonging to Protozoa, Rotifera, Cladocera, Copepoda, Ostracoda and Anostraca. Among the various groups of zooplankton, the most dominant one was rotifers representing 50%. Krishna et.al (2017) studied seasonal variations of zooplankton community in selected ponds at Lake Kolleru region of Andhra Pradesh. According to their study, total number 16 species recorded of which 9 are Rotifera, 3 are Cladocera and 4 are Copepods. In the rotifers the genus *Brachionus* is the dominant group.

Sandhya et.al (2016), explored Bhogaon Reservoir in Parbhani District of Maharashtra and observed that all the zooplanktons are found to be minimum in monsoon period and maximum in post-monsoon period. Banerjee et.al (2014) made a study on the zooplankton production in ponds under different fish farming system in West Bengal. They identified zooplanktons from 4 different orders namely copepoda, rotifera, cladocera, and Diaptomus. Dominant groups of the zooplankton available in all the samples were observed to be Copepoda and Cladocera represented by *Cyclops sp.* and *Daphnia sp.*, respectively. Verma et.al (2013) recorded the zooplanktons which are represented by five groups of organisms in order Rotifera > Crustacean > Cladocera > Protozoa > Copepoda.

Table.1 Zooplankton's observed in Anjaneri pond for the period February 2015 to February 2017

Sr No	Name of Zooplankton	Anjaneri pond		
		A-1	A-2	A-3
A	Rotifera			
1	<i>Anuraeopsis navicula</i>	+	+	+
2	<i>Asplanchna sp</i>	+	+	+
3	<i>Brachionus angularis</i>	+	+	-
4	<i>Brachionus calyciflorus</i>	+	+	-
5	<i>Brachionus caudatus</i>	-	+	+
6	<i>Brachionus dimidiatus,</i>	+	+	-
7	<i>Brachionus diversicornis</i>	+	+	+
8	<i>Brachionus forficula</i>	-	+	+
9	<i>Brachionus fulcatus</i>	+	+	+
10	<i>Brachionus havanaensis</i>	+	-	+
11	<i>Brachionus quadridentata</i>	+	+	+
12	<i>Brachionu bidentata</i>	+	+	-
13	<i>Collotheca edentata</i>	+	+	-
14	<i>Herringia sp.</i>	+	+	-

15	<i>Hexarthra sp.</i>	+	-	+
16	<i>Keratella cochlearis</i>	+	+	+
17	<i>Keratella tecta</i>	+	+	-
18	<i>Keratella tropica</i>	+	-	+
19	<i>Keratella valga</i>	+	+	-
20	<i>Lacane sp</i>	+	+	+
21	<i>Lepadella heterodactyla</i>	+	+	-
22	<i>Notommata sp</i>	+	+	-
23	<i>Ploimate sp</i>	+	+	+
24	<i>Polyarthra sp</i>	+	+	+
25	<i>Testudinella sp</i>	+	+	+
26	<i>Wigrella wiszniewski</i>	+	-	-
B	Cladocera			
1	<i>Bosmina longirostris</i>	+	+	-
2	<i>Ceriodaphnia cornuta</i>	+	-	+
3	<i>Ceriodaphnia reticulata</i>	-	-	+
4	<i>Ceriodaphnia rigaudi</i>	+	+	+
5	<i>Chydoridae.pleuroxus denticulatus</i>	+	-	+
6	<i>Daphnia pulex</i>	+	-	+
7	<i>Daphnia magna</i>	+	+	+
8	<i>Daphnia sp.</i>	+	+	+
9	<i>Diaphanosoma brachyurum</i>	+	+	-
10	<i>Eubosmina.hagmanni</i>	+	+	+
11	<i>Ilyocryptus spinifer</i>	+	+	+
12	<i>Leptodora kindti</i>	+	+	-
13	<i>Leptodora.sp</i>	-	-	+
14	<i>Macrothrix sp</i>	+	+	+
15	<i>Moina sp.</i>	+	+	+
16	<i>Polyphemus pediculus</i>	+	+	+
17	<i>Pseudosida bidentata</i>	+	-	-
C	Copepoda			
1.	<i>Calanoid sp</i>	+	+	+
2.	<i>Cyclops strenuus</i>	-	+	+
3.	<i>Cyclops viridis</i>	-	+	-
4.	<i>Diacyclops thomasi</i>	+	-	-
5.	<i>Diacyclops sp.</i>	+	+	+
6.	<i>Diaptomus sp.</i>	+	+	+
7.	<i>Eucyclops serrulatus</i>	+	+	-
8.	<i>Halicyclops sp.</i>	-	-	+
9.	<i>Harpacticoida sp.</i>	+	+	+
10.	<i>Tropocyclops prasinus</i>	+	+	+
D	Ostracoda			
1	<i>Cypris sp.</i>	-	-	+

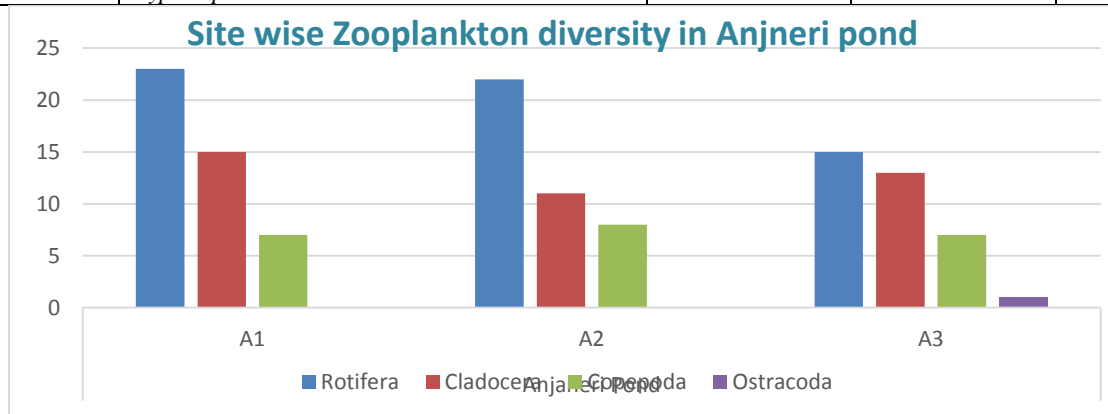


Fig. 2. Graph indicating Site wise and class wise species of Zooplanktons diversity in Anjaneri pond.

Conclusion

According to above observations, it is concluded that, the water of Anjaneri pond exhibits rich and diversified zooplanktons dominated by Rotifera throughout the study period. This is very suitable for aquaculture because, zooplanktons are known the major source of food for fishes and other aquatic

animals. This water body should be conserved and maintained as it is and should be protected from pollution.

References

1. Anbalagan R. & R. Sivakami (2019), *Freshwater zooplankton biodiversity and physico chemical parameters of Mayanur dam, Tamil Nadu, India. IJRAR- International Journal of Research and Analytical Reviews.*Vol. 6(1): 2349-5138
2. Krishna* P.V. and Hemanth Kumar(2017), *Seasonal Variations of Zooplankton Community in Selected Ponds at Lake Kolleru Region of Andhra Pradesh, India, Int.J.Curr.Microbiol.App.Sci* (2017) 6(8): 2962-2970
3. Kadam S. S. (2016), *Diversity of Bhogaon Reservoir in Parbhani District Maharashtra, India International Journal of Research & Review*, 3 (8)
4. Kar S* and Kar D.,(2016) *Zooplankton Diversity of a freshwater Pond in a Cachar district of Assam, India Int. J. of Life Sciences*, 2016, Vol. 4 (1): 125-128
5. Banerjee S, R. Nur and S. Barat (2014) *Study on the Zooplankton Production in ponds Under Different Fish Farming System in West Bengal, Journal of Krishi Vigyan.*
6. Vermal H. , N. Devendra Pandey and S. K. Shukla (2013) *Monthly variations of zooplanktons in a freshwater body, futera anthropogenic ponds of Damoh District(M.P.) International Journal of Innovative Research in Science, Engineering and Technology*
7. Vincent W.F. and J.E. Hobbie (2000), *Ecology of Arctic lakes and rivers.* 197-231.
8. Kodarkar, M.S. (1992), *Methodology for water analysis, physico-chemical, Biological and Microbiological, Indian Association of Aquatic Biologists, Hyderabad.*
9. Pennak R.W. (1953), *Fresh- water Invertebrates of United States, Ronald Press Co., New York.*
10. Rajgopal T. A. Thangamani, S.P. Sevakodiyone, M. Sekar and G. Archunan (2010), *Zooplankton diversity and physico-chemical conditions in three perennial ponds of Virudhunagar district, Tamilnadu, J. Environmental Biology*, 31, 265-272.
11. Sehgal K., G.G. Phadke, S.K. Chakraborty and Vijay Kumar Reddy (2013), *Studies on Zooplankton diversity in Dimbhe reservoir, Maharashtra, India, Advances in Applied Science Research*, 4 (1): 417-420.
12. Sharma B. K. (1998), *faunal diversity in India, Zoological survey of India*, 57-70.
13. Ferrara, O., Vagaggini, D. and Margaritora, F. G. (2002). *Zooplankton abundance and diversity in Lake Bracciano, Latium, Italy. Journal of Limnology*, 61(2), 169–17
14. Goswami A.P.1 and Mankodi, P.C.2(2012) *Study on Zooplankton of Fresh Water Reservoir Nyari – II Rajkot district, Gujarat, India ISCA J. Biological Sci.*Vol. 1(1), 30-34.

Covid-19 Pandemic and its impact on Social Science Research

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Abstract:

The impact of Covid-19 has unprecedented and it has devastated communities, economies, research and profoundly changed the ways in which we live and work. The lockdown had serious implications on mental health, resulting in psychological problems including frustration, stress, and depression. The crisis caused by COVID-19 has affected research in a variety of ways. It has impacted research activities undertaken by higher education institutions research centres and research groups in a variety of ways. Despite significant efforts to decrease the effects of the pandemic crisis, some researchers around the world have been (or are) forced into social isolation and they had to interrupt face to face meetings with their colleagues also with their guides, which had an adverse effect on the work. Furthermore, during the peak of the pandemic, several activities in research like field work, data collection from their libraries were interrupted. This has led to delays in the submission of many research projects and work related to M.Phil and Ph.D activities. Hence, this study will try to find out the impact of Covid-19 on social science research.

Introduction

At first glance, the Covid-19 pandemic looks like a medical and health emergency and accordingly resources from medical and physical sciences are mobilized to deal with it and rightly so. However, crisis like that one we are facing currently impact almost all aspects of human society as it is clearly evident from the shutting down of industries, businesses, travel, employment and various services. This multidimensional nature of the crisis requires a response and discourse which is also not limited to a particular discipline of science. In other words, it is the time to look at the situation through a social sciences lens and reflect upon the scenario in a broader perspective.¹

The coronavirus pandemic has claimed many victims. First and foremost, the hundreds and thousands of people who have sadly lost their lives and the millions of people who have contracted the virus, many of whom will suffer long term side effects. Millions have also experienced significant financial harm, be that from loss of business trade, income, or employment.² Beyond its huge impact on health, the welfare of both societies and economies, Covid-19 is greatly affecting academic research. Pandemic restrictions influence not only the way the researchers work but also create new barriers for interacting with peers, for ensuring continuity in the funding of research work, setting-up and pursuing international research collaborations and for disseminating research results, like conferences, meetings and workshops are cancelled. And they influence the possibilities of research institutes and universities to support and carry out research and to host guest researchers.

The COVID-19 pandemic has resulted in unprecedented research worldwide. The impact on research in progress at the time of the pandemic, the importance and challenges of real-time pandemic research, and the importance of a pediatrician-scientist workforce are all highlighted by this epic pandemic. As we navigate through and beyond this pandemic, which will have a long-lasting impact on our world, including research and the biomedical research enterprise, it is important to recognize and address opportunities and strategies for, and challenges of research and strengthening the pediatrician-scientist workforce.

Covid 19 and its overall Impact

The impact on research in progress prior to COVID-19 was rapid, dramatic, and no doubt will be long term. The pandemic curtailed most academic, industry, and government basic science and clinical research, or redirected research to COVID-19. Most clinical trials, except those testing life-saving therapies, have been paused, and most continuing trials are now closed to new enrollment. The lockdown that has occurred in many countries has influenced current work of researchers through work place restrictions, movement constraints for accessing research sites, facilities constraints, interruption of social and political processes in which research is situated, access to physical libraries or to high-speed internet, lack of peer support, and work-family interface challenges, among others. Furthermore, the increased

¹Shamsher Singh "COVID-19 Pandemic and Necessity of a Social Science Perspective", Happenings @ Flame, available at <https://www.flame.edu.in/newsroom/covid-19-pandemic-and-necessity-of-a-social-science-perspective>

² Steven Inchcoombe (2020) "Understanding better the impact of COVID-19 on the research enterprise", Springer Nature Group, <https://www.springernature.com/gp/advancing-discovery/springboard/blog/understanding-impact-of-covid-on-research-enterprise/18253260>

uncertainty amongst the population, accompanied by stress, actual sickness, and mental health challenges, can influence researchers as well.

Among various public/private organizations, universities and research institutes are most affected by COVID-19, causing severe pressure in delivering education and especially practical classes, evaluating students, maintaining their continuity, and retaining their sustainability. Most importantly, the shutdown of research laboratories has disrupted the ongoing research projects of several HDR students, diminishing their technical practice and leaving them with no options except for extending their graduate research milestones. Many researchers who have travelled back home during Christmas and new year, 2020 are not able to join the research lab due to travel restrictions.³ In addition, there is no possibility of physically attending, presenting, and sharing their work at international conferences in 2020, thus limiting their networking, critical evaluation, and dissemination of data. Similarly, short-term labs retained abroad with other collaborating research partners have been affected mainly due to travel ban and border restrictions.

Impact on Social Science Research

Due to the COVID-19 crisis, the scholar mostly belong to social science had to postpone some of their planned fieldworks in past months. At the same time, it would be a bit illogical not to carry out any research work until the public health researchers find a permanent solution to stop spreading Coronavirus. As far as India is concerned, Coronavirus infections are raising in the country due to which the world has been criticized.⁴ The Central Government and several state governments have taken a significant step towards loosening the lockdown, and experts want that the country is yet to hit the peak. As travelling to the research site has become a major concern, many social science researchers at universities, research institutions and non-government organisations researchers are now trying to figure out how to go ahead with the research work planned to conduct in-person. In this circumstance, crucial questions for social science researchers – how to collect data without meeting respondents face-to-face, and also how to collect data without compromising the quality? As social science researchers need to redesign their planned research and integrate as many as digital data collection methods, can digital ethnographic research become the most reliable research method for social science researchers?

It needs to mention here that research scholars are national assets who are essential to understand the ongoing changes in the society and economy. Investing in research is the need of the hour especially with respect to our national interest when we are living through a pandemic. The pandemic has constrained the access research scholars had to the resources they use for their work. Basically the research scholars are dependent on a variety of resources including libraries, human populations, archives, science laboratory, plant population, animal populations, among other resources. In view of national interest, the impact of the pandemic on research scholars is drastic and multi-fold. Unlike graduation courses with syllabi, research degrees require each scholar to work on a unique and completely novel topic.⁵ Therefore, the research is the greatest value and asset to the nation and this fact must first be acknowledged. Research scholars need to be actively supported given the large scale disruption caused to their work by the ongoing pandemic. Apart from that, the lockdown shows that online research is a myth and both terminal year as well as non-terminal year research scholars has been equally affected by the pandemic. As seen globally, research scholars in India too need to be given a research period extension, necessarily accompanied by scholarship extension to compensate for the time loss during pandemic. Moreover, due to this pandemic, mental health of the scholars has been worst affected. Uncertainty of impending research work, financial ambiguity and concern about future prospects all have become issues of concern. Mental health anxiety should be immediately recognized by the university administration and set up counselling services for its research scholars as recommended. Many scholars face additional challenges due to the pandemic, including a weak job market, disappearing research and travel funds, and added stresses of working from home.⁶ Those who

³ Yam Nath Paudel, Efthalia Angelopoulou, Bhupendra Raj Giri , Christina Piperi , Iekhsan Othman, and Mohd. Farooq Shaikh, (2021) "A Perspective on the Impact of COVID-19 Pandemic on Basic Science Research and its Future Implications", *Coronaviruses*, Vol. 2, No. 0, p.2.

⁴ Buddhadeb Halder, (2020) "Conducting social science research during the Coronavirus pandemic", Centre for Equality Studies, available at <https://centreforequitystudies.org/conducting-social-science-research-during-the-coronavirus-pandemic/>

⁵ Alamu R, Yangchen Roy, and Somashree Das, (2020) "The neglect of India's researchers during the pandemic Inside the lives of JNU's research scholars", [cdn.thewire.in > wp-content > uploads > 2020/10.](https://cdn.thewire.in/wp-content/uploads/2020/10/)

⁶ Peter Krause, Ora Szekely, Mia Bloom, Fotini Christia , Sarah Zukerman Daly , Chappell Lawson, Zoe Marks, Aidan Milliff , Kacie Miura , Richard Nielsen, William Reno, Emil Aslan Souleimanov, Aliyu Zakayo, (2021) "COVID-19 and Fieldwork: Challenges and Solutions", *The Profession*,

conduct fieldwork are particularly vulnerable to research disruptions as global travel restrictions, frozen travel budgets, and at-risk local populations make prior models of international research logistically and ethically impossible for the foreseeable future.

Conclusion

COVID-19 has changed life as we know it across the globe, generating social and economic repercussions that will be with us for years to come. Amid this tragedy, everyone's first concern is and should be their health and the health of those around them.

The COVID-19 pandemic has been by far the greatest challenge of the century that the field of research has had to face. Both the clinical as well as social research has been deeply affected due to lockdown. The impact of the COVID-19 pandemic on research and research in response to the pandemic once again highlights the importance of research as well as the challenges of research.

References

1. Chaturvedi Kunal, Vishwakarma Dinesh Kumar, Singh Nidhi, (2020) "COVID-19 and its impact on education, social life and mental health of students: A survey", *Children and Youth Services Review*, 121, 105866, <https://doi.org/10.1016/j.chilyouth.2020.105866>.
2. Inchcoombe Steven, (2020) "Understanding better the impact of COVID-19 on the research enterprise", Springer Nature Group, <https://www.springernature.com/gp/advancing-discovery/springboard/blog/understanding-impact-of-covid-on-research-enterprise/18253260>.
3. Pokhrel Sumitra and Chhetri Roshan (2021) "A Literature Review on Impact of COVID-19 Pandemic on Teaching and Learning", *Higher Education for the Future*, Sage 8(1) 133–141.
4. Radecki Jane, R Schonfeld, oger C. (2020) "The Impacts of COVID-19 on the Research Enterprise", *Research Report*, available at [sr.ithaka.org > publications > the-impacts-of-covid-19-](http://sr.ithaka.org/publications/the-impacts-of-covid-19)
5. Weiner Debra L. , Balasubramaniam Vivek , Shah Shetal I. & Javier Joyce R. (2020) "COVID-19 impact on research, lessons learned from COVID-19 research, implications for pediatric research", *Pediatric research*, <https://www.nature.com/articles/s41390-020-1006-3>.
6. WHO (World Health Organization) - Coronavirus disease (COVID-19) Pandemic <https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/novel-coronavirus-2019-ncov>.
7. The World Bank *The Global Economic Outlook During the COVID-19 Pandemic. A Changed World* <https://www.worldbank.org/en/news/feature/2020/06/08/the-global-economic-outlook-during-the-covid-19-pandemic-a-changed-world>.
8. "Social scientific research in the time of COVID-19", Faculty of Arts and Social Sciences, <https://fass.open.ac.uk/school-social-sciences-global-studies/news/social-scientific-research-time-covid-19>.

**Language in Dalit Autobiographies: A Critical Study of Malagatti's *Government
Brahmana***

Brahmana

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Abstract

Dalit literature is being translated into various Indian and foreign languages. With passage of time the translation has brought the writings of the marginalised sections of society to fore. The present paper is an attempt to critically study the use of language and translation in Malagatti's autobiography 'The Government *Brahmana*', which was originally written in Kannada and translated into English. The translated text reveals how the translator takes the reader to the text through various cultural practices found in the original text. It also attempts to find out the type of language used by the autobiographer to reveal the sufferings and struggles of Dalits.

Key words: Culture, Dalit, Language, Translation.

The period between 1978 and 1986 witnessed a large number of dalit writers receiving State awards. Dalit literature was being translated into various Indian and foreign languages. With passage of time the translation has brought the writings of the marginalised sections of society to fore. English translations being more easily available are more widely read both in India and other countries.

In the Introduction to *Postcolonial Translation: Theory and Practice*, editors Susan and Trivedi (1999) point to the opinion of Maria Tymoczko (found in the chapter titled 'Postcolonial Writing and Literal Translation'). Tymoczko points out that 'in translation studies, a distinction is always made between whether to take an audience to a text or a text to an audience' (qtd in Pai, 2018: 89). In *Government Brahmana*, the translator takes the reader to the text through various customs and cultural practices found in the original text. 'Dr. Aravind Malagatti's stories in *Government Brahmana* have spoken to the people of Karnataka and have now been translated for a larger community. These stories invite the reader into both the pain and integrity of his life; they involve us in his process of creating meaning from a world that can be both ugly and beautiful (Malagatti, 2009: ix)'. In *Baluta*, Pinto (2015) finds his translation to be blamed if the stories and characters get unbelievable and exotic. 'In the original, it is told in a matter-of-fact manner that takes in the wandering Raiwand and the aghori who would lick up his own vomit and makes of both the stuff of life itself' (xvi).

Malagatti (2007) in the Afterword of *Government Brahmana* acquaints the reader about the use of language in his texts. 'The language expressed in each of my work differs. The language of the novel *Kaarya* was different from that of the short story "Ahimsa Chappali Ayyappa". The language of *Government Brahmana* is quite different... We see a gaping divide with regard to subjects in Old Kannada poetry and New Kannada poetry. Though we cannot clearly demarcate the line, there is an abstract shape to divide. It is not easy to deconstruct the concepts in Old Kannada with New Kannada language. Though attempts have been made in this direction, they have not convincingly shown that New Kannada is capable of breaking the concepts prevailing in Old Kannada. It is more effective to deconstruct Old Kannada concepts with the same language. In order to cut diamond we need to use diamond (127)'. He, therefore, used the 'Old Kannada language' in his autobiographical work by which he claimed to bring about 'social change as well as build language (128)'. The translated version of this autobiographical work uses calques in the target text in an effort to preserve the culture of source text. The translation also tends to adapt the source text to the target culture to make it simpler for the foreign reader to understand certain practices as described in the source text.

'...my face drooped like a burnt brinjal (97)'

'...bulging like drums after gobbling the school *uppit* (12)'

'Our *chonnas* never had buttons (13)'

Dalit writings, further, employ language generally considered inappropriate for printing and reading. The opinions of Gautaman in the introduction of Bama (2005) claims that it is the stated design of dalit writing to overturn propriety in language, and 'to expose and discredit the existing language, its grammar, its refinements, and its falsifying order as symbols of dominance' (xii-xiii). In *Government Brahmana* the chapter titled 'The she-Buffalo on Heat and the he-Buffalo after her' clearly reflects the use of scandalous language. 'The chief's buffalo neither rode, nor let others ride. All that these he-buffaloes had to do was ride the she-buffaloes that were on heat. The he-buffalo was not only the king of all the buffaloes in the village but also the emperor of the buffaloes of the neighbouring villages (20)'. The chapter 'The Black Cat did not turn White' describes the bathing experiences of author. 'We always swam

like Bahubali, removing our clothes. When the watchman of the well came, we would run grabbing whatever clothes we could. It was a naked race... we could not obviously walk nude into the village, nor could we put on our clothes over our soapy bodies. It was total chaos... but we never fell into his hands. Of course there were instances when we walked naked dangling our bells for the villagers to gape at (30)! Malagatti (2007) also recalls the sight of washing clothes in the 'ever-flowing Ganga (31)' and how 'sometimes, while the clothes were being washed, even shit came floating. People would stop washing and give way for that thing to disappear from sight (31)'.

Translation means encrypting the meaning of one cultural context into that of another. It, thus, not only demands the conversion of grammar of the original text into the target language but also maintains the flavour of the original culture as well. Kothari (2006) states that it should also be noted that the terms 'translation' and 'metaphor' both share similar connotation of 'carrying across' or 'transferring' through their etymology. Translations serve as any metaphor of understanding the 'other', and metaphor itself acquires a sense of translation. Moreover, there is always an undercurrent of reality in dalit life writings. The stories in Malagatti's autobiography are a bundle of events, anecdotes, traditions, customs, ceremonies and conversations.

'They would lift the corpse only after confirming our presence. Once the money thrown on the corpse fell on the ground, it was the job of the dalits to fight among themselves to pick up the coins...the coins were thrown such that they would roll through the feet of the corpse-bearers and the mourners who followed them. Walking on the coins was an act of redemption for them.

After everyone had walked on them, we had to pick up the coins (Malagatti, 2007: 8)'

Apart from the 'death ceremonies' dalits were required for wedding feasts as well as with certain rules which were briefed to them by the 'commandant standing at the gate, with a long stick'

1. 'Not to ask for more food.
2. To accept only as much food as you can eat.
3. Not to carry any food home.
4. While going home after the meal, we should dip our hands in the ink kept outside (Malagatti, 2007: 10)'

Further, the language of violence is put forward without any glory details. In fact, it is narrated in a very straightforward manner. It has a sense of 'carrying across' a meaning. The chapter 'Some girls who flirt with the future' describes the incident of beating of author's roommate.

'When he was near the illuminated gate of the botanical garden, all of a sudden four to five people who were hiding behind the gate jumped on him and gave him a sound beating...he was moaning and there was blood on his forehead. He was unable to even get up or cry (86). Later in the chapter, the author informs the reader that it was a 'treacherous game which was played in order to destroy the life and future of an intelligent dalit researcher (90)'. Malagatti (2007) remarks that 'Dalits who come with glittering dreams find their future getting lost more often than blooming (91)'.

The words of abuse and use of violent language is common in dalit writings. It is so because they have only harsh insulting language hurled at them most of the time.

Hey boy,
The meal plate
Without bones or meat.
Hey, creature of reservation,
This is lavish food (Malagatti, 2007: 99).

Further, dalit writing employs a representational strategy called 'performance' as Nayar (2012) suggests. The narrator takes up the role of primary witness in this strategy. Thus, language and translation play a vital role in Dalit literature, and English as a language of translation makes this literature widely available. It presents the Dalit world from a Dalit perspective as it is about their sufferings and struggles at various levels. It brings forth the working of an unjust and oppressive social system. The language used can be seen as an assertion of that identity, and perception that Dalits seek to change by transporting the reader into the text.

Works Cited

1. Bama. *Sangati*, translated by Lakshmi Holmstrom, Oxford UP, 2005.
2. Bassnett, Susan and Harish Trivedi. *Introduction in Post Colonial Translation: Theory and Practice*. Routledge, 1999, pp. 1-18.
3. Kothari, Rita. *Introduction of Translating India*. Cambridge UP, 2006, pp. 1-5.

4. Malagatti, Aravind. *Government Brahmana*, translated by Dharani Devi Malagatti et al, Orient Longman, 2007.
5. Nayar, K. Pramod. 'The Poetics of Postcolonial Atrocity: Dalit Life writing, Testimonio and Human Rights'. *Ariel: A Review of International English Literature*, 2012, vol. 42, no. 3-4, pp. 237-64.
6. Pai, Nalini. "Language and Translation in Dalit Literature." *Dalit Literatures in India*, Routledge, 2018, pp. 86-102.
7. Pinto, Jerry, translator. *Baluta*. By Daya Pawar, *Speaking Tiger*, 2015.

Education in the Present Context and the Way Forward: The Challenges and Opportunities

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Abstract

During this 21st century, the world seems to become more complex and uncertain, where myriad challenges have distracted our lives at an ever-increasing pace. Lately, the global pandemic of COVID-19 has accelerated these circumstances and has caused a major breakdown of order in almost all the organisations and that includes our education. One of the key challenges for education in response to the COVID-19 has been dealing with the sudden move of teaching and learning from face-to-face to online mode. In the last year, since the world has been embroiled in this global pandemic, there have been considerable debates, discussions, and dialogs about how higher education should both cope with its immediate effects, while also considering new models and innovations for the future. But regarding the policy, some issues have not yet been discussed in detail. Hence, this paper is an attempt to highlight some salient points on to the policies to be considered in this regard.

Keywords: Education, COVID-19, challenges, opportunities

Introduction

During the 21st century, the world seems to have become more complex and uncertain, where myriad challenges like dramatic population growth, immigration, exploding technological development, ecological disasters, etc., have distracted our lives at an ever-increasing pace. Lately, the global pandemic of COVID-19 has accelerated these circumstances, causing a major breakdown of order in almost all of the organisations which also includes the educational sector, especially Higher Education (HE). In the last year, since the world has been embroiled in this global pandemic, there have been considerable debates, discussions, and dialogs, at both national and international level, about how higher education should both cope with its immediate effects, while also considering new models and innovations for the future. But, the literature review reveals that some issues regarding policy have not yet been discussed in detail. On a positive note, the pandemic has caused a major disruption in the traditional thought patterns relating to education and compelled all its stakeholders to think and act outside the box. This has given the policymakers ample scope to embrace considerable flexibility and adaptability, and define modern and innovative strategies to significantly address the emerging global complexities concerning the sphere of higher education. So, this paper is an attempt to highlight some salient points on to the policies to be considered in this regard.

Impact of COVID-19 and Education Scenario

COVID-19, as we all are familiar with, began in December of 2019 in Wuhan, China, and spread quickly around the world. On 11th March 2020, the WHO declared COVID-19 a pandemic. Sooner or later, there emerged an adverse situation in every aspect of society. This volatile context has extraordinarily disrupted the social, economic, and political landscapes at both national as well as global levels. "While HE around the world is no stranger to the turbulence brought on by major social, political, and economic change, the scale and scope of COVID-19 is unprecedented in an era when HE is both widely available and highly internationalized. This leads us to conceptualize COVID-19 as a wicked problem" (Mathur 2020; Moon 2020).

COVID-19 as a Wicked Problem

In India, the first lockdown was enforced from 23rd March 2020 to contain the spread of the virus. Along with other sectors, this has had a remarkable impact on the Indian education sector. The so-called social distancing and closure of educational institutions, right from the pre-primary level to the university level, made it difficult to continue the physical mode, and educators were compelled to shift to online education. This drastic change becomes quite challenging both for the institutions, teachers, and learners. According to UNESCO, a total of 1.3 billion learners around the world were not able to attend schools and universities, and approximately 320 million learners are affected in India alone. COVID-19 has changed the face of the education industry. People are totally into a new concept of education now. "The third world countries are facing policy paralysis in handling the sudden shifting scenario of educational planning, management and organization during this pandemic with their fractured technical infrastructure, academic incompetency and lack of resources; low and middle-income countries are suffering the setbacks most as they were already running out of finance" (Thomas, 2020). "A key challenge for HE in response to the pandemic has been managing the abrupt move of teaching and learning from face-to-face to online delivery. Other issues that have arisen for HE include how to assess and evaluate students, support

international students, manage travel restrictions, and ensure the psychosocial wellbeing of students, faculty, and staff” (Sahu, 2020). Hence, classroom teaching has been replaced by distance teaching and learning. But, the shift from face-to-face to distance teaching did not come without challenges, the main ones being access to technical infrastructure, competencies, and pedagogies for distance learning and the requirements of specific fields of study.

COVID-19 has increased virtual mobility and/or collaborative online learning as an alternative but has negatively impacted physical student mobility at both national and international levels. The type of impact, however, is diverse and varies from institution to institution, but on average, it has been negative. Another major impact of COVID-19 happened to be on the examinations. Though some of the institutions somehow managed to carry out their examinations through new measures, for a major section, almost all examinations had either to postponed or cancelled. As far as research is concerned, COVID-19 also had interrupted the ongoing as well as new research projects. The projects are at risk of not being completed due to enforced social distancing and ban on the international, interstate, and even interdistrict travel. The cancellation or postponement of many conferences that were scheduled in the period is another major concern (Marinoni and van't, 2020).

The Positive Aspect

One of the positive options of the global pandemic happens to be the complete paradigm shift regarding the teaching method. E-learning, which was a new and rare concept until March 2020, becomes inevitable for both educators and learners. The pandemic led to the beginning of online education for all the courses, all the levels, and at all the places. Optional online education has therefore become a compulsion now. Thus, the forced move to distance teaching and learning offers significant opportunities to propose more flexible learning possibilities, explore blended or hybrid learning, and mix synchronous learning with synchronous learning.

New Challenges and Opportunities

Statistics on the outcomes of present higher education shows that 50% of the graduates do not even get a decent job after completing their formal higher education (Tomas and Becky, 2019). Moreover, the employees would not deny the fact that more than 80% of the ones, those who did manage somehow to get a job, have to be re-skilled and reoriented for their job fronts. So, one of the major challenges of the education system should be to ensure somewhat decent living after the completion of formal higher education. In this regard, one cannot comply with the current education system, which is measurably failing to reduce the ever-widening gap between academia and industrial expectancies. Academia is undoubtedly failing to prepare young learners to match the industry's standards, readiness, and expectancies. Another major implication is that the system is increasingly churning out more job seekers rather than job creators. Now, the challenge before the policymakers is that can they think of any significant educational innovations or continue the same education policy that will continue to take standardised tests in the 21st century as one of the integral components of a learner's evaluation? But it is common knowledge that standardised tests heavily rely on the learner's ability to conform and comply rather than testing the learner's ability to create and innovate. Thus, the traditional and conventional educational norms force the young learners to draw and colour within the lines i.e. to comply, to conform, and to compete. Every learner is given the same amount of time to learn the same thing in the same way and preferably on the same day. So, no wonder learners struggle to realise their true potential. But one major thing is being overlooked, which is that the real world rewards those who can create and think out of the box; which is beyond the confines of the fancy physical infrastructure of a higher educational institution. Another important thing is that in order to thrive in the 21st century's ever-increasingly complex workforce, the learners have to be oriented more towards collaboration and co-operation rather than only cutthroat competition. To address the challenge that emerges with the global complexities we do not need mechanically trained minds, minds which are loaded with facts and figures only; minds, which are systematic and, if selected, to think alike. That is not what the world requires, but it does require the minds which are capable of 'out of the box' ideation and divergent thinking. And the present COVID context demands the re-definition of the whole educational ecosystem, which has to prioritise skills such as critical thinking, effective communication, creativity, meaningful collaboration, analytical thinking, effective and fast decision making, and at the same time nurturing the young learners Emotional Intelligence, which has been neglected so far in the current educational system. Due importance should be given not only to one kind of Quotient i.e. Intelligent Quotient, which the current educational system is obsessed with, but also other very important quotients like the Creativity Quotient, the Passion Quotient, The Happiness Quotient, the Social and Spiritual Quotient and most importantly in the present context, the Adversity Quotient for how to deal with the uncertainty of life. So, in the current situation concerning education, these are the

opportunities. It needs to nurture and develop these quotients in the young learners. Additionally, it must allow the creative and young learners more time, which they can effectively utilise in creating, exploring, sharing, and experimenting with their novel and unique ideas. As responsible educators, teachers have to stop securitising failures and mistakes and admit and acknowledge both failures and mistakes which are essential elements of an effective learning process. Moreover, if people truly want the present generation to be evolved into creative problem solvers, one must give them ample scope to explore not only to seek innovative solutions to problems but also to seek and spot inherent properties in the existing solutions. Therefore, the current context requires the learners to have complete responsibility and ownership of their own learning; and in order to do that the system should be such that it gives them both choice as well as voice to determine 'What', 'How' and 'When' they should learn.

Conclusion

Educators have spent over one year doing something entirely different from what they were doing earlier. Simply put, people have tried to create a new interface with the learners. Now, when the situation shall be normalised slowly and gradually, the question of whether one should go back to the old way of doing things arises; i.e., after having exposed the students to a year of virtual interaction, should learners be back under the impacts and effects of a rather redundant and obsolete education system all over again? Considering the answer to this question is a "No", there arises a second question: Should one start teaching learners to draw and colour within the line and to think and act inside the box all over again? Considering the answer to this is also "No", educators must wholeheartedly embrace the obvious benefits of the hybrid and blended teaching-learning procedure and thereby facilitating young learners to thrive in the 21st century by redefining education. Certainly, this re-imagined mode of education will open up vistas of new possibilities and new opportunities for both educators as well as learners.

References

1. Marinoni G., van't L. H. (2020). *The Impact of COVID-19 on Global Higher Education*, *International Higher Education (Special issue 102)*, 10-15, IAU.
2. Mathur, A. N. (2020). *Strategies for Solving Wicked Problems of True Uncertainty: Tackling Pandemics like Covid-19*, In *IIMA Working Papers (WP 2020-04-03; IIMA Working Papers)*, 3-4 <https://ideas.repec.org/p/iim/iimawp/14623.html>
3. Moon, M. J. (2020). *Fighting against COVID-19 with Agility, Transparency, and Participation: Wicked Policy Problems and New Governance Challenges*, *Public Administration Review* 80 (4), 651–656. doi:10.1111/puar.13214.
4. Sahu, P. (2020). *Closure of universities due to coronavirus disease 2019 (COVID-19): Impact on education and mental health of students and academic staff*, *Cureus*, 12 (4), 1–6. 10.7759/cureus.7541.
5. Tomas, C. P. and Becky F. (2019). *Does Higher Education Still Prepare People for Jobs?*, *Harvard Business Review, Education*. <https://hbr.org/2019/10/does-higher-education>
6. Thomas, C. J. (2020). *Coronavirus and challenging times for education in developing countries*. *Brookings*. <https://www.brookings.edu/blog/education-plus-development/2020>
7. UNESCO. (2020). *Education: From Disruption to Recovery*, UNESCO, March 4. <https://en.unesco.org/covid19/educationresponse>.
8. UNESCO. (2020). *Education: From Disruption to Recovery*, UNESCO, March 4. <https://en.unesco.org/covid19/educationresponse>.

Comparative Studies of Aerospora over Capsicum Annum L. In Open Field Cultivation during Mansoon and Winter Season

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Abstract

An extramural survey of aerospora of Ascomycetes was conducted over the Capsicum field (*Capsicum annum L.*) at Nashik District open field cultivation during Mansoon season of June to October and Winter season November to March. The data of airborne microbial components was collected with the help of continuous Tilak Air Sampler (Tilak and Kulkarni, 1970). In order to assess, the disease incidence to the crop by Ascospore types. Over a period of survey, There were 17 spore types during mansoon season and 13 spore types during winter season recorded from this group. Their high concentration was found in air under weather conditions in favor to sporogenesis and release into atmosphere. The abundance of many Ascospores types in the aerospora revealed the presence of copious Ascomycotina members in parasitic and sporophytic forms in and around the fields. *Bombardia*, *Cucurbitaria*, *Didymosphaeria*, *Hypoxyton*, *Hysterium*, *Lophiostoma*, *Oidiopsis*, *Parodiella*, *Pleospora*, *Sordaria* and *Sporormia* was the common Ascospores types noted throughout the period of investigation. *Chaetomium*, *Claviceps*, *Melanospora* and *Meliola* are present in mansoon season only

Key words- *Aerospora*, *Capsicum annum*, *Ascomycetes*.

Introduction

Aerobiology is a branch of Biology, which deals with the study of various aspects like transmission, dispersion, deposition of airborne bioparticles. *Capsicum annum L.* belong to the family Solanaceae is the indivisible component of spice. Considering commercial value in mind, *Capsicum* is cultivated as economically valuable crop in India. *Capsicum* plant is easily affected by many fungal diseases. The large number of Ascomycotina members actively released their spores in air for further transport. Usually, in fungi the liberation of spores is necessarily depends on turbidity of the cells. The precipitation affects release of aerospora. This effect may be immediate or delayed. The spores of Ascomycotina occurred in the environment when the conditions are favorable for their Formations and release. The present paper deals with the comparative studies of aerospora over *Capsicum annum L.* In open field cultivation during Mansoon and winter season

Materials And Methods

The continuous sampling in the *Capsicum* open field (extramural) during Mansoon season of June to October and Winter season of November to March was done using Tilak air sampler. The working of the Tilak air sampler is according to the principle of suction and impaction. One can collect continuous volumetric data i.e. number of spores/m³ of air with the help of this equipment. During present investigations air sampling was done with the help of Tilak air sampler. The sampler was mounted at the centre of *Capsicum* field, one meter above the ground level. Slide preparation, scanning and detailed calculations were obtained by using same method described earlier (Tilak and Kulkarni, 1970). Apart from Tilak air sampler the data of air catches was also collected by petriplate sampling. The petriplate sampling was carried out for confirmation of fungal genera trapped by Tilak air sampler wherever needed.

Results And Discussion

The large number of Ascomycotina members actively released their spores in air for further transport. Usually, in fungi the liberation of spores is necessarily depends on turbidity of the cells. The precipitation affects release of aerospora. This effect may be immediate or delayed. The spores of Ascomycotina occurred in the environment when the conditions are favorable for their Formation and release. The Ascomycotina spores occurred in environment under favourable conditions supporting their formation and release. Most of the time Ascospores occurred during rainy season and their concentration was found fluctuating in accordance with amount of rainfall and varying vegetation. There were 17 (first season) and 13 (second season) spore types recorded from this group (Table 1). *Bombardia*, *Cucurbitaria*, *Didymosphaeria*, *Hypoxyton*, *Hysterium*, *Lophiostoma*, *Oidiopsis*, *Parodiella*, *Pleospora*, *Sordaria* and *Sporormia* was the common Ascospores types noted throughout the period of investigation. *Chaetomium*, *Claviceps*, *Melanospora* and *Meliola* are present in mansoon season only. During the present investigation the concentration of Ascospore appeared highest under high percentage of relative humidity and low temperature. *Chaetomium*, *Didymosphaeria*, *Pleospora*, *Sordaria* and *Sporormia* etc. showed their dependence upon the occurrence of rainfall and occurred immediately after the outbreak the rainfall. Ingold (1965) reported effect of dewfall on occurrence of release of Ascospores. Similarly, the close relation between release of Ascospores and rainfall has been proved. The number of Ascospores increases

during wet period while it decreases during dry period. The temperature also affects the occurrence of Ascospores. *Bombardia* exhibited 0.14% contribution during Monsoon season and 0.27% during Winter season to the total airspora from first year of study. *Chaetomium* was noticed in monsoon season only its contribution was 0.14% of the total aerospora. *Claviceps* contributed 0.28% (First Season) and 0.00% (Second Season) during first year. *Cucurbitaria* contributed 0.31% and 0.42% during Monsoon and winter seasons respectively. *Hypoxyylon* contributed 0.14% during Monsoon and 0.30% during winter season. *Lophiostoma* contributed 0.21% (Monsoon Season) and 0.75% (winter Season) during first year. *Oidiopsis* contributed 3.07% and 4.79% in monsoon and winter seasons respectively. *Pleospora* contributed 0.15% during monsoon and 0.52% during winter. During the first year *Sordaria* contributed 0.35% monsoon and 0.55% during winter season. *Sporormia* contributed 0.33% and 0.53% respectively in monsoon and winter. The spore types such as *Chaetomium*, *Hysterium*, *Massarina* and *Sporormia* were observed even during the dry period. The present findings clearly revealed the importance and impact of rainfall, temperature and relative humidity on the spore release of some Ascomycotin members. The Similar results have also been reported before by Ingold (1965), Patil (1983), Patil (1985), Bhadane (1991), Jayswal (1993), Naik (1995), Pawar (1998) and Merideth (1962 and 1963). These reports stated remarkable influence of temperature and rainfall on the development of reproductive structure and also acts as determining factors in long term periodic fluctuation like annual cycle of airborne catches.

Table 1 Seasonwise concentration of Ascomycetes spore types from the total airspora of kharif season of June to October.

Sr. No	Name	Seasonwise percentage contribution of spore types to the total airspora	
		Monsoon Season	Winter season
1	<i>Bombardia</i> Fr.	0.14	0.27
2	<i>Chaetomium</i> Kunz. Ex. Fr.	0.22	0.00
3	<i>Claviceps</i> Tul.	0.28	0.00
4	<i>Cucurbitaria</i> Gray. ex Grev.	0.31	0.66
5	<i>Didymosphaeria</i> Fuck.	0.04	0.41
6	<i>Hypoxyylon</i> Bull. Ex. Fr.	0.14	0.37
7	<i>Hysterium</i> . Tode Ex .Fr.	0.06	0.24
8	<i>Leptosphaeriaceae</i> de	0.19	0.21
9	<i>Lophiostoma</i> Ces de Not.	0.21	0.32
10	<i>Massarina</i> Sacc.	0.16	0.27
11	<i>Melanospora</i> Corda.	0.13	0.00
12	<i>Meliola</i> Fr.	0.14	0.00
13	<i>Oidiopsis</i> Sawada.	3.07	4.05
14	<i>Parodiella</i> . (Speg) Theiss and Syd.	0.14	0.23
15	<i>Pleospora</i> . Rabh.	0.15	0.22
16	<i>Sordaria</i> . Ces and de. Not	0.35	0.55
17	<i>Sporormia</i> Ces and de. Not	0.33	0.5

Summary

The abundance of many Ascospores types in the aerospora revealed the presence of copious Ascomycotina members in parasitic and sporphytic forms in and around the fields. *Bombardia*, *Cucurbitaria*, *Didymosphaeria*, *Hypoxyton*, *Hysterium*, *Lophiostoma*, *Oidiopsis*, *Parodiella*, *Pleospora*, *Sordaria* and *Sporormia* was the common Ascospores types noted throughout the period of investigation. *Chaetomium*, *Claviceps*, *Melanospora* and *Meliola* are present in monsoon season only. The present findings clearly revealed the importance and impact of rainfall, temperature and relative humidity on the spore release of some Ascomycotina members.

References

1. *Aerobiology* (Ed., S.T. Tilak). Today and Tomorrow Printers and Publishers, New Delhi pp. 67-78.
2. Gregory P.H. 1952 Fungus spores. *Trans. Brit. Mycol. Soc.* 35: 1-18.
3. Jayswal B.O. 1993 Atmospheric incidence of microbial population at Dhule and its relevance to environmental parameters. Ph.D. Thesis, Marathwada University, Aurangabad.
4. Ingold C.T. 1971 Fungal spores, their liberation and dispersal Oxford 302-p.p
5. Meredith 1962 Some components of air spora in Jamaican Banana Plantation. *Ann. Appl. Biol.* 50: 577-594
6. Patil, C. R. 1983 Aerobiological studies at Aurangabad. Ph. D. Thesis, Marathwada University, Aurangabad.
7. Patil, B. Y. 1985 Aerobiological studies at Aurangabad. Ph. D. Thesis, Marathwada University, Aurangabad
8. Pawar S. R. 1997 Studies in air spora over some fields at Aurangabad. Ph.D. Thesis, B.A.M.U, Aurangabad. Rajput J.C. and Parulekar 1998 Capsicum, A Hand Book of Vegetable Y.R. Science and Technology-Production, Composition, storage and Processing, Marcel Dekker, New York, p.203.
9. Tilak, S.T. and Kulkarni, R.L. 1970. A new air sampler, *Experientia*, 26: 443-444

A View of Investors on Asset Management Companies' Performance

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Abstract

The study is based on comparative analysis of mutual fund investment and equity shares investment. The need of the study is to help the investor's in knowing how the equity schemes and mutual fund schemes of the companies are performing and which schemes are preferred most by the investors. It also creates awareness in the minds of investors in terms of risk, return, liquidity & marketability of their investment. Also focuses on which would be the better investment for an individual investor. In this analysis the researcher have going to select five mutual funds in blue-chip companies and five equity shares companies in various fields, and some tools going to use for the analysis like mean, standard deviation, Sharpe ratio, beta, Treynor's ratio for the study. The source of the data will be collected from respective company websites.

Keywords : Mutual fund, Investment, Standard deviation, Beta.

INTRODUCTION

To know how the equity schemes and mutual fund schemes of the companies are performing and which schemes are preferred most by the investors. It also creates awareness in the minds of investors in terms of risk, return, liquidity & marketability of their investment. Also focuses on which would be the better investment for an individual investor. The authors selected Five Mutual Fund companies on the basis of blue-chip fund (Axis Blue chip fund, SBI Blue chip fund, Kotak Blue chip fund, ICICI Prudential Blue chip fund, Mirae Asset Emerging Blue chip fund) and Five Equity Shares companies (Infosys Software, ITC(FMCG), HDFC Bank, Amazon online shopping, Reliance Petroleum) in different sectors.

Literature Review

- Dr Sandeep Bansal, Sanjeev k Saini (2012)- Impact of Sharpe ratio & Treynor's ratio on selected mutual fund schemes. It examines the risk profile of aggregate mutual fund universe can be accurately compared by simple market, liquidity, returns, systematic & unsystematic risk and complete fund analysis.
- Dr Yogesh Kumar Mehta (Feb 2012)- Emerging scenario of mutual fund in India. An analytical study of tax funds of public sector and private sector. Corporate and institutions who form only 1.16% of the total sizeable amount of Rs 2,87,108.01 crore which 56.55% of net assets in mutual fund industry.
- Dr surrender Kumar Gupta and Dr Sandeep Bansal (Jul 2012)- Debt scheme of mutual fund of reliance and Birla Sunlife. An overview of the debt scheme of mutual fund on reliance and Birla Sunlife with the help of sharp index after calculating wet assets and standard deviation. It reveals that returns on Debt fund index 4.34% and risk-free return 6%.
- C. Vijendra and D. Sakriya (Jun 2013)- A survey was conducted among 384 mutual fund investors from the twin cities of Hyderabad & Secundrabad to know the fund/schemes and selection behavior of the investors. This survey under in the AMCs with planning and implementation of designing, marketing and selling of innovation products.
- Dr S. Vasanth, Uma Maheshwari and K. Subhashini (Sep 2013)- Some selected open-ended equity diversified mutual fund in India. It conducting on HDFC top 200 funds. Reliance top 200(g). ICICI prudential top 200(g). Canara Robeco equity diversified fund(g). this analysis has been made on the basis of Sharpe ratio, Treynor ratio and Jenson.

Objective of the Study

1. To compare Equity and Mutual fund schemes in respect of their risk & return.
2. To analyze the performance of equity shares and mutual fund schemes with their NSE CNX Nifty.

Statement of the problem

The Equity schemes were categorized and selected on evaluating their performance and relative risk. The investor who prefers to invest in mutual fund and equity shares wish to know about the returns and risk ratio of the different mutual fund and equity shares companies.

Assets Management companies supports the investors to take investment decisions. Hence an attempted has been made to study the Assets management companies performance and how for the investors can gain awareness in terms of risk, return, liquidity & marketability of their investment in blue-

chip mutual fund and equity shares companies in different field.

Limitation of the study

- The comparison here made strictly on price of equity shares and NAV of mutual funds, the study has gone deep into other factors.
- Selection of schemes for study is very difficult because lot of varieties in equity schemes and mutual fund schemes.

Research design

The present study is based on secondary data, were collected from official websites of Nifty. The period of the study is five years 2015 to 2020. The tools used for analysis mean, standard deviation, beta, Sharpe ratios, and Treynor's ratio. In this study five companies have been selected from different fields in equity shares and five mutual funds selected on the blue- chip fund and after that comparison made between them, using their benchmark.

Analysis and interpretation

The study attempt to analyze the performance of Mutual fund companies based on Blue chip were stated in the below table.

S. No.	Company Name	Mean	Standard Deviation	Beta	Sharpe ratio	Treynor's ratio
1.	Axis blue-chip fund	14.40	0.76	-0.04	5.25	186.09
2.	SBI blue-chip fund	0.39	0.85	0.09	-7.88	-76.17
3.	Kotak blue-chip fund	7.23	-0.12	-0.08	-0.12	95.68
4.	ICICI prudential blue - chip fund	3.99	0.15	1.38	-43.27	-1.08
5.	Mirae assets emerging blue-chip fund	11.42	0.41	0.23	-5.58	-18.65

Source: concern blue chip website

Inference: The analysis discloses that the Axis blue chip fund has Sharpe ratio (5.25) and Treynor's ratio (186.09) with Beta value of -0.04. compare with all the blue chip ICICI prudential high Beta value (1.38) The study attempt to analyze the performance of Equity shares companies on different sectors were stated in the below table.

S. No.	Company Name	Mean	Standard deviation	Sharpe ratio
1	Infosys software	20.8	11.49	20.19
2	ITC (FMCG)	-6.55	6.33	-7.65
3	HDFC bank	-22.23	7.41	-23.17
4	Amazon online shopping	-57.98	24.39	-58.27
5	Reliance petroleum	-31.41	14.38	-31.9

Source: Company website

Inference:

The analysis discloses that the Infosys software has Sharpe ratio 20.19 very high compare with other company

Suggestion

The risk ratio is very high when compared to the return in the axis blue-chip fund during this period. There is a loss who investing in the SBI blue-chip fund because there is no return during this period. The risk ratio is medium when compared to the return in the Kotak blue-chip fund during this period. The is a very high return in the Infosys software during this period. There is a loss who invested in ITC FMCG because there is no return during this period. There is a loss who invested in HDFC bank because there is no return during this period.

Conclusion

The comparative analysis helps the investor who prefer invest in mutual fund and equity shares help to know about the returns and risk ratio of the different mutual fund and equity shares companies and it helps to select the companies in blue-chip mutual fund and equity shares companies in different field.

It suggests that the investors shall buy the Kotak Mahindra blue-chip fund and Infosys software in equity shares. Investors can use the Sharpe ratio and Treynor's ratio to calculate the return value and to

know the risk ratio because the results are accurate to know about the return and risk ratio. It will be useful to get clear idea to invest a huge amount and make the interest.

References

1. Adler, N. and Golany, B. (2001). *Evaluation of deregulated airline networks using data envelopment analysis combined with principal component analysis with an application to Western Europe*, *European Journal of Operational Research*, 132, 260-273.
2. Bjurek, H., Hjalmarsson, L. and Forsund, F.R. (1990). *Deterministic parametric and nonparametric estimation of efficiency in service production*, *Journal of Econometrics*, 46, 213-227.
3. Powers, J. and McMullen, P.R. (2000). *Using data envelopment analysis to select efficient large market cap securities*, *Journal of Business and Management*, 7, 31-42.
4. Worthington, A.C. and Hurley, E.V. (2000). *Technical, allocative and cost efficiency in the Australian general insurance industry*, *Discussion Paper No. 74 in Economics, Finance and International Competitiveness*, School of Economics and Finance, Queensland University of Technology, Australia.
5. <https://www.toppr.com/guides/business-studies/sources-of-business-finance/equity-shares-and-preference-shares/>
6. <https://www.mutualfundindia.com/> <https://www.investopedia.com/terms/m/mutualfund.asp>
7. <https://www.quora.com/What-is-the-most-recommended-book-on-financial-management>
8. <http://www.sciencepublishinggroup.com/journal/index?journalid=393>
<https://www.bankbazaar.com/mutual-fund/mutual-funds-vs-equity.html>
9. <https://www.financialexpress.com/>

Humanism and Posthumanism: A Theoretical Approach

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Abstract

This research work explores the notions of Humanism and how Posthumanism has developed and with what variations from the former. Humanism and Posthumanism have been related to the discipline of philosophy seeking about the ontology of human beings. Pioneers of Humanism such as Rene Descartes and Aristotle have defined it on the grounds of reason. Posthumanism has been associated more with the relationship of humans to the environment and technology in healthy tone. This study is an interdisciplinary research in the area of philosophy and literature through the theoretical analysis of Humanism in comparison to that of the Posthumanism. The research provides new dimensions to the field of Social Science and Philosophy of Science. The research reaches its destination by representing the autonomous nature of Humanism and Universe-centric approach of Posthumanism.

Introduction

This research work explores the notions of Humanism and how Posthumanism has developed and with what variations from the former. Humanism and Posthumanism have been related to the discipline of philosophy seeking about the ontology of human beings. Pioneers of Humanism such as Rene Descartes and Aristotle have defined it on the grounds of reason. Posthumanism has been associated more with the relationship of humans to the environment and technology in healthy tone. This study is an interdisciplinary research in the area of philosophy and literature through the theoretical analysis of Humanism in comparison to that of the Posthumanism. The research provides new dimensions to the field of Social Science and Philosophy of Science. The research reaches its destination by representing the autonomous nature of Humanism and Universe-centric approach of Posthumanism.

Ideas

Humanism is often associated with ‘moral values’ in most of the Asian Countries. Humanism is also seen as ‘atheism’ when it provides secularism to the people. In various countries, it has taken the shape of a religion such as a person is a secularist and a humanist (Soper 9). Soper finds that humanism is loosely connected to rationalism (9). He has defined humanism as it “appeals (positively) to the notion of a core humanity or common essential features in terms of which human beings can be defined and understood” (11). These definitions, however, do not explore any historical, academic or philosophical background of the term. Humanism has been holding a prominent place in philosophy and literature. The term “Humanismus” was first coined by educationalist Friedrich Immanuel Niethammer “in the early nineteenth century to describe a high-school and university curriculum based on what have been known since the Middle Ages as the humanities: the study of ancient Greek and Latin, and of the literature, history and culture of the peoples who spoke them” (Davies 10).

Various theorists have tried to define humans on the grounds of Reason. Aristotle has differentiated them from rest of the non-humans on the basis of Reason only. Aristotle has provided the philosophical idea that the gift of reason is the one that raises the human beings from rest of the creatures. According to him, the human virtues cannot be inherited even by God and these values keep human beings aloof (Roden 12).

Likewise, Rene Descartes has described in his canonical Discourse on the Method that humans have power to think and to question. This is one of the main properties that differentiate humans from rest of the world. In his famous quotation from Part IV of the book, he says “I think, therefore I am”. Here is a humanistic agenda behind this quotation that cannot be ignored. Descartes has elaborated the discussion in his Meditation on First Philosophy. He presents the idea that if “there were a machine that looked like a monkey, it would not be possible to distinguish between a real monkey and the fake- at the level of essence- because the fact that neither the animal nor the machine could ever exercise rational thought (Badmington 17). In this way, Descartes has differentiated humans from non-humans where he has not only considered animals but technology also in the same category. He has divided the body and the soul on the basis of reason.

Our physical self is occupied by so many living and non-living beings. These play an important role in our life. As it has been discussed, the agendas behind critical humanism are removing man from the centre of everything. This can further be said that everything is important equally (living or non-living).

Amidst of such theoretical discussions, there appears a novel crisis regarding the role and importance of technology in the universe. Posthumanism, in such conditions, comes to rescue. Promod K. Nayar has elaborated the role that have been played by Posthumanism. According to him,

It rejects both human exceptionalism (the idea that humans are unique creatures) and human instrumentalism (that humans have a right to control the natural world). This strand is far more critical of the traditional humanism, and treats

(i) The human as co-evolving, sharing ecosystems, life processes, genetic material, with animals and other life forms; and

(ii) Technology not as a mere prosthesis to human identity but as integral to it. (19).

To elaborate, Posthumanism represents the idea that machines, humans and non-humans are mutually dependent and their relevance cannot be ignored. Nothing is independent but the whole universe is co-evolving. The term Posthumanism can be seen in two ways. Firstly, it is “ontological condition” (Nayar 13) of humans that they have started living in scientifically enhanced environment and started evolving in it. Scientifically enhanced environment here means the excessive use of technology in the things around humans. Secondly, the term takes philosophical turn when it moves in the sphere of critical and social position of humans. As it has been discussed above, Posthumanism tries to limit the constructed supremacy of humans over rest of the universe.

Neil Badmington, in his essay “Theorising Posthumanism”, has developed the discussion regarding the term on multiple basis. According to him, the idea of complete ending of Humanism and beginning of Posthumanism with pomp and show is just a “myth” (21). The essence of Humanism in Posthumanism cannot be denied. He gives the examples from Hollywood that Hollywood knows where the powers and supremacies of humans are about to end. Even then, the makers defend humans by showing their moral supremacy over universe and aliens. Cary Wolfe’s *What is Posthumanism* is a book that uses Wikipedia definition of Humanism. The writer also explores that the google results of the term Humanism are much more as compared to Posthumanism. Wolfe tracks the beginning of Posthumanism from the Macy conferences on Cybernetics (1946-53) which tries to remove humans from the place of autonomy (xvi).

Typifying any term, especially Posthumanism, is restricting it in the limitations and boundaries. Posthumanism is a philosophical turn that is not time bound or nationality/culture bound. An observation regarding the involvement of living and non-living around us in our lifestyle can be seen as an awakening towards Posthumanism. This observation can be time-transparent and culture-transparent. The terms such as nationality and cultural differences are Humanistic because it is human only that has to play major roles in them. Even then, there are some areas where these categorisations of Posthumanism can be done.

Tamar Sharon has observed that Dystopic Posthumanism is just like exploring the ideas that technology can be so devastating that it may be out of control and may hamper the well-being of humankind. Literature provides examples for such type of Posthumanism as in Adlous Huxley’s novel *Brave New World*. The novel shows how technology, if goes out of control, can be so dangerous that it can remove the existence of entire humanity.

Liberal Posthumanism can be seen as the one that presents the idea of defending, rather extending, humanity. This can be seen as providing an Extopian View of humanity (Thacker 73). The term Extopian can be defined as Extra-utopia. Thacker has identified the term by saying that science and technology add to the benefits of humankind. It tries to create a utopian society for humans.

Liberal Posthumanism has been termed differently by various theorists. Another name for this term is Transhumanism. Transhumanism theorist, Nick Bostrom, defines the term as transhumanist is the one who can excel over rest of the humans and has some add-on properties with him/her. Cary Wolfe has termed in as “bad posthumanism” (xiv). In this way, Transhumanism can be seen as extended version of Humanism which clearly enhances it with scientific and technological developments. It tries to protect the notions of humanism by strengthening the autonomy of humans.

Conclusion

Humanism is anthropocentric. Posthumanism provides a perspective of the rest of the universe by minimizing the constructed autonomy of humans. It provides equal weightage to immanence by including the role of body. The notion of using science and technology as a tool for the betterment of humanity has been challenged. The idea that the living and the non-living beings represent a united whole is promoted thus by rejecting the subject-object dualism.

References

1. *Badmington, Neil. “Theorizing Posthumanism”. Cultural Critique. University of Minnesota Press, 2003. pp. 10-27.*
2. *Davies, Tony. Humanism. Taylor & Francis e-Library, 2001.*
3. *Descartes, Rene. Discourse on the Method. Duke Classics, 2012.*
4. *Nayar, Promod K. Posthumanism. Polity Press, 2014.*

5. Roden, David. *Posthuman Life: Philosophy at the Edge of the Human*. Routledge, 2015.
6. Sharon, Tamar. *Human nature in an age of Biotechnology: The case for Mediated Posthumanism*. Springer Science & Business Media, 2013.
7. Wolfe, Cary. *What is Posthumanism?* University of Minnesota Press, 2010.

Migration and Impact on Children of Migrant Labourers in India

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Abstract

Migration influences children in a diversity and can be both a positive and a negative event; it is a composite procedure with barriers chances which controls children's growth. This paper is written analysis concerning migrant children and the affairs that configure their accommodation and the results of migration on their children's lives. Children's educational presentation, their communal incorporation and psychological welfare is pretentious by the migration affair. In accordance with research, extensive range of distinct educational requirements and that paternal participation impacts children's educational acquirements as well as language expertise is encountered by migrant children. Provocations in the academic structure is generated by the distinct conditions of migrant children. A crucial part in the psychological welfare of the child is carried out by the adjoining situations. There are numerous additional elements that impact the educational welfare and dignity of the child. One of those elements is the age of the migrant child while migrating. The modification procedure is uncomplicated for younger children. The extensive frame of mind to migrants in the country and the plans presented by the government conceiving migrant children modification encounters are supplementary elements that influences migrant children.

Keywords- Migration, Children, Impact

Introduction: -

Today, a substantial dividend to economists is the mortal funds evolution of children. This is not only due to children's pedagogy and fitness results these days have a notable involvement regarding their own communal and financial welfare in the succeeding years, but also due to children are the future of a community and forecast of attribute of human resources stock in the upcoming years for the community as a whole will thoroughly rely on how children are performing as a batch. The crucial life moments that require substantial interchanges for the sole is childhood and adolescence. Accompanying household situations, the communal and ethnic habitats affect children's growth. Moreover, migration is also a crucial element that impacts children and households. Migration is a global event that has every time been chunk of archives. Children and adolescents can be especially affected by numerous methods counting their household relations and their communal and psychological presentation just by going to a different location. Wandering to new locations has crucial mental and communal inferences for the sole and the household less casual help or abettance that was formerly given by household, companions and peers is one of the inferences stated. Moreover, it might mean having to grasp different tongue and different communal standards to regulate to different communal and ethnic surroundings. Migration can be a demanding incident for children for all these and on numerous more basis including schooling, race, caste, hurt, age and sex. The consequence of migration for children turns on a numerous problem, such as cause for their household conclusions to move, household's agreement incidents, and accessibility of casual and legal help.

Families migrate for various causes but the most obvious cause is the aspiration for a superior lifestyle. Apart from this, the migration of labours takes place generally from one state to other for livelihood. Migration relies on the mortals and the situations for the migration as well as the habitat of one's nation and consequently contemplate as a composite circumstance. Unluckily, for some individual migration is not an option these includes daily wages labourers. Delhi and the states of Gujarat and Maharashtra are peak destinations for inter-state migrant employment. Labour migration has got larger and will possibly pick up to increase once the wealth retrieve from the present calamity. Even though paternal migration frequently escorts more earnings and likely more profitable assets for children's schooling and fitness expenditure. Absence of paternal supervision can additionally have unfavourable outcomes on left-behind children. Comparative proportions of the two outcomes and factual problems are the two crucial elements on which the paternal migrations rely. Effect of such migration on the children is further discussed in this paper.

Body: -

In India, communal erection and design of evolution is the vital source of labour relocation. Irregular evolution is the principal cause of relocation beside with elements such as scarcity, real-estate structure, separations of land, absence of job or work chances, huge household dimension and established disasters. There are various difficulties endured by relocated labourers and their households in India.

Several of the summons are fighting with underpaid, corporeal and venereal misuse with protection reliability, etc. These are the issues endured by personnel and further particularly disordered section.

- **Issues endured by Migrant Labour: -**

All the Indian nationals have the just to inhabit and resolve in any sector of the area of India, susceptible to rational limitations in the inquisitiveness of the common place or defence of any backward class. Nevertheless, individuals allocating for work endure crucial summons such as –

1. Absence of communal certainty and fitness' sake and deficient execution of minimal security levels rule.
2. Absence of convenience of situation supplied social security mostly nourishment supplied by PDS, Public Distribution System.
3. Absence of ingress to inexpensive houses and fundamental facilities in civilized sectors.

- **Effects of Labour Migration: -**

Labour migration increases output and stipend by well-organized redistribution of labour, permitting workers to exploit superior chances over areas and zones. Consequently, migration is observed as the main part of the profitable growth and household well-being. As a coin has two sides, therefore along with some positive effects it has some negative aspects as well. These comprise of diverted household life which can produce deficient diets and enlarged emotional issues. Motivation for schooling can be lessened due to migration when recognized in coming time, going back to schooling is less due to assumption of migration. Migration can additionally lesson labour constraint involvement for household personnel left-behind, mainly for women.

- **How does migration affect child development?**

Numerous child emigrant ultimately culminates in farming or services including household management. In accordance with further confirmations, amid child labourers' migrant toddlers encounter underpaid wages, more workload, visit school irregularly and experiences more mortality rates at sites comparative to localized toddlers. Child migrants experience consequential issues at the time of migrating. These issues are extremely consequential when children relocate without right certificates. In these circumstances toddlers are in danger of ill-treatment and endangered to child labour. Child migrants frequently face abuse such as bearing from segregation, brutality, inferior working situations, bankruptcy of wages and the warning of being announced to the officials. In spite of the number of toddlers implied, the requirements and attentiveness of migrant children are highly lacked from the conventional arguments on child preservation, child labour and migration. As a consequence of that, many governments have been unsuccessful in evolving productive strategy reaction to help and safeguard migrant children. Aside from these issues, some personal yet most underrated challenges are faced by children. Long detachment subsequent migration generally diverts parent-child correlation and effect in psychological awkwardness in children. These psychological influences may lead to psychological risks especially amid left-behind children living with numerous misfortunes in the household.

- **Advantages and Disadvantages of Migration: -**

Advantages	Disadvantages
Cash dispatched to household by migrants.	Individuals of working age resettle lessons the dimensions of the country's / state's capable personnel.
Reduces constraint on jobs / work.	Gender variances are given rise as it is commonly mean who look for work elsewhere. Women and children are left.
Migrants may comeback with retraining.	'Turn-Over' if numerous expertise workers and labourers leave.
An enjoyable and various customs.	Growing price of amenities.
Assists to lesson any labour scarcity.	Overcrowding.
Migrants are extra prepared to enrol on underpaid, inexpert works.	Disputes between various creeds and ethnics.

- **Pros and Cons of Migration: -**

PROS –

1. Family utilization and speculation is held up by the supplementary wages by settlement by the migration of a household personnel.

2. These wages impact can lesson the requirement for child labour and enlarge children's education, especially for girls in evolving countries like India.
 3. Settlements can enhance households' cleanliness medical management and sustenance and substitute for mislaid conventional Medicare in the short term.
 4. Settlements can sanction enduring household personnel to grab in dangerous, higher return fruitful ventures.
 5. Where numerous migrants are men, the negotiating capacity of women who stay behind may be built-up.
- CONS –**
1. Migration of labourer class can produce the child labour phenomenon certainly.
 2. The lack of the leading caretaker can enlarge children's prospect of giving up on school and detain school continuation.
 3. Diverted household life can effectuate substandard foods and enlarge emotional issues.
 4. Migration may lesson motivation for schooling when discerned succeeding returns to schooling are less due to assumption of migration.
 5. Migration can lesson labour pool involvement for household personnel left-behind, mainly for women.

Conclusion: -

This paper explores the effects of migration of the children of labourers. Migration influences children's consequences by switching in the confined labour market, which includes both adults and children. Unqualified relocation lessons straight children's labour anticipation by a replacement impact as unqualified workers and child labour are probably to be replaced. Unqualified migration decreases the earning prospective of unqualified parents and enlarges the chances of going back to education. In accordance with our research, domestic migration of a specified capability has a defeatist effect on respective adult's labour market results. In addition, unqualified immigration has a defeatist and notable effect on child labour. Eventually, unqualified immigration rises toddlers school presence and lessens their probability of being frivolous. The replacement and return to schooling impacts influences the earning impact medium. Still their impacts are indestructible and more applicable to children of unqualified parents as they are probably more restricted in their labour contribution settlement.

Though government of India has taken numerous steps with regard to migrant labour such as transport, food distribution, housing, financial aid; but all these are strictly with respect to the migrant labourers and it has nothing to do with the improvement of the negative impacts of migration on children of the migrant labourers.

References: -

1. <https://www.researchgate.net/publication/>
2. <https://www.prsindia.org/theprsblog/>
3. <https://wol.iza.org/articles/>
4. <https://www.bbc.co.uk/bitesize/>
5. <https://wol.iza.org/articles/>

Digitization of the Teaching-Learning Process in the Covid-19 Era – Impact on Foreign Language Learning

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Abstract

The Covid-19 pandemic has caused universities, colleges, and schools around the world to close, in the hopes that public health officials' advice on social distancing and staying at home may help flatten the infection curve and limit the number of total deaths from the disease. As a result of the development in online learning, where education is offered remotely on digital platforms, education has been tremendously affected. According to research, online learning improves information retention and saves time, implying that the changes and adaptations brought on by the pandemic may be here to stay. While the Covid-19 infection rates of several countries vary, more over 1.2 billion children in almost 180 countries are being affected by the closure of educational institutions as a result of the pandemic. Moreover, the online learning mode poses several risks and challenges to the future of education. While there are many difficulties in the teaching-learning process in different domains of study, language teaching and learning seem to be on the frontline of those challenges. Therefore, the purpose of this research article is to highlight the impact of Covid-19 on education, with a focus on the digitization of the teaching-learning process, particularly with regard to the teaching and learning of foreign languages, which has proved to be more difficult in a virtual learning environment.

Key words: digitization, teaching-learning, online learning, foreign language learning, Covid-19, education, French language learning

Introduction and purpose of the research

Even before Covid-19, industrialised countries were seeing rapid expansion and acceptance of educational technologies, with global investments in advanced technology reaching 18.66 billion US\$ in 2019. The global online education market is anticipated to reach US\$ 350 billion by 2025, according to UNESCO projections. Be it apps, virtual tutoring, video conferencing tools, or e-learning software, the use of these tools has skyrocketed during Covid-19. But what could be the impact of online education on the future of learning? While some believe that the unforeseen, rapid and abrupt switch to online learning, without training, sufficient bandwidth and little preparation, will result in a poor user experience that will not be conducive to sustained growth, others believe that a new hybrid model of education will emerge, with significant benefits. Many are already touting these benefits: a colleague who uses Moodle to teach his students said, "It has changed the way I teach. This allows me to reach my students more effectively and efficiently through focus groups, video meetings, voting and also document sharing, especially during this pandemic. My students also find it easier to communicate on Moodle. I will stick with it even after the Covid-19 crisis comes to a standstill. I think traditional offline learning and online learning can go hand in hand." However, there are challenges to be overcome. Some students without reliable internet access and / or technology find it difficult to participate in digital learning. Others don't have those kinds of worries; this gap is observed between countries and between income brackets within countries. For example, while 95% of pupils in Switzerland, Finland and Austria have a computer which they use for their schoolwork, half of the total number of learners in the world, or 826 million pupils and students, "do not have access to a computer at home", underlines UNESCO. "The disparities are particularly marked in low-income countries: in Africa 89% of learners do not have access to home computers and 82% do not have an internet connection," notes the United Nations Organization for education, science and culture.

On the other hand, the confinement period linked to the Covid-19 pandemic from the year 2020 has led modern language teachers to urgently switch from a more conventional face-to-face teaching-learning process to remote learning. This unprecedented event has prompted them to experience, without preparation, a situation with the loss of benchmarks that define the teaching-learning of modern foreign languages. This is shown by the results of our investigation conducted during the confinement period, and more particularly through the expression of a loss of contact with the students as experienced in the language class. The distance in this very particular situation has brought out the lack of physical presence of the language teacher. But is this problem specific only to the language classroom context or can it relate to the concept of presence as defined in research on technology-mediated distance learning? This is what we propose to question in this study.

Methodology

In view of this unprecedented situation, our research is intended to be exploratory, aiming to obtain data relating to the way in which modern language teachers experienced exclusively from distance education imposed in an emergency. The results reveal that one of the main difficulties for language teachers is the lack of face-to-face contact. One could say that these results echo what Jacquinet-Delaunay (2001, p. 188) said twenty years ago when ICT began to take off in France, concerning this strong attachment in the teaching process: “this experience of presence reduced to ‘physical’ presence and therefore this idea that as soon as there is no longer any physical presence, there is no longer any authentic communication”. However, the author also invites us to question the meaning of presence, considering that physical presence refers to one of the possible dimensions of presence (Jacquinet-Delaunay, 2000).

Our study is an extension of this reflection aimed at considering what underlies the presence in the language class, considered essential by foreign language teachers. To do this, we will rely on theoretical contributions relating to the question of presence in distance and face-to-face teaching-learning. We will present the main scientific reflections which, from French researchers, Jacquinet-Delaunay (2001) to Jézégou (2010), have made it possible to question the idea of presence in distance education mediated by digital technology. Then we will propose theoretical contributions referring in particular to interactions as well as the teacher-student relationship in a classroom context, highlighting elements likely to define the idea of presence in a language class.

Literature Review

Jacquinet-Delaunay (2001, p. 183) specified, for there to be presence there must be interaction, be it “mental, verbal or gestural”. In the language class, what makes it possible to generate the “feeling of presence” (Jacquinet-Delaunay, 2001) is linked, as if at a distance, to a situation of interaction between the teacher and the learners and between the learners. However, in a face-to-face situation, what accentuates the degree of presence relates first of all to this bodily co-presence referring to the “haptic dimension” (Weissberg, 2000, p. 31) of the relationship. Face-to-face communication is enriched by the presence of perceptible bodies in their totality. The feeling of presence thus refers to this total perception of speech as defined by Colletta (2004, p. 15):

“[...] a behaviour which associates articulated sounds with bodily movements, and when you perceive language behaviour, you perceive it in the different sensory modalities with which you are equipped. In other words, not only do you recognize the words spoken, but you hear them with their music (what is called prosody), and you perceive at the same time the gestures, the facial expressions, the looks [...] all the bodily movements produced by the speaker”.

In a virtual teaching-learning scenario, with regard to the specificity of the object which is both an end and the means of communication (Borg, 2006), the use of this multimodality of speech associated in particular with the body of the teacher in class can be considered as essential and difficult to transfer over distance. According to Tellier (2008, p. 40), “the teacher's body is a teaching tool as is his voice” and the teacher must know “how to use it in order to help the learner in the process of learning”. Gestures, that is to say “the movements of the hands and arms, produced with speech as well as facial expressions” (Tellier, 2008, p. 40) are, for Tellier, fundamental in the learning process of a foreign language, because they allow access to meaning. This specificity of communication based largely on the multimodality of speech is also evoked by Cicurel (2002, p. 154) to whom the language class is a place where the teacher's practices are deployed, in particular through “didactic language practices which can be verbal, non-verbal, mimogestual”.

This multimodality of speech, and in particular gestures, also participates in the construction of a common code referring to the here and now of the classroom. Tellier (2008, p. 45) explains in a study that certain gestures aim, for example, to animate. They include “both the gestures of class management (change of activity, starting and closing of activity, placement of learners / material, punishing / scolding / silencing, giving instructions, etc.) and the management of interactions and of participation (regulate flow / volume, have people rehearse, support, question, speak out)”. For Tellier (2009, p. 44), these gestures, reproduced regularly, as well as those of the learner participate in the construction of a particular communication based on “a common gestural code shared by the students of the same class”. This common sharing based on a reciprocal understanding of gestures likely to participate in this idea of presence also refers to the interaction generally considered in its collective dimension in the language class.

For Cicurel (2002, p. 148), the classroom is not seen only as a “place of linguistic progression”, but also and above all “as [a] place of speaking and socialization” involving the teacher and the group of teachers and learners considered as “a social group”. The interaction is thus based on the collective, whether it is a question of exchanges between teacher and group of learners allowing in particular a “co-constructed exchange within the class” (Ibid, p. 149), or between learners. The feeling of presence in the language

class could thus be linked to the implementation in the classroom space of these collective interactions involving “total” speech (see Colletta 2004, p. 15).

To this we can add what seems to us to be one of the defining traits most inclined to define face-to-face communication: the character of unpredictability inherent in this common sharing of “the here and now” to quote Weissberg (2001, p.31). The face-to-face course, although regulated by the teacher, progresses over the course of interactions, whether verbal or non-verbal, and in fact allows the teacher the possibility of responding to the unforeseen and adapting his course accordingly on spontaneous requests (implicit or explicit) from learners. In the classroom, teaching activity is thus subject to the influence of the always specific teaching-learning situation, as a function of the interactions that take place there so that “constantly, the planned action of the teacher meets episodes that can occur in the course of the interaction and modify it” (Cicurel, 2002, p. 147).

Cicurel (Ibid) speaks of this capacity for adaptation and improvisation specific to the expert teacher in a language classroom context. This comes under the teacher's “expert strategy” and in particular makes it possible “to move to another level, to free oneself from the contents and to concentrate on the unpredictable aspects of the task”. For Cicurel (Ibid, p. 153), these expert practices implemented “lie between the strategy, known in advance, planned, and the tactic, which arises in the heart of the exchange and pushes the protagonists to improvise solutions”. The teacher-expert therefore knows how to adapt to the unforeseen; he has, according to Cicurel (Ibid), “recourse to cunning, to the need to invent on the spot, to deal with, to imagine solutions in the immediacy of the exchange”. Of course, these adaptation-improvisation practices depend on the teacher in his individuality, and on his experience in teaching a foreign language.

Finally, a last element could relate to the feeling of presence. It resonates with teacher-student interaction in the language classroom, but in that it is likely to involve or establish at the relational level, an emotional bond. According to Espinosa (2016, p. 143), this teacher-student relationship is the result of a human encounter seen as going “beyond or in addition to the knowledge to be transmitted, transmitted, acquired or acquired”. For Virat, it refers to a tradition in the history of education dating back in particular to Erasmus (Virat, 2016, p. 406):

“No doubt it will be of great benefit if he who undertakes to educate a child, by a good inclination of courage, clothe himself with a father and mother's affection for the child. Because in every task, love removes much of the difficulty” (Erasmus, 1990, p. 76)

For Virat (2016), this teacher-student relationship should be compared to the parent-child relationship. It would be evident in particular in the attention that the teacher pays to the needs of the students and in the responses given that make it possible to offer emotional security. For Espinosa (2016, p. 142), this teacher-student relationship “marked by affectivity” would have an influence on learning in that it would allow, for example, to modify the attitude of the learner (who may be favourable or unfavourable with regard to the discipline taught), or to strengthen self-confidence “likely to play an important role in [...] the student's academic learning”. Finally, it would have an impact on the motivation of learners, which depends to a large extent according to Espinosa (2016, p. 145) on “school relational experiences and [the] relationship of trust [...] that the teacher has been able to establish between himself and each of his students”. This teacher-student relationship should be considered in varying degrees, from the absence of a link to a relationship whose educational dimension extends beyond the educational relationship in the classroom when, for example, the “content of interactions largely exceeds the academic domain and affects the personal and family life of the student” (Virat, 2016, p. 420).

Findings and Analysis

For those with access to the right technology, there is evidence that online learning can be more effective in many ways. Some research shows that, on average, students retain 25-60% more knowledge when learning online, compared to only 8-10% in the classroom. This is mainly due to the fact that students can learn faster online: online learning requires 40-60% less time to learn than in a traditional classroom, as students can learn at their own pace, returning backwards and reread, skip or speed up the acquisition of concepts at will. In Morocco, for example, and in 90% of cases, teachers use exchange and collaboration platforms such as Microsoft Teams, Zoom, Google Meet, Skype or WhatsApp? These applications are greedy in terms of Internet connection and computer resources intrinsic to PCs and smartphones. It is difficult to engage teachers and learners in sessions that last several hours. This has a financial, technological, psychological and educational cost. Only a tiny minority (especially in universities) use LMS-type distance education platforms which offer all the synchronous and asynchronous communication tools, monitoring and evaluation tools as well as production and integration tools and learning resources. LMSs also save time and money because the teacher leaves their scripted lesson there and their students

can access them securely and at any time of the day to perform activities or download resources or documents, homework, etc. The role of the teacher is coupled with the role of remote tutor, which implies personalized and effective learning. What we have seen is a simple transposition of the face-to-face course into a distance course. Students are planted in front of their screens all day, and parents pay the bill for the internet connection which ends up weighing on the family budget. It also involves dropouts and conflicts between parents and teachers who often only seek to fulfil their task made difficult by the distance, the indiscipline of the students and the pedagogical ineffectiveness that accumulates day after day.

However, the effectiveness of online learning varies across age groups. The general consensus on children, especially younger ones, is that a structured environment is necessary, as children are more easily distracted. To take full advantage of e-learning, it takes a concerted effort to provide this structure and go beyond replicating a course / face-to-face course via video capabilities, instead, using a range of collaboration tools and engagement methods that foster inclusion, personalization and intelligence. Since studies have shown that children make extensive use of their senses to learn, making learning fun and effective through technology is crucial. Research also shows that smart integration of games has fostered higher engagement and motivation for learning, especially among younger students, which makes them genuinely enamoured with learning.

A changing educational imperative

It is clear that the Covid-19 pandemic has completely disrupted an education system that many believe was already losing its lustre. Could the shift to online learning be the catalyst to create a new, more effective method of educating students? While some fear that the hasty nature of the online transition has hampered this goal, others are considering making online learning part of their “new normal” after experiencing the benefits firsthand.

The importance of knowledge dissemination is accentuated during the pandemic. Major global events are often an inflection point for rapid innovation. One shining example is the rise of e-commerce after the SARS epidemic. While we are not yet sure if this will apply to online training after Covid-19, this is one of the few areas where investment has not dried up. What has been highlighted by this pandemic is the importance of spreading knowledge across borders, across businesses and all parts of society. If e-learning technology can play a role here, it is up to all of us to explore its full potential. This can only be done by training teachers in digital pedagogy, distance learning platforms and modern assessment techniques.

Conclusion

It is difficult to predict what the educational landscape will look like after the passage of Covid-19, in part because of the scale of the threat of community transmission posed by interactions with academic institutions (e.g., Weeden & Cornwell, 2020). Indeed, discussions are underway in many institutions on the extension of emergency e-learning. Efforts to standardize emergency e-learning measures, precisely because post-pandemic pedagogy seems unthinkable, deny the education sector the opportunity to openly discuss how it can be empowering to all the students. Normalizing emergency e-learning would mean normalizing a form of education that perpetuates structural inequalities of class, race, and support (Farhadi, 2019) from which schools should enable students to break free.

But for these discussions on post-pandemic pedagogy to continue, face-to-face schooling must be reconsidered. The standardization of emergency e-learning, or the justification of widespread and mandatory e-learning protocols on the basis of crisis response, precludes the very possibility of a productive debate on the value of education.

Highlighting the danger of standardizing emergency e-learning is not the same as condemning all forms of e-learning. Indeed, one could argue that there is a different type of empowerment that e-learning offer. Bridging the digital divide, the radical portability of e-learning can increase access to education in rural communities. For people who cannot attend a traditional full-time school due to personal or financial circumstances, the flexibility of asynchronous e-learning can provide broader access. And even in traditional higher education institutions, hybrid or blended forms can help improve the quality of face-to-face teaching by moving content delivery online and focusing face-to-face sessions on active learning (for example, Bowen, 2012). In some countries like the United States in particular, optional e-learning could reduce the burden of exorbitant tuition fees that make higher education inaccessible to many people.

References

1. Borg, S. (2006). *The distinctive characteristics of foreign language teachers*. Language Teaching Research, 10(1), 3–31. Retrieved from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.132.6475&rep=rep1&type=pdf>
2. Bowen, J. A. (2012). *Teaching naked: How moving technology out of your college classroom will improve student learning*. Jossey-Bass. [Google Scholar]

3. Cadet, L. et Cicurel, F. (2017). *Réfléchir les pratiques enseignantes. De l'analyse des interactions didactiques à l'analyse des discours sur les pratiques*. In N. Guichon et M. Tellier (dir.), *Enseigner l'oral en ligne. Une approche multimodale* (p. 243-265).
4. Cicurel, F. (2002). *La classe de langue un lieu ordinaire, une interaction complexe*. *Acquisition et interaction en langue étrangère*, (16), 145-164. Retrieved from: <https://journals.openedition.org/aile/801>
5. Colletta, J.-M. (2004). *Le développement de la parole chez l'enfant âgé de 6 à 11 ans. Corps, langage et cognition*. Belgique : P. Mardaga.
6. Espinosa, G. (2016). *Affectivité, relation enseignant/e-élève et rapport à l'enseignant/e : Contribution à une réflexion sur les caractéristiques d'une relation réussie*. *Recherches en Éducation*, (26), 143-154. Retrieved from: <https://hal.univ-lorraine.fr/hal-01618220>
7. Farhadi, B. (2019). "The Sky's the limit": *On the impossible promise of e-learning in the Toronto district school board*. Doctoral dissertation. Toronto: University of Toronto. <http://hdl.handle.net/1807/97442> [Google Scholar]
8. Jacquinet-Delaunay, G. (2001). *Le sentiment de présence*. *Deuxièmes Rencontres Réseaux Humains / Réseaux Technologiques*, 183-191. Retrieved from: <http://rhrt.edel.univ-poitiers.fr/documentb52f.html?id=773>
9. Jézégou, A. (2010). *Créer de la présence à distance en e-learning. Cadre théorique, définition, et dimensions clés*. *Distances et savoirs*, 8(2), 257-274. Retrieved from: <http://www.cairn.info/revue-distances-et-savoirs-2010-2-page-257.htm>
DOI : 10.3166/ds.8.257-274
10. Meyer, K. A., & Wilson, J. L. (2011). *The role of online learning in the emergency plans of flagship institutions*. *Online Journal of Distance Learning Administration*, 14, 1. <https://www.learntechlib.org/p/52628/> [Google Scholar]
11. Tellier, M. (2008). *Dire avec des gestes*. *Le Français dans le monde. Recherches et applications*, 44, 40-50.
12. UNESCO (2021). *UNESCO's support: Educational response to COVID-19*. Retrieved from <https://en.unesco.org/covid19/educationresponse/support>
13. UNESCO (2020). *Education: From disruption to recovery*. Retrieved from <https://en.unesco.org/covid19/educationresponse>
14. Virat, M. (2016). *Dimension affective de la relation enseignant-élève avec les adolescents : Revue des études longitudinales et perspective de l'attachement*. *Revue de psychoéducation*, 45(2), 405-430. Retrieved from: <https://www.erudit.org/fr/revues/psyedu/2016-v45-n2-psyedu02956/1039055ar.pdf>
15. Weeden, K., & Cornwell, B. (2020). *The small world network of college classes: Implications for epidemic spread on a university campus*. Manuscript under review. <http://osf.io/t7n9f> [Google Scholar]
16. Weissberg, J.-L. (2001). *Entre présence et absence. Outils de communication et présence humaine*. *Actes des Deuxièmes Rencontres Réseaux Humains / Réseaux Technologiques*, 31-39. Retrieved from: <http://rhrt.edel.univ-poitiers.fr/document9a31.html?id=429>

Philosophy and Literature: Studying feminism through Christina Rossetti

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Abstract

This paper studies the philosophy of feminism with respect to literature. There is textual analysis of the poem "Goblin Market" by the female poet Christina Rossetti who was partially associated with the Pre-Raphaelite movement. Rossetti's poem has been studied from the perspective of philosophy of feminism and lesbianism. Various literary critics have associated the poem with the contemporary Victorian scenario of degradation of females. Critics have also projected the idea of female messiah in this poetry. This research paper is going to analyse feministic theories for some positive outcome. Literature is studied as the description of society that what is going on around. Philosophy describes the conceptions of society. This paper reads both the disciplines hand (with special reference to feminism) in hand to seek how females have been treated in the society and what methods they use in defense. Females have options of rejection patriarchy and domination by overthrowing the male indulgence in their lives. However, the system is itself corrupted that it is not letting any gender free. The war between the genders should be ended for the betterment.

Introduction

This paper studies the philosophy of feminism with respect to literature. There is textual analysis of the poem "Goblin Market" by the female poet Christina Rossetti who was partially associated with the Pre-Raphaelite movement. Rossetti's poem has been studied from the perspective of philosophy of feminism and lesbianism. Various literary critics have associated the poem with the contemporary Victorian scenario of degradation of females. Critics have also projected the idea of female messiah in this poetry. This research paper is going to analyse feministic theories for some positive outcome. Literature is studied as the description of society that what is going on around. Philosophy describes the conceptions of society. This paper reads both the disciplines hand (with special reference to feminism) in hand to seek how females have been treated in the society and what methods they use in defense. Females have options of rejection patriarchy and domination by overthrowing the male indulgence in their lives. However, the system is itself corrupted that it is not letting any gender free. The war between the genders should be ended for the betterment.

Ideas

The philosophy of Feminism intersects with literature as literature presents the way of life. Feminist philosophy uplifts females from their torturous plight and works for a better place for them. Feminism has four waves which present various circumstances where the females can empower themselves. Women empowerment considers that women are weak and they need a boost by men to perform well. Whereas, feminism is more about gender equality (Sen). Though some feminists such as Elaine Showalter and Adrienne Rich believe that females have different biological setup than males and they should enjoy it. The research is analysing the late Victorian poem "Goblin Market" from such perspectives.

Elain showalter removes the relevance of biological difference between males and females (187). The ideas given by Showalter are essentialist that females have different bodies than males and they should enjoy these differences. The gender differences are recognized but exploited. As in "Goblin Market", Lizzie took the risk of her life and put her frightness at one side and went for the sake of her sister's life Laura. She went with silver penny and Goblins forcefully gave her the fruits. They did their best so that the juices of fruits sucked by Lizzie but she fought against them and won to escape from there. As far as the poem is concerned, Lizzie toils hard to escape the forceful serving of Goblin fruit. The poem is more of Women Empowerment and less of feminism. Laura and Lizzie are presented as narrating the stories of their lives to their children. This means they have not rejected the male interference in their lives completely. although, if they have adopted the children but still the poem was written in Victorian Era, which means, at that time, science did not develop at that level that girls could make their clones. This means they have accepted males in their lives to reproduce babies. Adrienne Rich has described the ideas that in order to escape from gender discrimination, it is better to reject heterosexuality (17). Other critics, Gilbert and Gubar, have also discussed to importance of sisterhood which has been repeated by Rich in 1980. Gezari has mentioned the idea of "blurring boundaries" between the sisters in the works of Gilbert and Gubar(274). This shows that the Victorian values have not been left out by Rosetti in the poem. Escobar has studies the poem from various historical and feministic angles and he finds that the poem depicts the ideas of female messiah. This is clearly visible in the poem 'Goblin Market' where Lizzie

redeems her sister Laura as a female messiah. She feels the pain and needs of her sister and arise as female messiah. Females do not get any Christ but “Lizzie debunks that prohibition as she performs the redemptive work of a Messiah” (Escobar 146). This gives the idea of female messiah that Christ was no more needed for female’s redemption. Escobar states that Victorian values deny male protection to the fallen female. However, Laura has been redeemed by her sister Lizzie suggesting that a female messiah is available for females.

While to this day no grass will grow
Where she lies low:
I planted daisies there a year ago
That never blow (Rossetti)

However, the idea of female messiah may appear irrelevant in the times of third wave of feminism. This wave rejects heterosexuality and also suggests that females do not need any protection or empowerment as they are empowered within. The concept of messiah again puts the females in chains. Further, the idea of messiah can be seen from the angle of madness as suggested by Gilbert and Gubar. Sandra Gilbert and Susan Gubar suggests that a female is in the forceful custody of a male shows the signs of madness (55). Here in the poem, Laura has been presented as showing the signs of madness after eating the fruit. She has been repeatedly asked to live inside by Lizzie. This might be the reason that she is drawn towards the fruits. This means that keeping females in custody hampers their progress and this custody can be by a male or a female.

Adrienne Rich has described the idea of “lesbian continuum” by suggesting that females deliberately choose to reject heterosexuality and lives with other females. These ideas may mismatch with the poem. Rossetti suggests that both Laura and Lizzie narrated the incidents to their children. The concepts of raising children hints about the indulgence of males in their lives. According to the concept of feminism of homosexuality, Rossetti here made herself mismatched from this concept. She did not free her mind from the males indulgence in female lives. In the poem, from very beginning , it seems like she deals with this concept of homosexuality, but at the end of the poem she indulge in heterosexuality and gives the hint of children which is against the third wave of feminism.

Conclusion

This research paper concludes that females can omit males from their lives in the defense against patriarchy. The poem was written at the end of Victorian Era and Victorian flavour is visible. The poem is not completely feministic as the concepts of female security and protection are intersecting with Third wave of feminism. It gives new dimensions to the established theory as well. The rejection of males is not complete in the poem.

References

1. Escobar, Kristen. “Female Saint, Female Prodigal: Christina Rossetti’s *Goblin Market*”. *Reigion and the Arts*. Baylor University, 2001, pp. 129-154.
2. Gezari, Jennet. “Sandra M. Gilbert and Susan Gubar’s *The Madwoman in the Attic*”. *Essays in Criticism*. Oxford University Press, 2006, pp. 264-279.
3. Gilbert, Sandra and Gubar, Susan. *The madwoman in the attic: the woman writer and the nineteenth-century literary imagination*. Yale University Press, 1984.
4. Rich, Adrienne. “Compulsory Heterosexuality and Lesbian Existence”. *Journal of Women’s History*. John Hopkins University Press, 1980, pp. 11-48.
5. Rosetti, Christina. “Goblin Market”. *Goblin Market and Other Poems*. London and Cambridge Macmillian and Co., 1862.
6. Showalter, Elaine. “Feminist Criticism in the Wilderness”. *Writing and Sexual Difference*. The University Chicago Press, 1981. pp. 179-205.

Geographical Assessment of Tourism Potential in Agro Tourism and Major Forts and Its Effect on Rural Development in Pune District, Maharashtra

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Abstract:

The geographical variations from north to south and east to west in India are favorable for tourism. Maharashtra has different geographical regions such as Konkan, Western Ghat and Plateau region i.e. Desh. These geographical differences produce lot of places of interest in the state. The geographical environment provides a greater scope for tourism potential, for instance mountains, rivers, waterfalls, forests, wild life etc. act as center of tourist attraction. The potential for tourism development in any area largely depends on the availability of recreational resources such as mountain peaks, rivers, lakes, waterfalls, reservoirs, forts, historical monuments, an object of art fair or festival, also a person can be a tourist resource in addition to factor like climate, accessibility, attitude of local people, towards the nature and the extent of tourism development.

Key: Geographical regions, tourism potential, environment

Introduction:

In recent decades, many opportunities for agricultural and rural development have been created through agricultural tourism. Tourism in India is the largest service industry, with a contribution of 6.23% to the national GDP and 8.78% of the total employment in India in 2010, total Foreign Tourist Arrivals (FTA) in India were 5.78 million and India generated about 200 billion US dollars in 2008 and that is expected to increase to US\$375.5 billion by 2018 at a 9.4% annual growth rate. (Ref. *Travel & Tourism Competitiveness Report 2017*, <http://www.cci.in/pdfs/surveys-reports/Tourism-in-India.pdf> and cci reports on tourism in India).

Study Area:

Pune district, lies between 17° 54' to 19° 24' N latitude and 73° 33' to 75° 10' E longitude. The total geographical area of the district is 15,643 sq. km. The district headquarter is located at Pune. The district consists of 14 tahsils. The topography of the study areas varies between 500 m to 1400 m ASL. It is situated at 559 m above ASL. Pune district consists of 14 talukas and 1866 villages having 14,642 square kilometres area.

Objectives:

Against the above background, the present work attempts to study the potentialities for Agro tourism and major forts for tourism and effect on rural development in the Pune district. The broad objectives of the proposed study are,

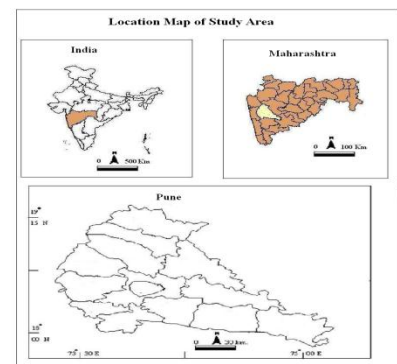
- 1) To study assessment of site and situation of agro tourism centers and forts in study area.
- 2) To identify and examine the tourism potential of the Agro tourism and major forts in study area on the basis of geographical location, historical background and infrastructural facilities with transportation and communication, accommodation and boarding facilities available for the tourism in rural region.
- 3) To examine the correlation between Agro tourism and major forts on the basis of geographical assessments.
- 4) To examine and assessment of Agro tourism center and major forts tourism and its socio economic effect on surrounding villages with respect of rural development
- 5) To assess potential for employment generation in rural area and socio economic and infrastructural development in rural area through tourism activity.
- 6) To suggest a plan for sustainable tourism development, restoration and conservation of forts and agro tourism through various tourism activity in rural area.
- 7) To suggest recommendations for development of tourism activity at important fort sites and to suggest effective agro tourism site

Hypothesis:

“Agro tourism and major forts in Pune district have great tourism potential due to their location and its helpful for rural development”.

Methodology and database:

The importance of the study lies in the fact that due consideration may be given to the primary data.



Researcher has collected data by visiting tourist's attraction centers during field work. Primary data regarding public utilizes and amenities have been collected through a questionnaire. For the authentic and reliable information proposed during the field work interviews of the local people have also been taken. Present study is designed to make an attempt to understand the importance of **Agro tourism and major forts** as a tourism potential for tourism development in Pune district. The study covers the physiography of the forts, infrastructural facilities, and tourist attractions in the study area. The study also assesses the present tourism and potential for tourism development. The importance of the study lies in the fact that due consideration may be given to the primary data. Researcher has collected data by visiting tourist's attraction centers during field work. Primary data regarding public utilizes and amenities have been collected through a questionnaire. For the authentic and reliable information proposed during the field work interviews of the local people have also been taken.

Secondary data was collected through District Census Hand Book, District Gazetteer, published and unpublished materials, travel books, newspapers, periodicals, etc. Different statistical methods and cartographic techniques are used wherever necessary. The information related to geographical background, origin of tourists, economic status, mode of transport, infrastructural facilities etc used by tourists, was collected through the questionnaire. Weather data and impact analysis has been used to calculate with the help of Likert Scale. For the identification and inventory of the natural scenery and recreational spots personal camera has been used and certain photographs have been taken. All the collected data is finally classified, tabulated and by applying various cartographic and statistical techniques presented in the form of diagrams, tables, graphs and maps etc. The preparation of tourist map following methodology is adopted.

Elevation Control Sampling: Agro tourism centers and major forts are selected representatively for the Tahasil in Pune district. They are selected on the basis of elevation controlled sampling. All these forts are having natural beauty, religious and also historical importance.

Primary data: collected by relevant questionnaire from tourists, trekking agencies and NGO's the questionnaires include basic information of tourist and the factors for the visit to fort site. It also includes the questions regarding the facilities like transport, food and drinking water, parking, cleanliness, behavior of local people.

Data regarding tourism is collected from the government offices like archeology, NGO and tourism department (MTDC).

Secondary data: regarding the physiography, drainage were collected from toposheets, map. Journals, reference books, tourist guides is used to collect the data regarding tourist activity.

Terrain map of Pune district: The location map of the fort is prepared by using toposheets, satellite image and data collected in the field. Digital Terrain model of these forts were prepared by using GIS softwares. To assess the tourism potential of forts in Pune district following key indicators are used. Following techniques are employed for the study.

Survey Technique: By questionnaire method qualitative as well as quantitative data is collected.

Dialogue Process: The purpose of the study is to understand profile of the tourists visiting fort sites. Dialogue process is adopted to communicate with tourist, shopkeepers in the area.

Statistical Technique: simple statistical technique like mean, percentage, satisfaction index, network analysis is used to summarize the quantitative data.

Mapping Technique: Charts, 3D model, cross sectional analysis, visibility mapping and line of sight maps were prepared by using GIS softwares.

Conclusion:

In Pune district, every fort has its own importance and uniqueness. There are 14 thasils in Pune district. The forts are lying in eight thasil of Pune district which includes Maval, Bhor, Khed, Mulshi, Purandar, Junnar, Velhe and Haveli. Tourism potential fort sites are classified on the basis of elevation. The forts from 400m to 1600 m MSL were selected and classified according to elevation with interval of 400 m. The minimum elevation of the fort Chakan is 618 m and maximum elevation of the fort Purandar is 1320 m (Table 4.10). Pune city region is not selected for any fort sites because in this region all type of infrastructural facilities are available to tourist, forts are well known, easy accessible, the information of these fort is easily available from MTDC, travel agents, media, internet and secondary data. On the basis of the above mentioned criteria different major fort sites have been selected from different terrain and environment. Chakan, Rajmachi, Tung, Shivneri, Rajgad, Purandar etc. forts were selected to assess the tourism potential of these fort sites. Assessment of level of satisfaction is necessary to find out the degree

of development therefore here attempt has been made to assess satisfaction of the visitors regarding lodging, boarding, food, transportation, darshan, travelling problems and the behaviour of local people. Transport factor for Rajgad, Purandar, Shivneri and Tung have satisfactory index 5 and 4 which shows that tourists are not satisfied with traveling facilities. Therefore, these places must have metalled road with increased in no. of vehicles by Govt. and by private agencies this will provide the employment for the district people.

The impacts of forts on the region are not widely understood because people think that this has only economic impacts. However, the range of impacts from forts is broad and residents of the places are realize with only positive impacts but this is also associated with negative impacts. The examining of these impacts is become easier to understand the development of region and maximizing positive impacts while minimizing negative impacts with keeping it under control. Therefore here attempt has been made to find out impact of forts by using seven point Likert Scale method. Tourism has a major impact on environmental conditions of the region. Assessment of the environmental impact of tourism is particularly important, for the various facts of the environment constitute the basis of much tourist development. The questionnaire for assessment of environmental impact consists of 15 questions. These questions will help to understand the environmental impact of the tourist on the region. The mean and standard deviation of residents of the Purandar, Chakan, Rajgad, Rajmachi, Tung and Shivneri forts responses to environmental impact on tourists are calculated. The mean and standard deviation of overcrowding and congestion is respectively 75 and 63.37, noise and air pollution 90 and 67.42, road condition 90 and 51.70 etc. The higher the number of respondent tourists larger the effect on host population of tourist centers fort. The frequency distribution of environmental impact means is 14.29 and standard deviation is 11.25. So, it can be said that in Purandar, Chakan, Rajgad, Rajmachi, Tung and Shivneri forts there is an overall positive effect of tourism.

References:

1. Alex Boakye Assiden (2003) *'Factors of Visitors Satisfaction at Recreational Sites in Ghana, Geographical Review of India, Vol. 65, No.4 Dec. 2003 P.P. 305-319.*
2. Bhawana, M.A., Olima W.H.A., Andika D., Agong S.G. and Hyombe P. (2015): *Agri-Tourism: Potential Socio-Economic Impacts in Kisumu County. IOSR-JHSS, Vol. 20, pp. 78-88.*
3. *Census of India (2011): District Census CD: Pune, Direcorate of Census Operation, Govt. of Maharashtra, Mumbai.*
4. Chapke, S.G. (2015). *Innovative Trends in Agro-Tourism: Special Reference to Maharashtra. An Indian Model for Cross Culture, Vol.5 pp. 448-450.*
5. Dwivedi Puneet, Kushwaha, S.P.S. & Nandy, S. (2006). *Site Suitability Analysis for Khair in part of Doon Valley using Geoinformatics, Journal of the Indian Society of Remote Sensing, Vol. 34 N0.2. pp. 318-334.*
6. Emanuel, Kadat (1979). *Tourism- Passport to Development, Oxford University Press.*
7. *Gazetteer of the Bombay Presidency, Poona District, Vol. XVIII, Part III, Govt. of Maharashtra, Bombay.*
8. Harpale, D.V. (2009). *Identification of New Tourist Centers and Their Site Suitability- A case Study of Pune District (MS), Unpublished Ph.D. thesis, submitted to Solapur University.*
9. Jaybhaye, R.G. and Saptarshi, P.G. (2010). *Tourist Assessment in Bhimashankar and Sinhgarh Centers of Pune District, The Deccan Geographer, 48(1), pp. 65-70.*

Response of GPS-TEC during severe Geomagnetic Storm over Low Latitude Hyderabad and Bangalore Stations

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Abstract

The Global Positioning System (GPS) data of IGS Hyderabad station (17.41°N, 78.55°E) and Bangalore (13.020N, 77.570E) have been used to measure Total Electron Content (TEC) of the ionosphere during the November 06 – 11, 2004 geomagnetic storm. GPS Total Electron Content (TEC) is estimated by removing receiver and satellite biases. The SSC occurred just after 1800 UT on Nov 7 and the Dst index decreased to a value of -373 nT at 0700 UT on November 8. The number of sub storm occurred on Nov 10. Second largest sub storm occurred on Nov 10, where the Dst index was -298 nT at 1100 UT. In this paper storm positive and negative effects on temporal changes in TEC were investigated.

Keywords: - Total Electron Content (TEC), Magnetic Storm, Ionosphere, Dst, Kp index

Introduction: -

The plasma distribution of the ionosphere significantly affected by the ionospheric electric field disturbances during the magnetic storm which are observed at mid and low latitude stations on different time scales. They result from both prompt penetration of time-varying magnetospheric fields from high latitudes to low latitudes (Nishida, 1968; Vasyliunas, 1970, 1972; Wolf, 1973; Fejer et al., 1979, 1990, Ayomide et al, 2020) and longer-lasting disturbance-wind dynamo effects [e.g., Blanc and Richmond, 1980; Sastri, 1988; D'ujanga, 2013]. The vertical TEC on Bastille Day storm (July 2002) at a low mid-latitude station suffered a sudden increase, over 250% with respect to the quiet day conditions (E.A. Araujo-pradere, 2005). The effect of season, solar and magnetic activity on night-time enhancements in TEC have been studied for low, mid and high latitudes (Young et al., 1970; Balan et al., 1991; Bailey et al., 1991, 1992). The occurrence frequency (in percent) of TEC enhancements during weak storms is greater than during quiet nights, for all seasons have been studied by K. Unnikrishnan et al (2002). Weixing Wan et al (2005) have studied that both TEC variation rate and TEC increment are proportional to the radiation flux and inversely proportional to the Chapman function and also they found that $dTEC/dt$ is closely related with the solar zenith angles. In this paper we study the response of the low latitude ionosphere to the different phases of the strong geomagnetic storm of November 06 – 11, 2004 by using GPS data of IGS station at Hyderabad and Bangalore.

Data Analysis

GPS receivers have two L-Band frequencies ($L1 = 1.575$ GHz and $L2 = 1.227$ GHz). The GPS TEC derived from both carrier phase and pseudo-range delays. The IGS Stations Hyderabad and Bangalore data were analyzed to study the ionospheric response during geomagnetic storm.

Result and discussion

The SSC occurred just after 1800 UT on Nov 7 and the Dst index dropped to a value of -373 nT at 0700 UT on November 8. The number of sub storm occurred on Nov 10. Second largest sub storm occurred on Nov 10, where the Dst index was -298 nT at 1100 UT. The calculated VTEC values are lowest on 08 and 10 November 2004 when the Dst index was lowest and these values are lower than those on the adjoining days. Fig figure (a & b) shows the VTEC values for Hyderabad and Bangalore station respectively and figure (c & d) shows the $d(TEC)/dt$ values for same stations respectively on 06-11 November 2004 and Figure (e & f) shows percentage deviation of storm time TEC relative to quiet day at night time only for same station using satellite no-18. In night time the deviation of TEC decreases about -85% and -75% on 08 November 2004 and -60% and -55% on 10 November 2004 relative to the quiet night for Hyderabad and Bangalore Station respectively

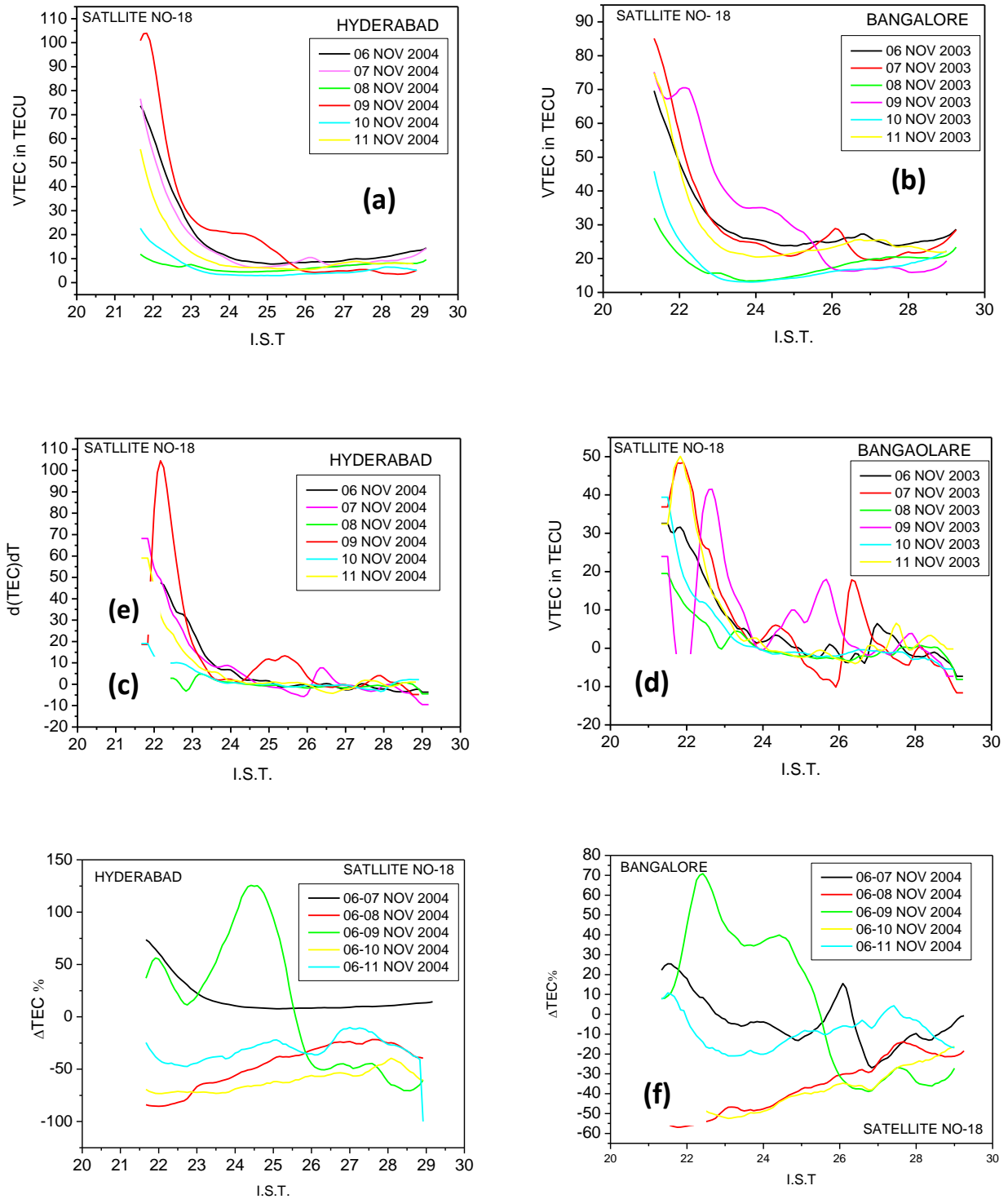
Conclusion

The TEC and derivative of TEC were largely affected during geomagnetic storm which influence on the satellite communication system. The large no of storm events required to study for better understanding of the ionospheric behaviour during storm. This large study of geomagnetic storm will be helpful for developing low latitude ionospheric modelling for forecasting the ionosphere.

Acknowledgements

Author is grateful to Don Thompson of Center for Atmospheric and Space Science, Utah State University, Logan for providing RD_RINEX software. The author is grateful to the IGS community for making available ground based GPS Data of Hyderabad and Bangalore Stations.

Figure: (a&b): The VTEC variation for Hyderabad and Bangalore at night respectively 06-11 Nov, 2004 (c&d):The $d(\text{TEC})/dT$ variation for Hyderabad and Bangalore at night respectively on 06-11 Nov, 2004 (e&f). The percentage deviation of TEC for Hyderabad and Bangalore at day and night respectively on 06-11 Nov, 2004.



References

1. Araujo-pradere E.A., GPS-derived total electron content response for the Bastille Day magnetic storm of 2000 at a low mid-latitude station, *Geofisica International*, Vol 44, Num. 2, pp. 211-218, 2005.
2. Ayomide O. Olabode, Emmanuel A. Ariyibi, Geomagnetic storm main phase effect on the equatorial ionosphere over Ile-Ife as measured from GPS observations, *Scientific African*, Volume 9, e00472, 2020.
3. Bailey, G. J., Sellek, R., and Balan, N.: Night-time enhancements in TEC during winter at solar minimum: the effect of the conjugate hemisphere, *Adv. Space Res.*, 12, 309–312, 1992.
4. Bailey, G. J., Sellek, R., and Balan, N.: The effect of interhemi-spheric coupling on night-time enhancements in ionospheric total electron content during winter at solar minimum, *Ann. Geophysicae*, 9, 738–747, 1991.
5. Balan, N., Bailey, G. J., and Balachandran Nair, R.: Solar and mag-netic activity effects on the latitudinal variations of night-time TEC enhancement, *Ann. Geophysicae*, 9, 60–69, 1991.
6. Blanc, M., and A. D. Richmond, The ionospheric disturbance dynamo, *J. Geophys. Res.*, 85, 1669, 1980
7. D'ujanga F.M., Baki P., Olwendo J.O., Twinamasiko B.F., Total electron content of the ionosphere at two stations in East Africa during the 24–25 October 2011 geomagnetic storm, *Advances in Space Research*, Volume 51, Issue 5, Pages 712-721, 2013.
8. Fejer, B. G., R. W. Spiro, R. A. Wolf, and J. C. Foster , Latitudinal variation of perturbation electric fields during magnetically disturbed periods: 1986 SUNDIAL observations and model results, *Ann. Geophys.*, 8, 441–454.,1990
9. Jaggi, R. K., and R. A. Wolf , Self-consistent calculation of the motion of a sheet of ions in the magnetosphere, *J. Geophys. Res.*, 78, 2852– 2866. 1973.
10. Nishida, A., Coherence of geomagnetic DP 2 fluctuations with interplanetary magnetic variations, *J. Geophys. Res.*, 73(17), 5549., 1968
11. Sastri, J. H. , Equatorial electric fields of the disturbance dynamo origin, *Ann. Geophys.*, 6, 635 ,1988.
12. Unnikrishnan K. , Balachandran R. Nair , and Venugopal C. , A comparative study of night-time enhancement of TEC at a low latitude station on storm and quiet nights including the local time,seasonal and solar activity dependence, *Annales Geophysicae* 20: 1843–1850,2002
13. Vasyliunas, V. M. , The interrelationship of magnetospheric pro-cesses, in *Earth's Magnetosphere Processes*, edited by M. McCormac, pp. 29– 38, Springer, New York. 1972
14. Weixing Wan,,Libo Liu ,Hong Yuan ,Baiqi Ning, ,Shunrong Zhang , The GPS measured SITEC caused by the very intense solar flare on July 14,2000, *Advances in Space Research* 36,pp.2465 – 2469,2005
15. Young, D. M. L., Yuen, P. C., and Roelofs, T. H.: Anomalous night-time increase in total electron content, *Planet. Space Sci.*, 18, 1165–1179, 1970.

Status of Covid -19 Pandemic In Indapur Tehsil

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Abstract

The corona virus is showing its strength and spreading exponentially in all the corners of India. In Maharashtra Pune is highly infected district Therefore, this paper aims to study the infection level and current scenario of fatality cases in Indapur tehsil. All the supported data is collected from Sub-District Hospital (SDH), Indapur. Fatality rate defined as per the number of currently active cases per 100 positive cases of covid-19. This paper deals with the village wise current situations of current cases, recovered cases, deceased cases. There are reported 4667 confirmed cases up to the month of December 2020. These infected cases are found in 138 villages and tehsil headquarter. Out of them 2.95% deaths occurred in the study area. A wide variation was observed across the tehsil. There was no single fatality case found in 0 to 14 age group people in the study period. Only four villages has not infected by COVID-19. As compare to the rural area the infection level of corona virus is high in urban area. The infected cases are increasing on one side and on another side the numbers of recovered cases are also increasing in the study area.

Key words: COVID19, infection, mortality, pandemic,

Introduction

Society is an asset of the every nation. Due to the corona virus almost every nation of the world are suffering from pandemic situation. The corona virus (COVID-19) is spreading rapidly, and scientists are endeavoring to discover drugs for its efficacious treatment in the world (Gao et al., 2020). Older people, suffering from medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer, are more likely to develop severe illness (Remuzzi & Remuzzi, 2020; Singhal, 2020). Maharashtra has more than 1984768 confirmed cumulative infected cases (31 December 2020). The impact of preventive measures on daily infected-rate is discussed for each village of Indapur tehsil dist. Pune.

Objectives

1. To identify the infection level in the study area.
2. To study the mortality status in the study area.
3. To make favorable suggestions for COVID-19 control.

Database and methodology

For the present research work secondary data source are used. All the supported data is collected from Indapur Tehsil Health Office, Indapur, Dist. Pune, Maharashtra. This office provides the most updated information on the daily and total confirmed cases, active cases, recovered and deaths from each village of the study area. Data considered for analysis up to 31 December 2020. Fatality rate defined as per the number of currently active cases per 100 positive cases of covid-19.

Month wise COVID-19 infection in the study area

In the study area, the disease was first detected on 27th April 2020 in Bhigwan station a women who returned from Pune. The gradual incidence of COVID-19 cases has increased in June and July and in the month of August and September these cases has increased rapidly. Mostly the daily infection-rate (DIR) is higher in urban area than the rural. In the high population-density area has found high COVID-19 infected cases i.e. Indapur city and western side villages. Indapur Tehsil Health Office reported total 4667 new confirmed cases up to month of December 2020 (**Table 1**). In this period in urban area 673 and in the rural area 3994 cases found. There are also reports of near capacity utilization of ICU and Ward beds, in the Sub-District hospital in the study area. **Table 1:-** Month wise COVID-19 positive patients in Indapur tehsil.

Sr. No.	Month	March	April	May	June	July	Aug.	Sept.	Octo.	Nove.	Dece.	Total	Perc.
1	Urban	0	0	0	14	45	166	230	68	71	79	673	14.42
2	Rural	0	1	4	10	111	466	1562	738	673	429	3994	85.58
3	Total	0	1	4	24	156	632	1792	806	744	508	4667	100

Source: Indapur Tehsil Health Office, Indapur.

Above Table and figure shows the month wise infection of corona virus. After the first five cases during 27th April to 20th May 2020, there were no more confirmed COVID-19 cases was not found for the next two months. The COVID-19 cases appeared again from 3rd June 2020 onwards. These cases are

related to people who have been evacuated or have arrived from COVID-19 affected areas and there is an exponential growth in the daily number of COVID-19 positive cases. The maximum people are infected in month of September, in this month 230 people from urban area and 1562 people are infected from rural area. The infection level COVID-19 was rapidly

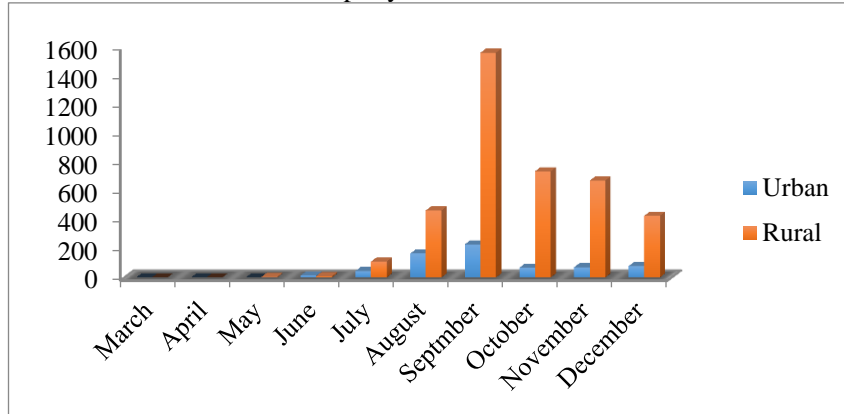


Figure 2 Month wise COVID-19 patients

increases in July to October over 139 settlements. In the study period according to above figures 1.10% people was infected in rural area and 3.11 are infected in urban area. It means in comparison to rural area, infection level was higher in urban area. There are number of reasons like migrant workers, businessman, students and others came from the cities to their native place. Some migrants are not followed the COVID-19 guidelines, careless attitude about infections, inadequate literacy at village level.

Status of mortality during pandemic period in Maharashtra

The first case of the COVID-19 pandemic in the Indian state of Maharashtra was confirmed on 9 March 2020. Maharashtra is a hotspot that accounts for nearly one-third of the total cases in India as well as about 40% of all deaths. As of 7 July, the state's case fatality rate is nearly 4.3%, which is lower than the global average but significantly higher than other Indian states with large numbers of cases.

Month wise death

The incidence of cases and deaths in study area increased from month of July 2020. Compared to the study area reporting the highest number of new deaths in month of September i.e. 59 deaths and only one death occurred in month of April and June (Table 2). Death rates in tehsil lower than the Maharashtra state rate and have not increased in the past month. There are only 2.95% deaths occurred in Indapur tehsil up to the end of December 2020.

Table 2:- Month wise death patients

Sr. No.	Month	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	Perc.
1	Urban	0	0	0	1	2	11	8	0	0	0	22	15.94
2	Rural	0	1	0	0	6	19	51	28	7	4	116	84.06
3	Total	0	1	0	1	8	30	59	28	7	4	138	100

Source: Indapur TehsilHealth Office, Indapur.

Figures shows that the fatality cases was higher in rural as compared to urban area. People was infected and then died because of negligence attitude about pandemic situation in the rural area. Some people are died because of inadequate health facilities and due to the higher infection level.

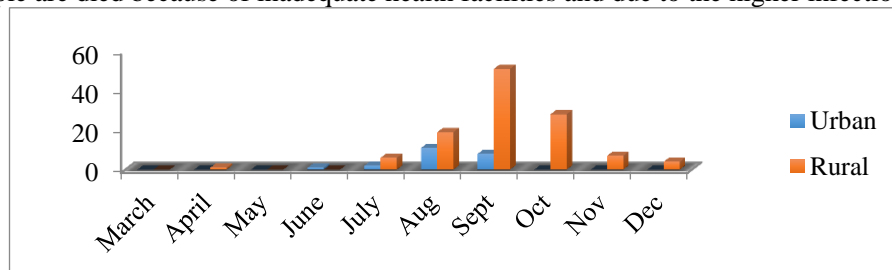


Figure 3 Month wise death patients

From the month of October to December has not found death cases in the urban area. A maximum 11 death cases has occurred in the month of August in urban area. Similarly, in rural area maximum 51 deaths has occurred in month of September.

Age group wise fatality

According to this table highest fatality cases were found in 60 and sixty plus age group people. Most of the people infected with the COVID19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Old age people and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease and cancer are more likely to develop serious illness. There was no single fatality case found in 0 to 14 age in the study period.

Table 3 :-Age group wise fatality cases

Sr. No.	Age Group	0 to 6	7 to 14	15 to 59	> 59
1	Urban	0	0	9	13
2	Rural	0	0	42	74
3	Total	0	0	51	87

Source: Indapur TehsilHealth Office, Indapur.

.Village wise mortality

Out of the infected patient 138 (2.95 %) persons was died due to covid -19. Those cases are found in 65 villages in the study area. The average infection rate of these villages was estimated as 1.30 percent; while the fatality rate was 2.95 percent. There has wide variation observed across the tehsil. The highest fatality rate was found in Bhodni village (28.57%) and zero fatality rate in 82 villages. While 3.29 percent was found in Indapur city.

Table 4 :- Village wise status of mortality In Indapur tehsil

Sr. No.	Name of village	Population	Infected Cases	Percentage	Total Death	Percentage
1	Agoti No.1	1269	14	1.10	0	0
2	Agoti No.2	731	2	0.27	0	0
3	Ajoti	628	17	2.70	0	0
4	Akole	3015	67	2.22	0	0
5	Anthurne	5448	122	2.23	0	0
6	Awasari	1806	1	0.05	0	0
7	Babhulgaon	2167	29	1.33	1	3.44
8	Balpudi	588	5	0.85	0	0
9	Bambadwadi	904	0	0	0	0
10	Bandewadi	319	13	4.07	0	0
11	Bandgarwadi	519	15	2.89	0	0
12	Bawada	9783	67	0.68	5	7.46
13	Bedshinge	709	1	0.14	0	0
14	Belewadi	4556	126	2.76	4	3.17
15	Bhadalwadi	1831	29	1.58	0	0
16	Bhandgaon	2568	15	0.58	0	0
Sr. No.	Name of village	Population	Infected Cases	Percentage	Total Death	Percentage
17	Bharnewadi	3957	70	1.76	1	1.42
18	Bhat Nimgaon	1360	23	1.69	1	4.34
19	Bhawadi	818	9	1.10	2	22.22
20	Bhigvan	6026	240	3.98	11	4.58
21	Bhodani	2289	14	0.61	4	28.57
22	Bijwadi	5388	27	0.50	0	0
23	Birgundwadi	692	0	0	0	0
24	Boratwadi	1559	8	0.51	0	0
25	Bori	5272	61	1.15	2	3.27

26	Chakati	1057	7	0.66	0	0
27	Chandgaon	787	5	0.63	1	20
28	Chavhanwadi	480	4	0.83	1	25.00
29	Chikhali	1285	9	0.70	0	0
30	Dalaj No.1	1005	53	5.27	1	1.88
31	Dalaj No.2	1292	14	1.08	0	0
32	Dalaj No.3	915	13	1.42	0	0
33	Dikasal	1434	16	1.11	1	6.25
34	Gagargaon	533	4	0.75	0	0
35	Galandwadi No.1	1655	24	1.45	0	0
36	Galandwadi No.2	2018	13	0.64	2	15.38
37	Ganeshwadi	1323	8	0.60	1	12.5
38	Ganjewalan	734	2	0.27	0	0
39	Gholapwadi	1212	18	1.48	1	5.55
40	Ghorpadwadi	1301	27	2.07	2	7.40
41	Giravi	1596	4	0.25	0	0
42	Gokhali	1205	12	0.99	1	8.33
43	Gondi	906	4	0.44	0	0
			Infected		Total	
Sr. No.	Name of village	Population	Cases	Percentage	Death	Percentage
44	Gosaviwadi	882	0	0	0	0
45	Gotandi	3833	37	0.96	1	2.70
46	Hangarwadi	1632	24	1.47	0	0
47	Hinganewadi	1356	12	0.88	2	16.66
48	Hingangaon	1275	11	0.86	1	9.09
49	Indapur Urban	21592	673	3.11	22	3.26
50	Jadhavwadi	434	12	2.76	0	0
51	Jamb	1210	11	0.90	0	0
52	Kacharewadi	963	11	1.14	0	0
53	Kadbanwadi	1486	2	0.13	0	0
54	Kalamb	17138	234	1.36	5	2.13
55	Kalas	3772	34	0.90	1	2.94
56	Kalashi	1690	8	0.47	1	12.5
57	Kalewadi	1432	0	0	0	0
58	Kalthan No.1	1874	19	1.01	1	5.26
59	Kalthan No.2	1078	26	2.41	1	3.84
60	Kandalgaon	1838	3	0.16	0	0
61	Kardanwadi	1469	1	0.06	0	0
62	Karewadi	1344	0	0	0	0
63	Kati	4799	89	1.85	3	3.37
64	Kauthali	2393	11	0.45	0	0
65	Kazad	2675	45	1.68	1	2.22
66	Khorochi	3398	36	1.05	1	2.77
67	Kumbhargaon	1403	13	0.92	1	7.69
68	Kurawali	2195	36	1.64	0	0
69	Lakadi	2068	24	1.16	0	0
70	Lakhewadi	3955	45	1.13	1	2.22
71	Lamjewadi	596	5	0.83	0	0

Sr. No.	Name of village	Population	Infected Cases	Percentage	Total Death	Percentage
72	Lasurne	7301	218	2.98	8	3.66
73	Loni	2446	28	1.14	2	7.14
74	Lumewadi	2614	21	0.80	1	4.76
75	Madanwadi	4631	57	1.23	0	0
76	Malwadi No.1	1900	8	0.42	2	25.00
77	Malwadi No.2	4069	30	0.73	0	0
78	Mankarwadi	909	9	0.99	0	0
79	Maradwadi	569	0	0	0	0
80	Mhasobachiwadi	1684	13	0.77	0	0
81	Narsingpur	2094	7	0.33	0	0
82	Narutwadi	1213	6	0.49	0	0
83	Nhavi	2865	63	2.19	0	0
84	Nimbodi	1595	31	1.94	0	0
85	NimgaonKetki	11280	244	2.16	9	3.68
86	Nimsakhar	5620	37	0.65	1	2.70
87	Nirgude	1907	18	0.94	0	0
88	Nirnimgaon	2299	11	0.47	1	9.09
89	Nirwangi	3239	25	0.77	3	12
90	Ozare	527	7	1.32	0	0
91	Padsthal	980	13	1.32	0	0
92	Palasdeo	3267	99	3.03	1	1.01
93	Paritwadi	1161	3	0.25	0	0
94	Pawarwadi	1977	14	0.70	1	7.14
95	Pilewadi	1013	8	0.78	0	0
96	Pimpale	1181	14	1.18	0	0
97	Pimpri Bk.	1821	4	0.21	1	25.00
98	PimpriKh.	1205	22	1.82	0	0
99	Pithewadi	1052	1	0.09	0	0
Sr. No.	Name of village	Population	Infected Cases	Percentage	Total Deaths	Percentage
100	Pitkeshwar	1864	9	0.48	1	11.11
101	Pondkulwadi	1051	13	1.23	0	0
102	Poundhawadi	1693	9	0.53	0	0
103	Rajwadi	505	0	0	0	0
104	Ranmodwadi	3252	23	0.70	1	4.34
105	Reda	2010	12	0.59	0	0
106	Redani	3561	28	0.78	1	3.57
107	Rui	1831	37	2.02	1	2.70
108	Sansar	5908	229	3.87	7	3.056
109	Sarafwadi	1411	19	1.34	0	0
110	Sarati	1861	13	0.69	0	0
111	Sardewadi	2661	43	1.61	0	0
112	Shaha	2142	11	0.51	1	9.09
113	Shelgaon	7647	89	1.16	3	3.37
114	Shetphal Haveli	2830	16	0.56	3	18.75
115	Shetphalgadhe	3997	37	0.92	0	0

116	Shindewadi	1574	13	0.82	0	0
117	Shirsadi	1520	31	2.03	1	3.22
118	Sirsatwadi	1949	32	1.64	0	0
119	Sugaon	351	2	0.56	0	0
120	Surwad	2849	15	0.52	1	6.66
121	Takali	501	0	0	0	0
122	Takrarwadi	1821	25	1.37	0	0
123	Tannu	1613	13	0.80	0	0
124	Tarangwadi	1787	16	0.89	2	12.5
125	Taratgaon	432	4	0.92	0	0
126	Tawashi	2870	37	1.28	1	2.70
127	Thoratwadi	788	9	1.14	0	0
Sr. No.	Name of village	Population	Infected Cases	Percentage	Total Deaths	Percentage
128	Udhat	1806	17	0.94	0	0
129	Vadapuri	4052	35	0.86	1	2.85
130	Vakilwasti	2073	7	0.33	0	0
131	Vangali	941	8	0.85	0	0
132	Varkute Bk.	2376	49	2.06	0	0
133	VarkuteKh.	4268	55	1.28	0	0
134	Vaysewadi	478	0	0	0	0
135	Vyahali	1561	9	0.57	0	0
136	Zagadewadi	966	5	0.51	0	0
137	Jachakvasti	1157	19	1.64	0	0
138	Sapkalwadi	1411	25	1.77	0	0
139	Udmaiwadi	1000	7	0.7	0	0
	Total		4667		138	

Source: Census of India 2011 and Indapur TehsilHealth Office, Indapur.

Conclusion and Suggestion

As maximum number of villages fall under the high number of infected patients and few villages not found a single case of positive. In the study period 1.10% people was infected in rural area and 3.11% are infected in urban area. Infection level of corona virus is higher in urban area. There are number of reasons like workers migration, businessman, students and others persons are came to their native place. Some migrants are not followed the covid-19 guidelines, careless attitude and inadequate literacy at the village level. Out of the entire tehsil 138 villages and tehsil headquarter affected by COVID-19. Only four villages are not infected. There has strictly followed the government's guideline and no interaction with surrounding area in this period. In the high population-density area, has found high COVID-19 infected cases. These settlements are located on the highway, the excess interaction among them and other cities for different work. In 65 villages found the death cases. There has no death occurred in the 0-6 and 7-14 age group. We have concluded the COVID-19 mostly affected to sixty and above sixty ages As mortality and severity of illness are correlated to both age and co morbidities in general in the study area, having strategies to safe guard these high-risk groups will provide adequate protection from infections.

References:

1. Chang CS, Yeh YT, Chien TW, Lin JCJ, Cheng BW, Kuo SC. The computation of case fatality rate for novel corona virus (COVID-19) based on Bayes theorem. *Medicine*. 2020; 99(21):19925.
2. Government of India (1992): "Gazetteer of the Bombay Presidency, Poona District", 1992, Vol. XVIII, part-III
3. *International journal of Community Medicine and Public Health*.:Srinivas G and others (2020): Mortality indicators of COVID-19 in high burden states and cities of India: a review,

4. IIPS Analytical Series on Covid 19: Harihar Sahoo¹, Chaitali Mandal², Suyash Mishra³, Snigdha Banerjee⁴, Paper 14: Burden of COVID-19 pandemic in India: Perspectives from Health Infrastructure, (May 22, 2020).
5. Indapur Tehsil Health Office, Indapur, Dist. Pune, Maharashtra.
6. Korean Spatial Information Society 2020: B. G. Kodge¹, A review on current status of COVID19 cases in Maharashtra state of India using GIS: a case study, Received: 12 May 2020/Revised: 18 July 2020/Accepted: 21 July 2020
7. Palash Ghosh and Others (2020): COVID-19 in India: State-wise Analysis and Prediction.

Web Sites:

1. www.censusindia.gov.in
2. <https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200121-sitrep-1-2019-ncov.pdf>. Accessed April 5, 2020.
3. https://www.who.int/docs/default-source/sri-lanka-documents/what-is-coronavirus-english.pdf?sfvrsn=a6b21ac_2. Accessed April 5, 2020.
4. <https://www.who.int/docs/default-source/coronaviruse/situation-reports/20201005-weekly-epi-update-8.pdf>

Soil Variety Impact on Fruits Cultivation in Dhule District (MS)

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Abstract:

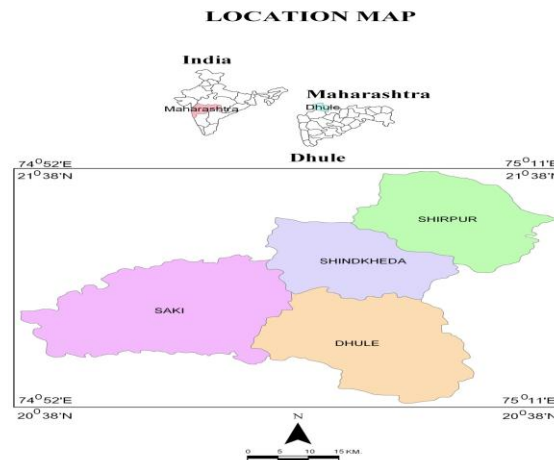
Horticulture is a best way for agro economic empowerment. The study area mainly consists of basalt rock however difference in the micro-climatic condition formed varied types of soil. So that determines cultivation various fruit crop in study region. The soil of study region can be broadly grouped in to four subtype's viz deep soil, moderate medium, shallow, very shallow. But difference in the micro-climatic conditions along with the topography at different location mainly altered the physical characteristic of the basic soil type. The shallow and medium soils occupy 65.6% cultivable area. This area indicates the abundant availability of for growing pomegranate cultivation in Dhule district. Those are respectively suitable for banana, papaya, grapes, guava, and pomegranate cultivation.

Keywords: Horticulture, Cultivation, Spatio-temporal, Rural economy, Arid and semi-arid

Introduction:

Dhule district under is located in peninsula region of India. This is covered with 'Great Deccan Trap' of volcanic formation. This study region difference in the micro climatic condition along with the topography at different locations mainly altered the physical characteristics of the basic soil types. Soil is the chief natural factor on which the success or failure of growth of fruit depends. For the production of any crop the type of soil is very important. But the fruit cultivation is not particular about the soil type. It can be grown in various soil types such as medium and deep soil with widely ranging characteristics. For growth fruit trees proper soil condition is necessary to get best economic remuneration. As a result, employment, per capita income, foreign exchange, social and economic growth has been observed. Overall nature of Indian farming is changing. Since last two decades, horticulture production has been increased considerably (Singh H. P. 2009).

Study Area:



The shape of the study area is triangular. It is located in the northern part of the Maharashtra State. It has occupied over an area of 8063.11 sq. km. It is extended from 20°38' N to 21°39' N latitudes and from 73°50' E to 75°13' E longitudes (Fig. No.1). Dhule district is separated from Madhya Pradesh State, while 'Satmala' ranges separate the district from western Maharashtra.

Objective of the Study:

1. To study different soil types of study region
2. To understand the suitability of soil types for fruit crops in study region.

Hypothesis:

The physical factor of soil types determines cultivation various fruit crops in study region.

Methodology:

The present paper is based on secondary data and field observations. Data on area of horticultural in Dhule district collected from department of district agricultural office. Data related to area of different horticultural crop is collected from agricultural office data base for the year 1901-02 to 2016-17. Table and diagrams were prepared to show growth of pomegranate cultivation in Dhule district. In study region soil classification was understood for suitability of fruits cultivation.

Discussion:

The soil of study region can be broadly grouped into four subtypes. Those are discussed in detail as below. The depth, texture and colour were three major physical characteristics of soil that determines the yield of fruits quality and quantity. According to the depth of soils as stated by pomegranate growers at the time of interview, the sample pomegranate plantation were classified into four micro types in the given below table. The field survey data indicates the feasibility of coarse textured soil type for pomegranate cultivation. Since, 35.7 and 29.9 percent were pomegranate plantation in shallow and medium soil types respectively. The significant proportion of pomegranate plantation 11.3 percent is also planted very shallow (murmy) soil type. Though deep soil is good and fertile but only 23.2 percent pomegranate were planted in this soil type. The comparative economic benefits of above soil types of pomegranate cultivators were attempted and cost benefit ratio is calculated separately. Table indicates that average productivity of all sampled pomegranate was 9.1 tons per hectare.

Table : Soil Type of Sample Pomegranate Growers and Production in Dhule District

Sr. No.	Soil Types	Soil Depths in cm	Category of Farmers			Total	% of growers	Production (tons/ ha.)
			Small	Medium	Large			
1	Deep Soil	>50	39	27	10	76	23.2	8.02
2	Modreat Medium	25 to 50	48	27	23	98	29.9	9.82
3	Shallow	7.5 to 25	59	39	19	117	35.7	8.94
4	Verry Shallow	0 to 7.5	18	5	14	37	11.3	8.13
Total / Average			164	98	66	328	100.0	9.1

Source: District Agriculture Department, 2018

1. Deep Soil (Depth above 50 cm):

Deep soils are popularly known as 'Black cotton soil'. As this soil from basalt rock, the colour of parent material containing iron (Ferrous) hence they are reddish brown, dark brown to grayish brown colour. Its depth is 50 to 100 cm. Another group different from the above soil in the thickness of soil profile, it is deeper 100 cm to 150 cm and colour which is much darker. In fact, these are alluvial soil occupy the flood plains. Due to a sudden decrease in the slope of the Tapi river basin some part of Tapi river is quite deep and fertile soil. Deep and very deep soils are good fertile in nature but it was not suitable for pomegranate fruit crop cultivation. In the study region 23% growers have deep soil which gives only 7.9 tons per hectare production, hence CBR is lowest. The compact nature of soils leads to develop wide cracks in soils during sunny season. Such soil cracks may cause physical disturbance to the shallow roots of pomegranate tree that develops in shallow root system. Fertile deep soils are good for more vegetative and productive magnification in pomegranate cultivation. In is also characteristic of deep soil with various pomegranate crop. Therefore, the production of pomegranate is not copacetic from deep soil. Deep soils have good natural fertility that minimized cost of fertilizers. Its soil type had incurred lowest gross cost (Rs.194551.94) in all soil types under pomegranate cultivation. In spite of that lower yields obtained from these soils brought down the net profit (Rs.207766.99 /ha.) of respondents. By and large, deep soil even though fertile in nature but shown poor response for pomegranate production, as it demonstrated low returns and stood at third place in CBR (1:2.07).

2. Moderate Medium Soil (Depth 25 to 50 cm)

Near about 30% growers have moderate medium soil, which give 9.82 tons per hector production. It is good for pomegranate cultivation. On the other side, due to favorability of medium soils utmost yields 9.62 tons/ ha. is produced along with superior quality of fruits received premier market rates. Net profit is Rs.345109.82/ha. gained by respondents. Overall, pomegranate orchards developed in medium soils demonstrated uppermost CBR (1:2.71) among all soil types of study region. This provides evidence of favorability of medium soils for good pomegranate production in study area.

3. Shallow soil (Depth 7.5 to 25cm)

The thickness of shallow soils is less than 25cm. These soil characters are light and friable. They are coarse textured contains more sand particles so water drained easily. This free water draining characteristic of shallow soil is favorable of pomegranate cultivation. Because pomegranate trees do not tolerate stagnant soil water for long time that leads to decaying and fungus of root and tree The limited moisture storage in soil particles are favorable condition of proper white root development system also favorable for the growth of flowers and fruits of pomegranate tree. So for as pomegranate cultivation is concerned, shallow soil is good for it shallow soil is observed near about 35.7% of the pomegranate growers which gives highest 8.94 tons per hectare production, hence CBR is highest. It amply reveals that good quality of fruits was produced in the shallow soils. Such produce fetched remunerative prices in market and net profits Rs. 237579.43 / ha was realized by respondents in this soil group. As a result, second highest CBR 1: 2.15 were revealed for shallow soils.

4. Very Shallow Soil (Depth 0.70 to 7.5cm)

The thickness of soil is less than only 7.5 cm. geographically; the soil horizons were not fully developed. Pomegranate growers have very shallow soil 11.3 % which gives 8.13 tons per hectare production. It contains coarse material such as number of rock fragments and more sand particles. These soils are irrigated and fertilized more frequently but satisfactory yields were not obtained. Very shallow soil is very low fertile in nature therefore, pomegranate yields were lowest tons compared to other soil types. The pomegranate cultivation from very shallow soil revealed highest gross net per hectare. In this regard, it is worth mentioning that formerly this type of soil is either in the form of barren lands. At some growers cultivated under food grain crops such as jowar, bajara and pulses. But since last few years had been brought under drought hardy pomegranate cultivation. Eventually tree develops on very shallow root systems due to which overall growth of trees, flowers and fruits is hampered. Inferior productivity status of these soils lowered down gross yields i. e. 8.13 tons /ha. Ultimately, this soil type also brought down net returns (Rs.153624.73) of growers and demonstrated lowest CBR (1: 1.73) among all soil types brought under pomegranate cultivation in study region.

Conclusion and Finding:

Yield and CBR analysis presented in table 5.8 points out that for study region as a whole the average CBR of pomegranate cultivation is 1: 2.16. Nonetheless, it considerably varied with soil types that are 1: 1.73, 1: 2.15, 1: 2.71 and 1: 2.07 of very shallow, shallow, medium and deep soils respectively. It proves that well drained medium and shallow are most profitable form pomegranate cultivation because the pomegranate tree develops on shallow root system. In contrast moisture retentive deep and very deep soil is less profitable. Besides, high porous medium and shallow soils were found too expensive to pomegranate production in existing water resources in the study region. The shallow and medium soils occupy 65.6% cultivable area. In addition to pomegranate and other drought tolerant fruit like ber custard apple, those possess ability to bear the moisture stress for several days can also be adopted for fruit cultivation.

References:

1. Bhujabal B. G. (1998): *Dalimb Bag (Pomegranate Orchard) – Om Publication, 5B/14, Visava Park, DP Road, Aundh Pune – 7*
2. Deshpande C. D. (1971): *Climate Geogaphy of Maharashtra, National Book trust, India, New Delhi, pp 24-27*
3. Husian Majid (2002): *Agriculture Regionalization, Systematic Agriculture Geography, Rawat Publication, Jaipur, India pp 222*
4. Pawar C.T. & Phule B. R. (2001): *Development level of fruit farming in Solapur District : A Geographical Analysis Maharashtra Bhugolshastra Sanshodhan Patrika, Maharashtra Bhugolshashtra Parishad, Pune vol. XV no. 1 (Pp 11-23)*
5. Phule B. R. (2002): *Pomegranate cultivation in Solapur Distric: A Geo – economical Analysis – Unpublished Ph. D. thesis submitted to Shivaji University, Kolhapur.*
6. Sonawane Sudhir (2007): *Successful Techniques for pomegranate cultivation Dalimb shetiche Yashswi Mantra) – Published by Saket Papers Limited 595, Budhwar Peth, Pune 411 002.*

Construction & Standardization of Pivoting Skill Test in Netball

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Abstract

The study titled 'Construction & Standardization of Pivoting Skill Test in Netball' was conducted on collegiate player from Savitribai Phule Pune University, Pune. The main objective of this study was to Construction & Standardized appropriate Pivoting Skill Test to select collegiate players. The study was restricted to Pune district sport Zone of Savitribai Phule Pune University. 211 Male & 200 female were selected for the study. The study was delimited to Pivoting Skill Test which is necessary for the outstanding performance in Netball game. Researcher not found any appropriate test battery after going through a range of study review, books & published articles. Then the Researcher selected most important skill of Netball for the study. The Pivoting Skill Test was standardized by determining the objectivity, reliability & validity. Test retest method was used for reliability. Correlation between different observers for objectivity & face validity were taken in to consideration for the standardization of the test. The Validity of Pivoting Skill Test found 0.88. The Reliability of skill test found Male 0.861 & Female 0.831 and the Objectivity of skill test found Male 0.99 & Female 0.98. Descriptive analysis was done by testing the Mean, Median & Standard Deviation. The normality of the score was tested through skewness & kurtosis. The distribution of scores resides in normal range of probability curve. The performance norms of skill test were graded as poor, fair, average, good & excellent on the basis of Rank order method. The findings indicate that the Netball players must be selected on the basis of Test so that the team gets better Pivoting Skill players. The test can be successfully administered to discriminate between Netball players for selection. Selection committee & coaches can use these Tests as 'Selection criteria' for District, University, State, National & International Netball Teams. This study will give player a guideline & target to prepare themselves for selection. Hence researcher recommends the use of test, norms & grading prepare

Keywords – Construction, Standardization, Netball, Pivoting

Introduction

The games like Netball is not that much popular in India & it is at initial stage. Compare to U.S.A or European players. Our Indian players don't have that much overall technique & tactics of the Netball game. If we want to compete with European, U.S.A or other countries players we have to raise the standard of physical fitness, technique & tactics of our Netball players. Whenever the researcher observes the game of other countries players the main difference he observed that the perfection of Pivoting Skill were very high standard compare to Indian players. By the nature of the game Netball is very dependent on the physical qualities of power & speed in running, jumping & throwing. Skillful players can score high & help to restrict the score of opponents; obviously it helps to win the match. We will get good results if we select the players having skills & qualities of Goal Shooting, Passing, Running, Catching, Pivoting & Balancing. But the researcher surprisingly noticed that no standardized skill tests are available for Netball at present. There-fore the proper selection criterion is highly essential to select the quality players from available sources. Pivoting Skill is highly important skill in Netball. Matches can win through the good score for that best quality shooting pivoting is essential. So the researcher decided to work on this topic Construction & Standardization of Pivoting Skill Test in Netball.

Objectives of the study

The present study has been conducting with following objectives

1. To design & construct Pivoting Skill Test in Netball.
2. To standardized the constructed Pivoting Skill Test in Netball.

To prepare norms of Pivoting Skill for collegiate Netball players.

Method

The study is delimited to the students who played Inter college level & 17 to 25 years age groups as per A.I.U. rules only. All male & female Netball players of Pune District Zone in the year 2018 & 2019 were selected as a sample. (N = 411)

Why Pivoting Skill Test?

After observing matches researcher came to the conclusion that many time players make mistake when they collect the netball and turn other direction. Players make foot foul. Refry blow Whistle & gave ball position to opposite team. In this way team lose the match also. So, accurate Pivoting Skill is must for all players. That is the main reason for finalizing Pivoting Skill Test.

EquipmentThe equipment's used for the test were Cone, Measuring tape, Stopwatch, Whistle, Chalk power, Scorecard & Pencil

Procedure

- Permission for The Secretary, Pune District Sport Zone, Savitribai Phule Pune University for data collection for both the years.
- Assistance from trained persons was taken during the data collection.
- Demonstration & one trial were given to each subject before final data collection.
- Pivoting Skill Test was conducted for all the samples one by one & collected the data.

Description of the test

- The subject should stand inside the 20cm radius circle.
- When the whistle blows the players will start stepping clockwise.
- Subject one leg will be static in the circle & another leg will move clockwise touches the four cones.
- Repeat the same move anti clockwise by using another leg.
- Each subject will be allowed to do three trails.
- Each subject will be allowed to get ready in 30 seconds for next trails.

Scoring

The minimum time taken by the subject to complete the test with both leg will be considered for the final score. Best of three trails of the subjects will be score.

Data Analysis

For the analysis of collected data SPSS version17.0 & Microsoft office excel 2010 were used as a tool. Descriptive statistics was used for obtaining mean, median, mode & standard deviation. The percentile method was used to prepare the norms.

The Descriptive of Pivoting Skill Test

Table 1

The Descriptive Statistic of Pivoting Skill Test found for Female & Male

Statistics	Score of Female	Score of Male
N Valid	200	211
Mean	10.38	9.65
Median	10.22	9.57
Mode	10.44	9.11
Std. Deviation	1.41	1.67
Skewness	0.23	0.19

Kurtosis -0.10 -0.37

Table 2
Percentile Norms of Pivoting Skill Test for Female & Male

Percentiles	Score in (Seconds)	
	Female	Male
99	8.08	7.17
95	8.51	7.39
90	9.10	7.50
85	9.29	8.07
80	9.41	8.32
75	9.78	8.88
70	9.88	9.11
65	10.00	9.28
60	10.14	9.29
55	10.22	9.57
50	10.39	10.00
45	10.41	10.11
40	10.77	10.28
35	11.08	10.41
30	11.21	10.78
25	11.46	11.10
20	11.94	11.32
15	12.38	11.81
10	13.14	12.70
05	13.71	13.67

Result & Discussion

- When the players Pivoting Skill Test score is 13.71 of Female & 13.67 of Male then the players gets 05 points.
- When the players Pivoting Skill Test score is 10.30 of Female & 10.00 of Male then the players gets 50 points.
- When the players Pivoting Skill Test score is 8.08 of Female & 7.17 of Male then the players gets 99 points

Grading

The grading scale prepared is presented below in detail. For the description of player performance Excellent, Good, Average, Fair & Poor descriptor words are used.

Table 3
Grading Scale on Pivoting Skill Test performance of Netball Female & Male players

	POOR	FAIR	AVERAGE	GOOD	EXCELLENT
FEMALE	11.94 & above	11.93 to 10.77	10.76 to 10.14	10.13 to 9.41	9.40 & below
MALE	11.32 & above	11.31 to 10.28	10.27 to 9.39	9.38 to 8.32	8.31 & below

Conclusion

1. Pivoting Skill Test can measure the good pivoting skill of Female & Male Netball players.
2. Pivoting Skill Test was Valid, Reliable & Objective.
3. The norms of the test are gradable & can be useful to distinguish Netball Female & Male players having good level of skill performance.

Recommendation

One can study & prepare norms for other skills of Netball like Passing, Balanced foot work, Agility & Goal shooting skills

References

1. Best, John W. (1977) *Research in Education*. (Eagle Woods Cliff, n.j.;Prentice Hall Inc.,1977)
2. V. J. Prakash, (2000) *Sports Statistics*. Gwalior: Venus Publication. P 285-290
3. Kansal D. K. (1996) *Applied Measurement Evaluation and Sports Selection* (2nd ed.)New Delhi: D. V. Publications.
4. M. Robson et. al. (1978) A simple physical fitness test battery for elementary school children, *SNIPES Journal*, 1, P. 28.
5. Jensen, K., Johansen, L and Larsson, B. (1999). *Physical performance in Danish elite team handball players*. 5th ICO World Congress on Sport Sciences with the Annual Conference of Science and Medicine in Sport, Sydney. Australia.
6. F, D. Brown (1963). *The determination of the validity of four selected motor fitness items and the construction of norms for Washington State University men, Completed Research in Health, Physical Education And Recreation*, 5, p. 84.

The Poverty in India – facts and remedies

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Abstract:

India is a developing country. After completing 73 years of Independence, our country is still facing a big problem of poverty. India's 68.8% population lives in below poverty level. It is the fact that before independence India's all the three sectors i.e. Agriculture, Industrial and Service sectors were under control of British government. In those days the level of the poverty was very much boosted that most of the population was died only due to hunger. Small agriculture landholders always used to take a very less production of crops from their own land and after that had to work as interim workers in the maximum months in the year. But, after independence the state and central government has chalked out various plans to solve the problem of poverty from our country. But these efforts are not sufficient. There must be more initiatives should be innovated to solve the percentage of poverty in India. The state as well as central government must chalk out the action plan for this.

Keywords: Inequality, migration, inefficient, deficiency, conservation

Introduction:

India is a second largest country in the world having very large population. Less awareness about family planning schemes, lack of entertainment facilities in rural and tribal areas, early marriage etc. is the few reasons of India's rising population. India's maximum population belongs to younger age i.e. below 25. This is the main reason because of which our country is known as 'the country of youngsters'. But as most of the Indian population is unskilled, that is why still India is facing a problem of poverty. In spite of lot of population and low rate of Industrialization, there are various reasons due to which India is continuously facing the problem of poverty. This research intends to know the reasons and possible remedies against this genuine problem. Inequality of income is another reason behind the continuously rising percentage of Indian poverty. In India the economic variation is vary from each other. In other words we can say that, as per their economic background the peoples are distributed in various categories; viz; i.e. below poverty level, middle class, higher middle class and rich. The taxation policy in India is different from each other. This taxation policy should be newly framed. According to many economists, one of the major remedy to solve this problem is equal taxation policy. Many past thinkers, economists and finance ministers have the faith that the equal taxation policy should definitely minimize the income inequality in India. Take 'Dharavi' – a biggest slum in Asia, in which many people have possessed degree as well as post graduation degrees. But still it is not possible for them to get a job which will match to their qualifications. After 100 years the world had suffered from great pandemic; i.e. 1720 – plague, 1820 – Cholera, 1920 – Spanish Flu, 2020 – Corona virus. ^1. Due to this pandemic most of the people in our country has lost their jobs. So, pandemic is also one of the major reasons for Indian poverty. Today due to Corona Virus is the natural calamities or today we can say epidemic or pandemic due to which lot of people has lost their jobs. This is also one of the major reasons of uncertain reason of poverty. There must be a certain measures due to which the percentage of poverty in India should be completely vanishing.

Objective of the research:

The objective of the research is to know the reasons of poverty in India.

Hypothesis:

“Today India is facing a big problem of poverty.”

Research Methodology:

The secondary sources are mostly used to collect the necessary data.

The reasons of poverty in India:

From many decades India is facing the problem of poverty. Some of the major reasons behind it are as follows;

- Increasing population rate:

The increasing population rate is the major reason due to which India is struggling to solve the problem of poverty. There are various reasons behind it; viz; lack of awareness about this problem, illiterate population, illegal migration, more percentage of rural population, the rising modern culture etc. are some of the major reasons due to which India's population rate is always increasing .

“India’s population is equivalent to 17.7% of the world population.” ^2.

- **Low Industrialization:**

Indian Industrialization is not yet developed. Lack of strategically planning, low availability of finance and fewer infrastructures are some reasons due to which Indian Industrialization is not developing. In 1995, the finance minister Dr. V.P. Singh along with P.V. Narsinha Rao has firstly defined the LPG concept; Liberalization, Privatization and Globalization. It has definitely boosted the Indian Industrialization. But, by the changing circumstances, political issues and negligence from the present government the LPG concept has completely destroyed after successful implementation.

“Indian industrialization is contributing around 31% of the Indian GDP.” ^3.

- **Inefficient Population:**

India is a second country in the world having highest population. India’s most of the population belongs to fewer than 25. While China is the country in which the average age of population is about 64 years. But the fact is that, though our country’s maximum population is young, but most of them are unskilled. That’s why India is always lacking of skilled manpower. Our present Prime Minister Mr. Narendra Modi has established maximum schemes due to which they can develop their skill and can start their own business. By giving the loan facilities and also the subsidies it is one of the best option to minimize the percentage of poverty rate in India. Some of those are namely Skill India, Make in India, Start up India etc. But as the India’s population is so high, the problem arises, how to distribute these schemes in such a large population.

“One in five Indians labor force is skilled. The percentage of skilled persons in India is around 20%.” ^4.

- **Brain drain problem:**

As far as the higher education is concerned, India has established and ruined the new diploma, degree and also the master degree courses in few decades in various disciplines related to higher education. Due to high package, opportunity for development and to show their versatile skills, most of the Indian pupils always take their higher education from well known and reputed institutions like symbiosis, IIT, IIM etc. And rush to join the above sea jobs. In other words we can say that, the Indian talent is of no use for the growth of Indian economy. Other countries are always ready to make good use of Indian talent. By paying them high salary, perks and packages, they always attract the Indian youngsters towards their country.

“Among the Asian countries, India continued its trend of being the top country of birth for immigrant scientists and engineers with 9, 50,000 out of Asia’s total 2.96 million.” ^5.

- **Low percentage of per head Income:**

Indian population is continuously increasing due to which per head income is rapidly decreasing. This is the main reason due to which India is always facing problem of deficiency of capital required to set up welfare as well as new Industrial project for the society. India’s most of the population belongs to poor and below poverty level category. That’s why their saving rate is so low that the capitalization rate is also very low. It is said that, the maximum population is having the average monthly income i.e. below 5,000 rs. This is one of the reason due to which India is facing many problems in establishing the welfare facilities and also the basic infrastructure facilities to the common people.

“India’s per capita net national income or NNI was around 135 thousand rupees in the financial year 2020.” ^6.

- **Negligence towards agriculture sector:**

India’s more than 65% people are still living in the village and tribal area and the major source of their income totally depend on agriculture sector. But due to unexpected natural calamities, more use of artificial fertilizers, insecticides and pesticides, infertility of soil, lack of soil conservation centers, lacking of financial support from government, traditional technology, lacking of irrigation sources etc. are some of the major reasons due to which Indian agriculture sector is standing on the age of doom.

“About 20,000 crore loss in perishable and non perishable production in the Maharashtra state is due to the lockdown, according to estimates.” ^7.

- **More priority to Service and negligence towards Self trade:**

Indian youths are always preferred to make jobs. They are not interesting to start a self business. It is their mentality that they have to work only for limited hours and will get their

regular payment within a certain date. There are many reasons due to which Indian youths are neglecting to start their own business. Some of them are lack of finance, the wrong way of thinking, the lacking of proper business planning, the lacking of proper business strategy, not having more capacity to bear risk, Improper management, lacking of skill staff etc. are the some of the main reasons due to which Indian youth is always prefer to make jobs rather than starting a self business.

“A survey revealed that job security followed by a healthy work-life balance, drives Indian youth to opt for banking and government jobs.” ^8.

Testing of the Hypothesis:

In this problem the following Hypothesis was taken;

“Today India is facing a big problem of poverty.”

India is a developing country with mix economy. From many decades India is struggling to completely remove the poverty as it is the main barrier of the Indian economic growth. The fact is that, Indian youths are always having more attraction of the overseas jobs due to high salary and passion. Due to this money minded psychology, India is really lacking of the talented as well as skillful employees. Moreover, due to industrialization, enormous growth of population, tax differentiation, more emphasis on traditional education aids rather than new one, lack of finance to purchase the new aids, traditional education rather than skill based education, declining or a very low rate of rural development, negligence towards agriculture sector are some of the major reasons due to which Indian poverty level in India is continuously increasing.

By the above information it proves that, the hypothesis taken in this problem proves true.

Suggestions:

Government should take initiative to chalk out new strategies planning against poverty. For this they should establish governing committee in each state. This committee should establish to know the basic reasons, should collect the important data to find out various unknown facts. The governing committee should report the central government regularly regarding these facts. Finally the central government should chalk out the final planning to restrict the poverty.

Conclusion:

Due to Covid-19 Pandemic the problem of the poverty in India is continuously increasing in last one and quarter of a year. It is necessary to take the effective steps to solve this problem. Due to various social, political and social reasons, yet Indian government is not successes to make control the problem of the poverty. Migrated peoples from other countries, unskilled peoples, illiterate peoples, traditionalism in the education, negligence towards agriculture sector, always declining percentage of Indian GDP, lack of finance due to low percentage of per capita income, lack of technical support from other countries etc. are some of the reasons due to which Indian poverty level is always increasing. These obstacles should be solved only when government will make the all over strategic planning. India should adapt the policy of Japan. Japan had adapted the policy of Microfinance. By giving the short term loans to small corporate sectors, they increased their countries Industrialization. By this way they reduced their poverty percentage. China had very intelligently chalked out the strategic plan to reduce the poverty. For this it has given the first priority to the development of basic infrastructure. They engaged their excess unemployed manpower in this work. India should chalk out such strategic plans like China and Japan. India's main challenge is to make the unskilled manpower into skilled one. To solve this problem, India should give more importance to the technical education rather than traditional under graduation or Post graduation degree courses. This education policy will definitely help to increase Indian Industrialization and will definitely help to decrease the percentage of unemployment and poverty. If the government does this, India will prove itself as a superpower of the 21st century.

Bibliography

1. www.politifact.com>has-a-pandemic-occurred-every-hundred-years-by-tom-kertscher
2. www.worldmeters.info>india-population-2021-worldmeter
3. www.jagranjosh.com>what-is-the-sectorwise-contribution-of-GDP-in-india-2016-17
4. www.timesofindia.indiatimes.com>with-1-in5-workers-skilled-india-ranks-129-among-162
5. www.news18.com>india-tops-in-brain-drain-of-scientists
6. www.statista.com>india-national-income-per-capita-2015-2020
7. www.linkedin.com>pulse-agriculture-industry-during-covid-19

Role of Embedded Technology in 21st Century

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Abstract

Embedded Technology plays a vital role in defining a person's ability to succeed both in school, college, university Education and throughout their lives. This is an inherent aspect of 21st century education, which is the spine of our educational pedagogy here at Education in India. 'Digital India', is a dream project of the Hon. Prime Minister for the nation. Library is also part of this digital initiative. National Digital library of India (NDL) is a project carried out under the Ministry of Human and Resource Development, Government of India. Digital Technology enabled services fulfils the information needs of the users at the proper time in the proper place to the proper person. Due to recent developments in IT and the advent of social media, researchers and academics as well as people started using web for their everyday work.

Keywords: Embedded Technology, Online Resources, Digital Services, Digital Information, IT

Introduction:

Our era has come to see the vital importance of Embedded technology in our daily lives. It allows us to unlock a huge collection of information and communication data. Each kind of task, be it a regular task or a job specific task requires digital proficiency or literacy. Digital literacy can be defined as "the ability to use digital technology, communications tools, and or networks to access, manage, integrate, evaluate, and create information in order to function in a knowledge society" (Lemke, 2003). The execution of a successful approach for the advancement of digital literacy skills is known to include multiple components that tackle hurdles for explicit demographics such as; attitude, age, socio-economic status, language, and regional availability of resources. In order to increase digital literacy levels strategies must be targeted and implemented, where necessary for specific populations and situations keeping an account of different obstacles. According to (Castells, 2009) there is a technological transformation with the increasing use of internet access. Therefore, technology transforms the mode or platform in which we converse and process knowledge. A substantive growth in execution of information and communications requires improvement in quality of life and development by preparing people for a knowledge society. As said by (Castells 2009) networks demonstrate strength in their flexibility, adaptability and capacity to self-configure. Therefore networking is here to reside and education has no alternative but embrace it. In this essay the basic focus is on the need to develop nation's digital skills at all levels as it is gradually becoming important in the present period where technology and its benefits are becoming more sophisticated and pervasive. By critically discussing whether developing the nation's digital skills at all levels helps in achieving fairness rather than amplifying it in the presence of various inequalities? People search so many Apps, websites in every 60 seconds in the world-



People search so many Apps, websites in every 60 seconds in the world.

Digital India:

'Digital India', is a dream project of the Hon. Prime Minister for the nation. Library is also part of this digital initiative. National Digital library of India (NDL) is a project carried out under the Ministry of Human and Resource Development, Government of India. The Digital India sets out an action plan to

contribute its full potential to secure Nation's place as one of the world's foremost digital knowledge socio-economies which is significantly dependent on having enough people with the accurate skills in the exact place at the precise time by applying new technologies; further assembling a high class of professionals and ensuring India's future prosperity. The issue is not only of socio-economic competitiveness, but also of fairness which is defined as ensuring that all have access to the content, services and skills to contribute and connect effectively to the digital economy and the benefits are available to all. There is an immense range of services delivered online while also a hazardous threat to those who lack or struggle to access technology. Ministry of Human and Resource Development, Government of India believes that "It is neither morally acceptable nor economically sustainable to leave millions of people behind, unable to use information and communications technologies to their advantage." However it is of utmost importance to transform the lives of those who are excluded in order to avoid the major parts of our society being deprived and enduringly lag behind. Though, the matters about digital exclusion broaden far-off than ensuring access to internet albeit with the increasing role of the internet in daily life, an analysis of utilizing the opportunities offered by the internet is of fundamental significance. We focus on applying innovative teaching methods that arm our students with the skillsets they need to succeed throughout their education and as they enter the workplace. For us, this concept is as practical as it is progressive. Some educators still feel that we live in an 'age of distraction' and that students must be pried away from their devices if they are ever going to focus long enough to learn. However, there's a strong body of evidence to the contrary.

How We Integrate Technology:

Our Technology Program's focus is to use technology to enhance, enrich, and augment classroom learning with active and engaging learning activities. This occurs across all grade levels. In terms of communication and collaboration – an intrinsic part of 21st century education – iPads actually bring students together to accomplish shared goals. For instance, our college students can use iPads for all subjects, including motion games, publishing movies, and even science dissections. We also use this technology for testing purposes. The NWEA testing measures student growth and learning needs and identifies ways for us to accelerate the learning process for each individual student. These tests are distributed using iPads that automatically feed into the NWEA system, allowing our teachers to aggregate results quickly and then apply useful, evidence-based lessons to accelerate academic growth and achievement for our students. After the results of these tests are uploaded, a customized enrichment program is created for each individual student. Not only are we able to gain applicable insights into how to cater to each student's learning style, students are enhancing their digital aptitude by familiarizing themselves with this technology.

Putting the Technology to Use:

Almost all of students attend computer class. While this is not an aberration from the mandatory curriculum at many other schools, we are lucky enough to offer resources that many others cannot – or will not. These technologies include Smart Boards and a recently acquired pair of 3D printers. Have you witnessed a classroom where a Smart Board or 3D printer is in use? The interaction with these devices is not only active but entertaining, communicative, and collaborative. Teachers may also use tablets to record students's interviews with members of their community, other students, or teachers. This enhances communicative skills and bolsters the student's confidence in public speaking. The ways to use technology as a tool for education are nearly endless! And, as with our 3D printer training program, students can even take an active role in identifying the best way to utilize these tools.

Give Them What They Want:

If students' eyes are glued to a screen, it only makes sense to populate those devices with edifying, useful activities. Instead of assuming that focus is split between education and technology, we believe that these two can be the perfect complement to one another. In a past blog, we discussed just how important a role technology plays in how students learn. If this is true, it only makes sense to integrate these tools into curriculum to better serve the students that are using them. Why see this as a problem when instead it can be a solution? students are fascinated by technology, so when they learn through technology it's equal parts entertainment and education. This provides a unique opportunity to teach them the skills they'll need without monotonous lessons that are unable to keep their focus.

Embedded Technology Actually Improves Focus:

"Executive function" skills – the ability to control impulses, make plans, follow instructions, multi-task and stay focused – are learned skills not inherent in student at birth. We must learn these skills to thrive in the ever-connected world that we live in today. Teaching digital literacy is an assured way of accomplishing this. There have been strong advocates for infusing technology into the classroom far before

the turn of the 21st century. The Fred Rogers Center, created by the well-known host of Mister Rogers' Neighborhood, was a strong proponent of introducing technology into the classroom. After all, these are the tools that students will use for the rest of their lives. As technology is further incorporated into the classroom setting, educators have the ability to expand student's learning and enhance their 21st century skills. When done correctly, educators can use technology as a way to encourage learning and bring experiences to student in a way that they will embrace, enjoy, and benefit from for the rest of their lives.

ICTs Role in Socio-Economic Development:

Information has become one of the chief inputs in financial procedures, and information and (ICT) steadily became vital for the capability of enterprises, communities and individuals to contribute effectively in the global economy (Hollifield and Donnermeyer, 2003). When wisely applied, ICTs recommend prospects via network effects to narrow down social and economic inequalities and to sustain innovative market access in services and support wealth creation. The basis of inequalities in internet access and use are frequently hinted back to usage factors (price of technology, lack of information, ability or operational skills) and psychological factors (nervousness about using technology or reluctance to try something new) (Van Dijk and Hacker, 2003). There is a crucial need to tackle the difficulty of the particular individuals and communities who might have lack of knowledge, the resources, or the ability to achieve an equivalent opportunity to contribute in society and economic life. For the ones working in more disadvantaged communities, and who see the impact of technology on people's daily lives, the relations among digital and social equality are perceived without any doubt. However, it is argued that the spotlight should be on structuring the business case for digital inclusion quantitatively and qualitatively.

Use of Embedded Technology in Every 60 Seconds:

In Every 60 seconds global people use-Facebook-900,000 logins, Text messages – 16 Million, YouTube- 4.1 Million Videos Viewed, Google play- App Store 32,000 Apps Downloaded, Instagram-46,200 Posts Uploaded, Twitter-452,000 Tweets sent, Tinder- 990,000 Swipes, E-Mail- 156 Million E-mail sent, Amazon echo- 50 Voice-First Devices Shipped, LinkedIn- 120 New Accounts Created, Messenger- 15,000 GIFs Send via Messenger, Snaps- 1.8 Million Snaps Created, Online Shopping- 751,522 USD Spent Online, NETFLIX-70,017 Hours Watched, Google- 3.5 Million Search Queries. *(All statistics recorded in 2017.)*

People search so many Apps, websites in every 60 seconds in the world.(Statistics2017.)

Sr. No.	Web or APP	Use/Search
1	Facebook	900,000 logins
2	Text messages	16 Million
3	YouTube	4.1 Million Videos Viewed
4	Google play- App Store	32,000 Apps Downloaded
5	Instagram	46,200 Posts Uploaded
6	Twitter	452,000 Tweets sent
7	Tinder	990,000 Swipes
8	E-Mail	156 Million E-mail sent
9	Amazon echo	50 Voice-First Devices Shipped
10	LinkedIn	120 New Accounts Created
11	Messenger	15,000 GIFs Send via Messenger
12	Snaps	1.8 Million Snaps Created
13	Online Shopping	751,522 USD Spent Online
14	NETFLIX	70,017 Hours Watched
15	Google	3.5 Million Search Queries
	& so many Webs and Apps	

Conclusion:

On a global perspective comparing to different nations, India is establishing a vision to develop clear and simple techniques to construct a digital knowledge economy in the modern era. Therefore in conclusion, India government is motivated with its goals for broadband speeds and to encourage people to access new digitalized technology. What remains at question is that do people want to be part of this new Embedded Technology and are they ready to accept it and embrace it in near future.

References:

1. Han, Lifeng and Goulding, Anne, *Information and reference services in the digital library*, *Information Services & Use*, 251–262, IOS Press, 2003.
2. Kumar, P.S.G. (2004) *Information Technology: applications, theory and practice*. Delhi: B.R. Publishing Corporation.
3. Bansode, Anil Changdeo, (2016) *Library and Information Science NET/JRF/SLET/PET Objective Questions (Paper-II and Paper-III) With Latest Solved Question Papers*. New Delhi: EssEss Publications.
4. Singh, A. P. And Murthy, T.A.V. (2005) *Library without walls*. New Delhi: EssEss Publications.
5. Cleveland, Gary. *Digital Libraries : definitions, issues and challenges*
www.ifla.org/vi/5/09/udtop8/udtop8.htm
6. Kany, Terry and Cleveland, Gary. *The Digital Library : myths and challenges*
7. Hanif, Md. Hanif and Islam, Md. Shifal. (2005) “Digital Libraries : concepts, issues and implications in Bangladesh”. *IASLIC Bulletin* V 50 (4): 207-15
8. Nair, Saji S. and Jeevan, V.K. (2006) “Metadata and Libraries”. *University News* 44 (35) August 28 – September 03.

Water Budget of the Indapur Tahsil

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Abstract

Water budgets provide a foundation for evaluating its use in relationship to other important influencing conditions such as other ecological systems and features, as well as social and economic components – how much water is being used by agriculture, industry and residents etc. A water budget commonly provides the info of quantity and place of it. Water budget studies consider the volumes of water within the various reservoirs of the hydrologic cycle and the flow paths from recharge to discharge. The reservoirs of surface and underground water are about 1542.695 MCM; Out of this only 601.38 MCM water is required for use. Water budgets are developed by measuring or estimating the inputs and outputs of a hydrologic system. Inputs are the processes that add water to the system; these include precipitation and inflow from surface water and groundwater. Outputs are the processes that remove water from the system; these include evapotranspiration, the various uses of water by humans, and outflow from surface water and groundwater. General hydrological equation to compute water balance and runoff has been estimated. The average surface water village wise runoff of the study area is estimated. There is great deal of variations in terms of volume of runoff by different villages. The entire tahsil is drought prone and faces the problem of water scarcity throughout the year. Observing these outcomes in the present context, this paper calculates the water budget of the Indapur tahsil. The outcomes of these studies are briefly presented in this paper. It has been observed that the water resources are not uniformly available in the study area.

Key words: Precipitation, evapotranspiration, runoff, surface water, groundwater water balance, water budget.

Introduction

A water budget is a basic tool that can be used to evaluate the occurrence and movement of water through the natural environment. Water budgets provide a foundation for evaluating its use in relationship to other important influencing conditions such as other ecological systems and features, as well as social and economic components – how much water is being used by agriculture, industry and residents etc. The water budget process can encompass various levels of assessment which start simple and grow more complex if there are concerns about how much water is available at any level. Water budgets commonly provides the info of quantity and place of it. Water budget studies consider the volumes of water within the various reservoirs of the hydrologic cycle and the flow paths from recharge to discharge. Water budgets need to consider this information on a variety of spatial and temporal scales (Hazel Breton 2010). The maximum water holding capacity of soils, rainfall and potential evapotranspiration are the basic controlling elements of water balance. The distribution of these elements decides droughts or water surplus condition. Therefore rainfall, potential evapotranspiration, aridity, humidity and soil moisture are become primary controlling factors of agriculture (Saikia 1994). In the present study water balance technique is used to estimate the availability of rainwater resource in the study area. The nature and distribution of rainfall of the study area discussed earlier indicates that about 90 percent rainfall takes place during the short period of four months from June to September. There is a great variation in the number of rainy days.

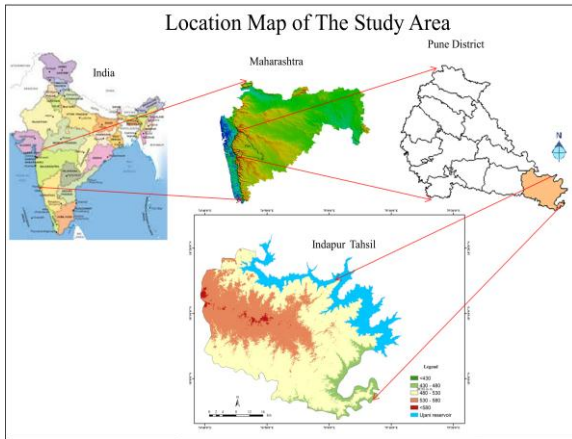
Objectives

1. To identify inputs and outputs of a hydrologic system
2. To identify place and quantity of water.
3. To calculate the runoff of the study area.
4. To make favourable suggestions to low runoff and sufficient water available.

Study area

Indapur tahsil is one of the tahsils in the Pune district consisting of 142 villages along with one urban centre in the study area. There are eight revenue circles in the tahsil. The area extends from 17° 53' 42" to 18° 19' 58" North latitudes and 74° 39' 16" to 75° 09' 39" East longitudes (**Fig. 1**). The area is drained by the river Bhima on north and east both sides. Nira River flows south of Indapur tahsil. Total geographical area of the tahsil is 1575.38km² (Census 2011), out of which Nira river catchment area compress about 586.8 km² and Bhima river catchment covers an area of 902.43km². Nira River joins the Bhima River at famous tourist place i.e. Narsinhapur village after travelling a course of 209 Kms from origin. The slope of region is towards east. There are three soil types, namely, coarse shallow, medium black and deep black soils occupying 30, 40 and 30 percent respectively.

Fig. 1 Location map



Database and methodology

For the present research work secondary data source are used. This work is to develop digital database at large scale using spatial and attribute data. The spatial data comprise of all the thematic and topographic maps and the attribute or non-spatial data is created mainly water details utilities information etc. All the supported data is collected from survey of India, Maharashtra State Gazetteer Pune District, Maharashtra Governments department of irrigation, department of agriculture, department of water conservation. General hydrological equation to compute Water balance used is $P = Q + E + \Delta S$. The Dickens, Inglis and Nawab Ali Jung Bahadur formula was used to estimate the runoff. These data base

converted to Microsoft access format to suit to the link up for processing through Arc View 9.3, Surfer version 10, Global Mapper version 11.

Present water Inputs and Outputs of the study area

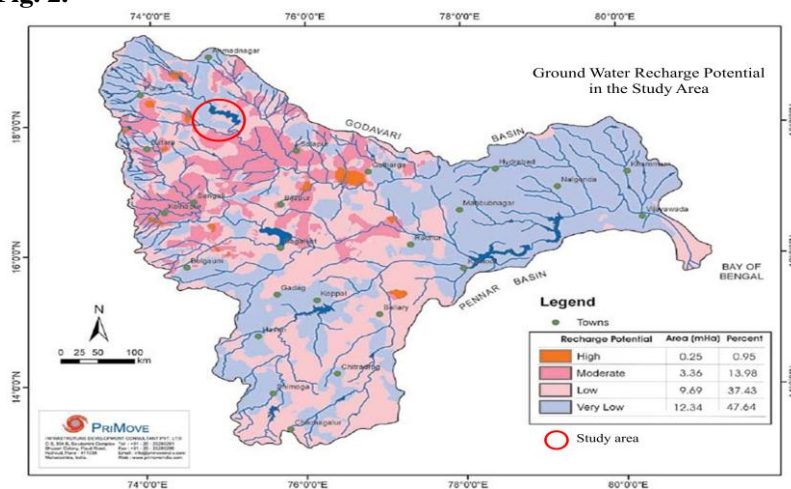
Water budgets are developed by measuring or estimating the inputs and outputs of a hydrologic system. Inputs are the processes that add water to the system; these include precipitation and inflow from surface water and groundwater. Outputs are the processes that remove water from the system; these include evapotranspiration, the various uses of water by humans, and outflow from surface water and groundwater. It is also observed that the critical examination of ground water recharge potential of the study area reveals that infiltration is negligible and hence not considered in the present computation of water budget. The components of a water budget are illustrated in **Table no. 1**. Many inputs and outputs can be measured directly or estimated using various techniques.

Table no. 1 The components of a water budget

Sr. No.	Inputs	Water in MCM	Outputs	Water in MCM
1	Rainfall	1052.468	Runoff	327.716
2	Canal and Reservoir	214.587	Actual evapotranspiration	771.212
3	Recharging of groundwater	275.64	Infiltration	*
	Total	1542.695		1098.918

Source: Tahsil office and agriculture office Indapur, Irrigation offices, Baramati and Daund, GSDA office, Pune, 2018.

* Being too low ground water recharge potential Infiltration has not been considered in the present component. Ref. **Fig. 2**.



Source: National rain fed area authority planning commission New Delhi 2011

Fig. 2.

Water budget estimation using hydrological equation

General hydrological equation to compute Water balance used is

$$P = Q + E + \Delta S$$

Where,

P is precipitation, Q is runoff,
 E is evapotranspiration and ΔS is the change in storage in soil or the bedrock.

Inputs

1. Rainfall

One of the fact that need to be emphasized here, is that the mean annual rainfall of the eight stations in the study area is above 362 mm for all of the stations receive more or less same rainfall throughout the year. The lowest rainfall in the study area, during the last 15 years period of time, the minimum value was around 128.12 mm in the year 2003 and maximum value was 817.99 mm in the year 2009 with this rainfall the volume of rainfall that is received is 188.06 MCM and 1200.73 MCM, respectively.

2. Canal and reservoir

The Nira left canal and Mutha (Khadakwasala) canal runs through the study area, hence the higher level of contribution to the irrigation. On the basis of the hydraulic data total 93.963 MCM water available from these two canals this is ultimately recharge the groundwater by canal through seepage and increase the level of groundwater. Dam and reservoirs may largely regulate the hydrological regime of a catchment since they temporarily store surface water and hence, reduce storm water runoff downstream of structure. In terms of water budget, overall surface runoff may be significantly reduced due to evaporative losses from the reservoir and abstraction of stored water. Irrigation tank, percolation tank, K. T. Weir etc. near the Ujani dam are the water resources for the area.

3. Recharging of ground water

In the study area the total rechargeable fresh groundwater is computed as 275.64 MCM and the net ground water availability is to the tune of 261.86 MCM. The present gross groundwater draft for all purposes is 221.15MCM. The Stage of groundwater development for the study area, as whole, is 84.45%. This indicates that on an average 84.45% of yearly replenishable groundwater is being used in the study area. Considering the domestic and industrial requirement the allocation of groundwater for next 25 years comes out to be 18.79 MCM. Leaving this allocation, the groundwater available for irrigation in future is around 53.33 MCM. The canals and reservoirs are other main sources of groundwater recharge in the study area.

Outputs

1. Runoff

A. Runoff estimation and computation of its volume

There are several rainfall-runoff models available in the study of hydrological field. In this study, the following empirical formulae have been used and runoff has been estimated by the three methods. Design flood for Indapur tahsil has been worked out by empirical formulae are given below;

1. Dickens formula

$$Q = CA^{3/4}$$

Where Q = flood discharge in cumecs

C = constant depending upon the rainfall depth which may be taken as 13.9 to 19.5 for central India basins

A = catchment area in sq.km.

2. Inglis formula

$$Q = 124A / (A + 10.4)^{0.5}$$

Where Q = flood discharge in cumecs

A = catchment area in sq.km.

3. Nawab Ali Jung Bahadur formula

$$Q = C (0.386A)^{\{0.925 - (1/14) \log 0.386A\}}$$

Where Q = flood discharge in cumecs

C = coefficient varies from 49 to 60 with maximum value 86

A = catchment area in sq.km.

B. Distribution of surface runoff

Runoff is that portion of rainfall, which enters the stream immediately after the rainfall. It occurs when all losses are satisfied and if rain is still continued, with the rate greater than in-filtration rate, at this stage water starts flowing over the land as overland flow. For the design of any soil and water conservation

structures and waterways or channels, runoff volume and peak rate of runoff are required to be estimated. Runoff rate is expressed in cubic meter per seconds and runoff volume or water yield from watershed is generally expressed as m³ **Fig. 3a** The study area is characterised by undulating terrain land in western part and eastern part is a plain area.

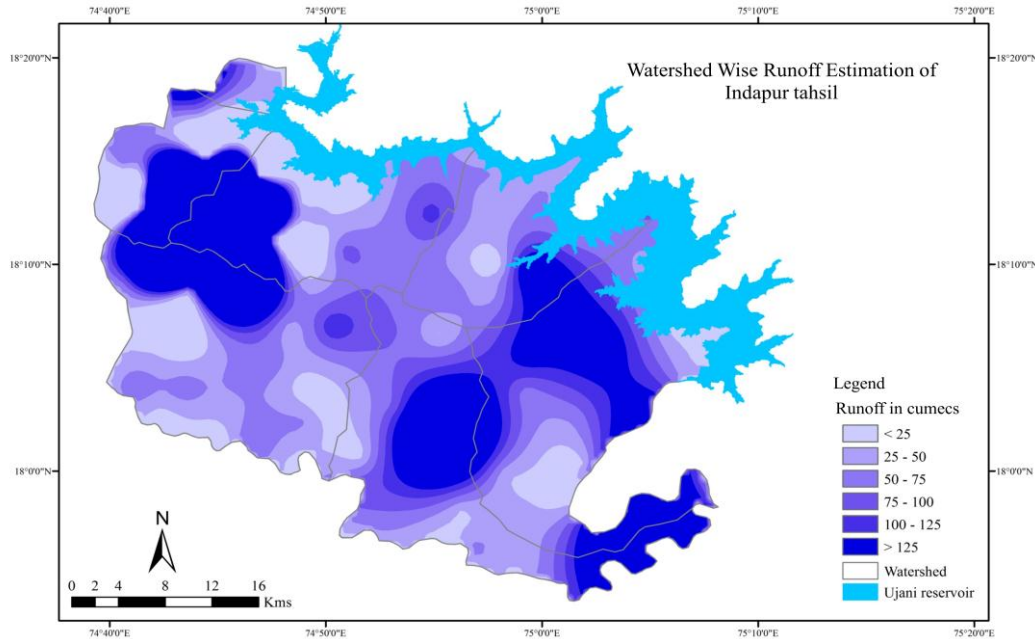


Fig. 3a

In the study area it is observed that the maximum 402.25 km² (25.57 %) area under more than 125 cumecs runoff and 235.51 km² (14.95%) area under less than 25 cumecs. More than 125 cumecs area found western high altitudinal area, eastern side strip between river Bhima and Nira and two patches are found at around Nimgaon Ketki and Indapur settlement. Low runoff (< 25) has found in the Northern area, besides this it found around in patches in the middle and Eastern part of the study area. Besides this 25-50, 50-75, 75-100 and 100-125 cumecs runoff found in patches all over in the study area (**Fig 3a & Fig 3b**).

Table 2 watershed wise runoff

Sr. No.	Runoff in cumecs	Area		Description
		Km ²	%	
1	< 25	235.51	14.95	Very low
2	25-50	334.86	21.25	Low
3	50-75	357.76	22.71	Medium
4	75-100	149.32	9.48	High
5	100-125	95.08	6.04	Very high
6	> 125	402.25	25.57	
	Total	1575.38	100.00	

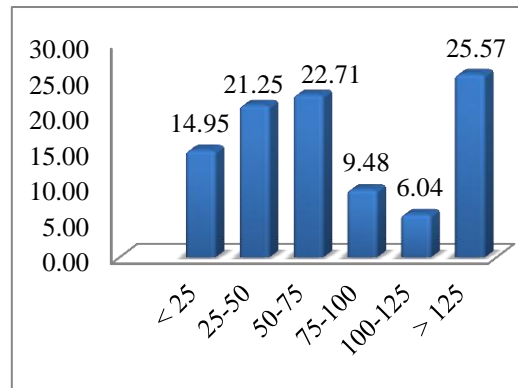


Fig 3b Average surface water runoff (% area)

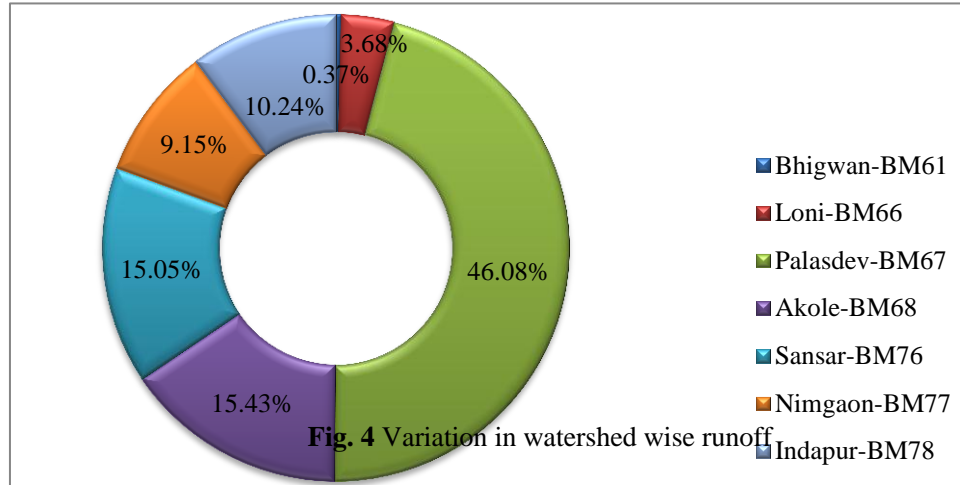
The average surface water runoff of the catchment is estimated to 327.72 MCM/year (**Table 3 & Fig. 4**). This is about 31.14% of the total volume of rainfall for the entire study area. There is great deal of variations in terms of volume of runoff by different watersheds. The maximum contribution of runoff in the watershed no. BM67 area that is amounting 46.08% and lowest contribution can obviously be expected from BM61 Bhigwan area which is only 0.37%. From the following **table no. 5.2** it becomes clear that, due to variation in rainfall and size of considerable amount of rainfall volume does not get converted in to runoff.

Table 3 and Fig. 4 Watershed wise area and runoff of Indapur tahsil

Sr. No.	Name of Watershed Area	Surface Area in		Runoff in	
		Km ²	%	MCM	in %
1	Bhigwan-BM61	24.53	1.56	1.20	0.37

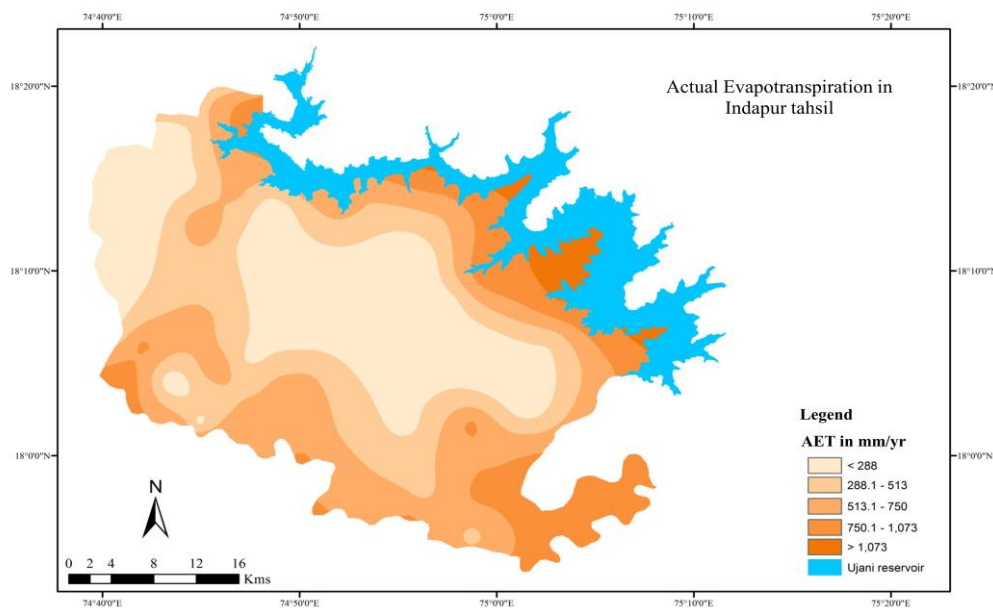
2	Loni-BM66	194.93	12.37	12.07	3.68
3	Palasdev-BM67	238.97	15.17	150.99	46.08
4	Akole-BM68	125.67	7.98	50.57	15.43
5	Sansar-BM76	337.88	21.45	49.33	15.05
6	Nimgaon-BM77	281.63	17.88	29.98	9.15
7	Indapur-BM78	371.77	23.59	33.57	10.24
	Total	1575.38	100.00	327.71	100.00

Source: Author.



2. Actual evapotranspiration

Actual evaporation is a major component in the water balance of a catchment, reservoir or lake, irrigated area. Compared with precipitation and stream flow, the magnitude of actual evaporation over the long term is more difficult to estimate than either precipitation or stream flow. The actual evapotranspiration data obtained from 2006 year has been used for the present study. The spatial distribution pattern of actual evapotranspiration (AE) is shown in the **Fig. 5**. It has distinct to that of PE distribution. But in this case, highest values are observed in the eastern side area and decreasing from east to middle portion of the study area.



Source: Remote Sensing and Hydrological Modeling of the Upper Bhima Catchment (2006) **Fig. 5**

The highest value of 1500 mm is at the village Ganjewalan, Ajoti and Kandalgaon; where the area experiences very heavy rainfall comparatively rest of the study area and in the area of Ujani dam. An increasing trend towards east has been observed in actual evapotranspiration, this is seen in the case of

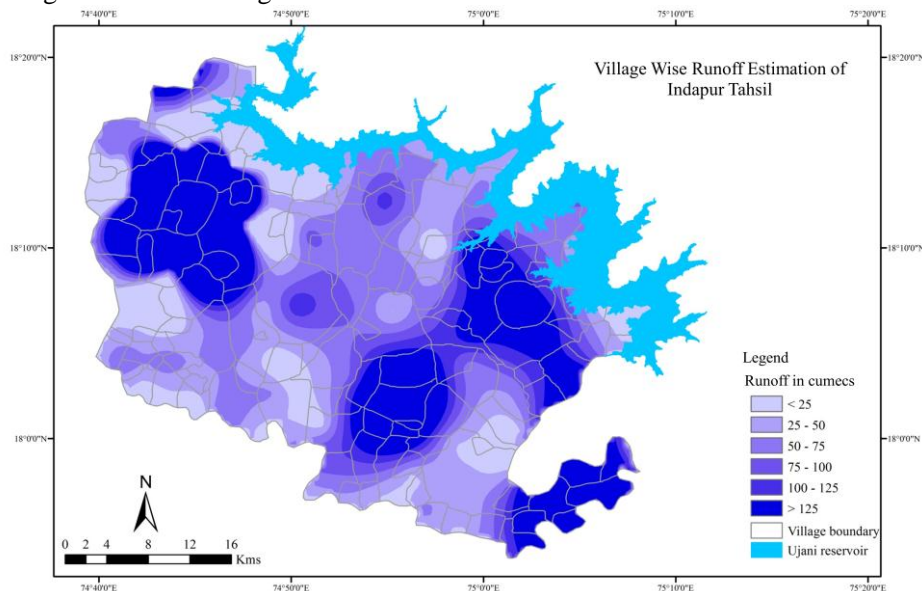
annual potential evapotranspiration. This is because of the dependence of actual evapotranspiration on rainfall. The lowest values of actual evapotranspiration are over the places Nirgude, Mhasobachiwadi, Lakdi, Vyahali, Kauthali, Karewadi, Nimgaon-ketki, Tarangwadi, Zagadewadi, Gokhali, Vadapuri and Galandwadi No.2, which is already discussed, is the lowest rainfall part of the study area. In this area actual evapotranspiration has been observed between 56 mm to 113mm.

3. Infiltration capacity of the soil

The study area is in the rain shadow and semi-arid climatic condition. In this climatic condition the direct infiltration is relatively ineffective because of the rarity of rainfalls, low mean average precipitation and high potential evaporation. Furthermore, the high potential evaporation compared to precipitation in semi-arid environment results the low deep infiltration of rainwater. The entire tahsil is the basement of Deccan trap basaltic lava. Typically these rocks form the 'Hard rock terrain' and their physical properties such as porosity and permeability play an important role in the movement and accumulation of groundwater. Therefore, in the study area, ground water of acceptable quality and quantity usually lies very low. There are more than 95% area of the study area shows very low ground water recharge, along the Ujani back water and near the confluence of river Bhima and Nira low recharge the ground water. There are only 74.67 km² (4.74%) area recommended for groundwater development in the study area. These are found in the patches in SW and NE part of the study area. Another 1500.71 km² (95.26%) area is notable for groundwater development.

Village wise computation of runoff volume

The average surface water village wise runoff of the study area is estimated to 327.72 MCM/year (Fig. 6), this is about 31.14% of the total volume of rainfall for the entire study area. There is great deal of variations in terms of volume of runoff by different villages. The maximum contribution of runoff in the Akole area that is amounting 79.889 MCM and lowest contribution can obviously be expected from Lamjewadi village that is amounting 0.007MCM.



Source: Author Fig.6

Classification of villages based on hydrological equation

It can be deduced from the figure no. 5.5 that, hydrological equation implied for water budget assessment clearly demonstrates that, the entire tahsil is drought prone and faces the problem of water scarcity throughout the year. In order to make the differences again to find out the villages facing very high shortage of water. By adopting the grid operation, reclassification has been achieved and two classes have been determined. One class below '0' indicates more severity covered 566.92 km² (35.99%) area (50 villages) and 0-1 shows less severity 1008.46 km² (64.01%) area covered (93 villages).

Conclusions

It has been one of the challenging studies for quantifying the climate change impact wherein the water balance simulation modelling approach has been used to maintain the dynamics of hydrology and thereby make assessments of vulnerability which are more authentic and reliable. The average annual volume of rainfall is 1052.46 MCM. The very low rainfall volume is observed to the northern side sub basin of the

tahsil (BM-61) accounts 16.43 MCM i.e. 1.56% and very high rainfall volume is observed to the eastern side sub basins of Indapur tahsil (BM-78) accounts 247.95 MCM which covers around 23.56% of the total study area. After the study of empirical formula, it is noticed that, around 49.08 % area (65 villages) facing very high water scarcity and rest of the villages (78 villages), 50.92% area comparatively show low degree of water scarcity. In an attempt to find out the present villages which are dependent on water supply through water tankers especially in summer months. This overall statistics generated from the raster analysis through the principles of map algebra, clearly indicates that entire tahsil is in water deficit zone, within which different levels of priority have been delineated. The average annual volume of rainfall is 1052.46 MCM. The very low rainfall volume is observed to the northern side sub basin of the tahsil (BM-61) accounts 16.43 MCM i.e. 1.56% and very high rainfall volume is observed to the eastern side sub basins of Indapur tahsil (BM-78) accounts 247.95 MCM which covers around 23.56% of the total study area. The 'High' ground water potential areas are those having ground water table less than 5 m bgl, admeasures about 394.79 km² (25.06%). The 'Medium' areas are those having water table in the range of 5 to 15 m bgl this groundwater potential zone covers 553.12 km² (35.11%) of the total study area and the 'Low' ground water potential areas are those having water table more than 15 m bgl and under these having maximum area i.e. 627.47 km² (39.83%) of the total study area. In the study area it is observed that, the maximum 402.25 km² (25.57 %) area under more than 125 cumecs runoff and 235.51 km² (14.95%) area under less than 25 cumecs. More than 125 cumecs area estimated for western high altitudinal area, eastern side strip between river Bhima and Nira and two patches are found at around Nimgaon Ketki and Indapur settlement. Low runoff (< 25) has estimated for Northern area, besides this it found around in patches in the middle and Eastern part. Besides this 25-50, 50-75, 75-100 and 100-125 cumecs runoff found in patches all over. The average surface water runoff of the catchment is estimated to 327.72 MCM/year.

References:

1. Arora K. R. (2007): *Irrigation, Water Power And Water Resources Engineering, Standard Publishers Distributers, Delhi.*
2. Balek J. (1983): *Hydrology and Water Resources in Tropical Regions, ELSEVIER, Amsterdam, the Netherlands.*
3. Bansil P.G. (2004): *'Water Management in India', Concept pub. Compony, New Delhi. Pp 154-155, 158, 160.*
4. Biswas A. K. (1998): *Water Resources: Environmental Planning, Management and Development, Tata McGraw-Hill Publishing Company Limited, New Delhi, India.*
5. Central Water Commission (2005): *General Guidelines for Water Audit and Water Conservation, Ministry of Water Resources, Government of India.*
6. Chander S. and Prasad R. (2008): *Water Resources System IInd Edition, Jain Brothers Publication New Delhi.*
7. Chitale M. A., "Maharashtra Jal Va Sinchan Aayog Ahawal", Maharashtra State (1999).
8. *Dynamic Ground Water Resources of Maharashtra (2011-12), Prepared By Groundwater Surveys and Development Agency, Pune, Water Supply and Sanitation Dept., GoM and Central Ground Water Board, Central Region, Nagpur, Gol*
9. Gujar R. K. and Jat B. C. (2008): *Geography of Water Resources, Rawat Publications Jaipur.*
10. Kaustubh Mahamuni, Siddharth Patil and Himanshu Kulkurni (2009): *Rapid Hydrological Study of Nirgude and Neighbouring Villages, Indapur Taluka, Pune District, Maharashtra, Unpublished project material, Advanced Center For Water Resources Development And Management, Pune.*
11. Milan K. Jermar (1987): *Water Resources and Water Management, Elsevier Science Publishers B.V., Amsterdam, the Netherlands.*
12. Raghunath H. M. (1997): *Hydrology: Principles, Analysis And Design. New Age International (P) Limited Publishers, New Delhi, India.*
13. Sharma J. R. (2014).; *Krishna Basin, Central Water Commission, Ministry of Water Resources, Government of India, New Delhi (2014).*
14. *Shwetpatrica Volume 2 (2012): Irrigation Development and Feature Progress in State, Ministry of Irrigation, Mumbai, Maharashtra.*
15. Subhan Khan and Rohan Ali.S, (2002): *Water resource Assessment and management using GIS and Remote sensing in parts of Haryana and Rajasthan", Geospatial Today (May-June 2002), (P. 53-54).*
16. Suresh R. (2008): *Watershed Hydrology, Standard Publishers Distributers, Delhi.*

“The Role of Farm ponds in Agricultural Development; A Case study of Wadule village in Parner tehsil of Ahmednagar District (M.S.)”

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Abstract:

The present study attempts to analyse the Agricultural development through Farm ponds in Wadule village. The development of Agriculture has been measured with the help of variable parametric approach. The total geographical area (TGA) of the village is 619.09 hect. As per 2011 Census, the total population of the village was 570 persons. For the irrigation purpose, the village has 71 wells and bore-wells along with 40 number of constructed farm-ponds. The number of farm-ponds are 41 per 100 hect of NSA. The 12 variables showed positive increment after construction of Farm pond. Based on amount of increment in respective variable. The sample farmers have 62.35% before while 86.36% irrigated area after farm-pond. The average annual income of farm-pond holding farmers of Wadule village was 1,35,000 rupees before and 2,90,500 rupees after the construction of farm-pond. The village has hilly terrain topography and gentle slope therefore area available for cultivation is low. The depth of black cotton and red soil is less. There is presence of Gravel and sandy soil type which holds water in very lower extent. This type of study can be useful for holistic growth of Agriculture at village level.

Key Words: IPCC, Multi-faceted, Agricultural Development, Farm ponds, Cash crops etc.

1. Introduction:

The issues of Indian agriculture cannot be overlooked as more than 62% population is directly dependent on it (Balasubramaniam, 2019). Therefore, it is essential to understand the issues associated with farming activities and to provide specific suggestions. Both of these aspects have been studied by several geographers like Saptarshi (1993), Bhagat (2002), More (2008), etc. The severity of droughts has its long term impact as it does not allow capital formation and hence farmers become vulnerable community, financially as well as socio-politically. What is the way out? It is possible to hold the Runoff water through **Farm pond by stopping it, storing it and using it for safe irrigation** when needed. which can be used conjunctively in the event of failure or late arrival of monsoon? “Farm pond is an artificially dug out structure with definite shape and size for collecting and storing surface runoff water for secure irrigation whenever needed” (Jalsandharan and Krushi Vibhag Feb. 2003). Agricultural development in any region is a multi-faceted process. Irrigation plays a vital role in Agriculture

The present paper basic has aim to understand the agricultural development through farm ponds and its effect on socio-economic development of the farm pond holding farmers. has been undertaken.

2. Study Area:

Wadule village is located in Parner tehsil of Ahmednagar district, Maharashtra. (Figure 1)

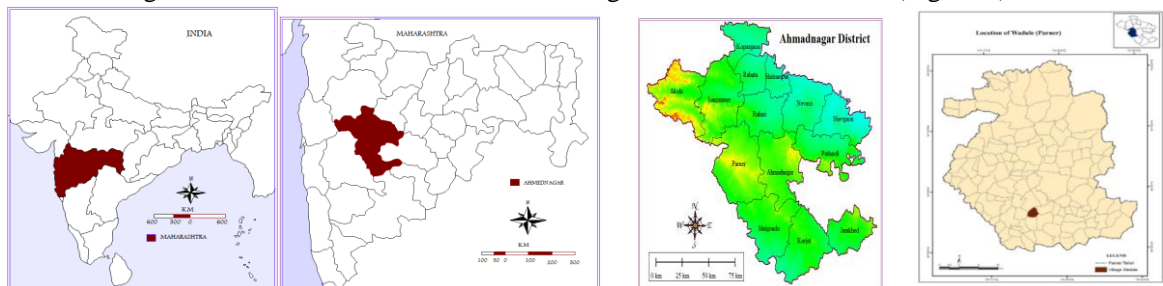


Figure No 1: Location map of Study area

The village lies at crossing of $18^{\circ}56'11''$ N latitude and $74^{\circ}23'22''$ E longitudes. The Parner-Pune state highway (MH-50) is passes from about 5 Km east from the village. The average annual rainfall in the village is 450 mm and average annual temperature is 32.3°C . The total population of Wadule village was 570 as per the 2011 census comprising 304 (53.33%) males and 266 (46.67%) females.

3 Rational of the study: Ahmednagar district is known as the drought prone region in Maharashtra (FFC 1973). Most importantly, rainfall is less than half of the potential evaporation that has resulted in crop failure once in three years according to the data provided by the IMD. There are various schemes to secure agriculture and to reduce the frequency of crop failure in such regions. A farm pond is considered quite useful for conjunctive use of stored water in the event of long dry spell. This type of study is important for agricultural planning to achieve a holistic growth at village level.

4. Objectives:

1. To study the Geographical setup of Wadule village.
2. To carry out impact analysis of farm ponds on agricultural development using variable Parametric approach.

5. Hypothesis:

It is assumed that, "Wadule village having agriculture mostly rainfed is located in the drought prone zone. In this situation the farm ponds can be useful for improving agricultural development and water conservation as well. Thus, the construction of farm pond may be instrumental in agricultural development on sustainable basis."

6. Database & Methodology:

The data is collected through primary and secondary sources. Village survey is carried out & information is collected using structured questionnaires. For selection of farmers in the selected village **convenient sampling method** has been applied. In the village, out of the total farm pond holder farmers, at least 50% (20 farmers) farmers have been selected for data collection. Agricultural and Infrastructural related 12 parameters of Agricultural development have been computed for two situations, i.e. before and after Farm pond construction and change between them is found out. The collected data from field and offices have been compiled, processed and summarized with the help of suitable statistical techniques. Change in Parameter values have been computed and analysed. Identified problems and Planning strategies for Agricultural development were suggested.

Results and Discussion:

Profile of Wadule village:

Area and Land use:

The pie diagram (Figure 2) represent the area and land use of Wadule village. The total geographical area (TGA) of the Wadule village is 619.09 hect. There is no forest cover observed in the village. The area not available for cultivation is 55.6 hect (8.98%). The cultivable waste land is 18.1 hect and about 2.92% of TGA can be brought under cultivation. The remaining 545.39 hect (88.10%) area constitutes of net sown area (NSA)

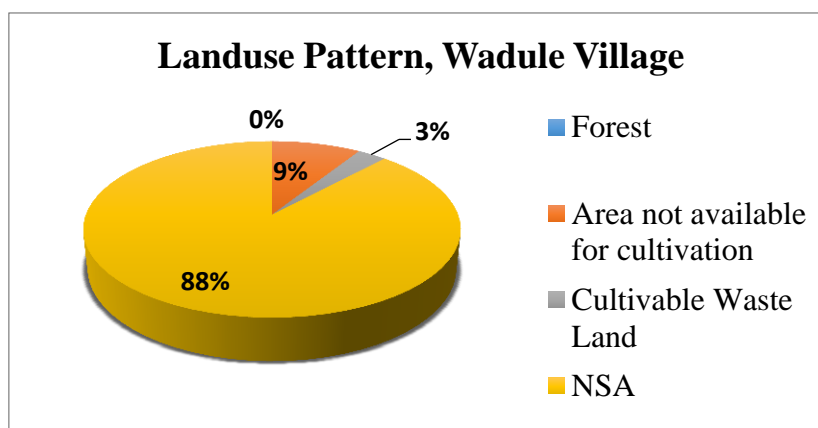


Figure No. 2: Landuse Pattern of Wadule village

Available amenities for agriculture:

It is important to study the facilities and amenities available to understand the problems and prospects of agricultural development in the village. Various available amenities in Wadule village are represented in table (Table 1)

Table No. 1: Available Amenities

Available Amenities	Agricultural Markets	Banks and Society	Milk Dairy	Well and Bore well	Tractors	Farm ponds
Number	3	2+1	3	71	22	40

(Source: Based on Talathi office record 2017-18)

Farm-pond holding farmers' agricultural development:

The second part of the case study is related to farm-pond holding farmers' agricultural development in Wadule village.

Farm-pond:

To what extent farm-ponds are useful to generate protective irrigation area? Are there any uses of farm pond water for another purpose? So, data is collected through questionnaire and dialogue with the farmers. The quantitative data is thus obtained from the farmers and presented in the table (Table 2).

Table No. 2: Use of Farm-Pond Water Resource

Number of Sample Farm ponds	Water storage capacity (TCM)	Area under protective Irrigation in hectare	Number of Farmers using Farm-pond water for...		
			Crops	Drinking purpose	Fish culture
20	104.12	32.87	20	13	09

(Source: Computed by researcher based on field work)

Variables of agricultural development:

The twelve variables of agricultural development of farm-pond having farmers in the *Wadule* village are presented in table (Table 3).

Table No. 3: Variables of Agricultural Development

Sr. No.	Variables of agricultural development	Before FP	After FP	Change
1	% of NSA to TGA	68.25	81.45	+13.20
2	Cropping intensity	124.44	158.22	+33.78
3	Irrigation intensity	92.21	147.35	+55.14
4	Number of farm-ponds per 100 hect of NSA	N.A.	41	41
5	% of irrigated area by farm-ponds to NIA	N.A.	78.57	78.57
6	% of area under horticultural crops to NSA	9.46	68.41	+58.96
7	% of area under micro irrigation to NSA	18.36	60.10	+41.73
8	Use of fertilizers in ton per 100 hect of NSA	34.2	42.5	+8.30
9	Number of electric pumps per 100 hect of NSA	32	75	+43.00
10	Number of tractors per 100 hect of NSA	7	22	+15
11	Number of sprayers per 100 hect of NSA	20	56	+36
12	Average annual income per farmer in rupees	135000	290500	+155500

(Source: Computed by researcher based on field work)

X1. Percentage of NSA to TGA: This is an important variable to understand the agricultural development of study region. The NSA has increased by 13.20%.

X2. Cropping intensity: The cropping intensity refers to the use of agricultural land several times during a cropping year. The cropping intensity was 124.44% before while it increased to 158.22% after the farm-pond. The volume of change is 33.78%.

X3. Irrigation Intensity: The irrigation intensity was 92.21% before and 147.35% after the farm-pond construction. The irrigation intensity has increased by 55.14%.

X4. Density of Farm-ponds per 100 hect of NSA: This is a crucial parameter which indicates the level of agricultural development on ground level. The density of farm-ponds in *Wadule* is 41 farm-ponds per 100 hect of NSA which are constructed during study period.

X5. Percentage of Irrigated area by Farm-Pond to NIA: The % of irrigated area by farm-pond in the village is 78.57%.

X6. Percentage of area under Horticultural crops to NSA: Cash crops and fruit crops are majorly responsible for economic development of farmers. The % of area under horticultural crops to NSA was only 9.46% before farm-pond which increased to 68.41% after the construction of farm-pond. It means that the area under horticultural crops has increased.

X7. Percentage of area under Micro Irrigation to NSA: The micro irrigation method is found suitable for effective utilization of water and to increase the productivity. The volume of change is 41.73%.

X8. Use of Fertilizers in Ton per 100 hect of NSA: The use of fertilizers plays a vital role in crop productivity by replenishing fertility of the soil. The amount of fertilizers used in ton per 100 hect of NSA was 34.20 before and 42.50 ton after the farm-pond construction.

X9. Number of Electric Pumps per 100 hect of NSA: The farm-pond having farmers had 32 pumps before and 75 pumps after the construction of farm-pond per 100 hect of NSA.

X10. Number of tractors per 100 hect of NSA: Tractors help to increase cropping intensity by enabling the farmers to save time and utilising that time to grow an extra crop. The number of tractors per 100 hect of NSA was 7 before and 22 after the farm-pond.

X11. Number of sprayers per 100 hect of NSA: The number of sprayers per 100 hect of NSA in the village is 20 before while 56 after the farm-pond construction.

X12. Average annual income: The average annual income of farm-pond holding farmers of *Wadule* village is 1,35,000 rupees before and 2,90,500 rupees after the construction of farm-pond. The major reason behind increase in avg. annual income is increased cropped area in fruit and cash crops. The onion crop is also a major crop which is taken in this village.

Conclusion:

It is concluded that, ***“Wadule village having agriculture mostly rainfed is located in the drought prone zone suffering from inadequate and ill distributed rainfall. In this situation, the farm ponds are found to be useful for improving agricultural development and water conservation as well. Thus, construction of farm pond is instrumental in agricultural development on sustainable basis.”*** The farm-pond is water bank of farmers.

Recommendations: It is observed that the farm-pond is useful for secure and sustainable irrigation. Therefore, it is suggested to develop more farm-ponds in Ahmednagar district as well as in drought prone areas. This type of investigation can be useful to government for preparation of various action plans in drought prone districts. The present study can be useful to provide required remedies to overall development of remote rural agriculture.

References:

1. Balasubramanian A. (2019): *Swayam online course of Agricultural Geography, week-I, Outline script of Agricultural Geography.*
2. Bhagat V.S. (2002): *“Agro-based model for sustainable development in the Purandhar Tahsil of the Pune district, Maharashtra”.* Unpublished Ph. D thesis submitted to University of Pune.
3. Department of Agriculture: *Parner tehsil*
4. FFC (Fact Finding Committee) (1973): *“Report of the Fact Finding Committee for survey of Scarcity areas, Maharashtra state, chapter VII, Pp: 124 to 144*
5. Government of India (2011): *District Census Hand Book, Ahmednagar.*
6. Government of Maharashtra (2016): *District Social and Economic Review-Ahmednagar.*
7. IPCC (2007): *“Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation”.*
8. Government Offices of Talathi, Gramsewak & Krushi Sahayyak
9. Saptarshi P.G. (1993): *“Resource appraisal and planning strategy for the Drought prone area – A case study of Karjat tehsil Dist. Ahmednagar, Maharashtra”* Unpublished Ph.D. thesis submitted to University of Pune, Pp: 304 to 377.

A Profound Review On Employee Welfare In Private Banking Sector With Spotlight On South India's Manchester City

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Abstract

Employees are the vital part of any institution in the growth and survivals of any organization so the welfare of employee is a significant criterion that cannot be ignored. Employees' play a key role in the reality and progress of any organisation, therefore their welfare is essential. Employees' welfare facilities include housing facilities, medical facilities, retirement benefits, educational benefits, welfare measures for the employee's families, loan facilities, etc. Employee welfare is also essential because if the organization only expecting high performance then its ordinary waste because it also provide motivational opening to the employees.

Keywords: *Welfare, Ease of Use, Perceived Usefulness, Trust, Usage, Benefits.*

Introduction

The private sector banks in India are banks where the majority of the shares or equity is not held by the government but by private shareholders. Employee welfare is an imperative factor to help banks to sustain competitive advantages. Employees are one of the company's greatest assets. As a business to maintain those valuable assets of the organization, it is necessary to provide various benefits to ensure employees welfare. While this may increase business expense and negatively affect bottom line of business, looking beyond that, employees will benefit the organization in other ways. Therefore, the purpose of this research is to search and examine the employee welfare provided by private banking sector.

Need of the Study

It recognizes the fact that both employers and workers are responsible for employee's welfare. The accountability of an assessment or evaluation of existing welfare services on a periodical basis. It helps to judge and analyze the success of employee's welfare programs. To identify the employees problem and to discover what kind of help is necessary to solve it and when to provide this help are all very necessary in planning employee's welfare programs.

Scope of the Study

Welfare policy should be guided by idealistic morale and human value. There are employers who consider all employee welfare activities as distasteful legal liability. The study covers the welfare measures and employee satisfaction with the well-being. Based on the valuable suggestions it will increase employee morale, prosperity and well-being of the organization. Which it turn it helps to be aware of the wellbeing level of private bank employees.

Objectives of the Study

1. To study on employee welfare in private banking sector with special reference to Coimbatore district
2. To study the concept of statutory and non-statutory welfare schemes prevailing.
3. To study the welfare measures adopted by the private banks
4. To study effective factors in the employees satisfaction
5. To know about the employee attitude and satisfaction level towards the welfare measures.

Research Methodology

Haphazard execution of the study will end up itself in chaotic result, so to evade such happenings, the scholar is also required to plan well before he can start his work. The researcher is required to prepare a system operating procedure of action which is known as research design.

It ensures that

- (1) the study will be germane to the problem and
- (2) the study will employ economical procedures

Descriptive research design

The descriptive research is secondhand for this study. The main objective of consuming descriptive research is to pronounce the state of affairs as it exists at present. It mainly involves surveys and fact verdict enquiries of different classes.

Statistical Tools and Techniques

The collected data were edited and then consolidated by using simple statistical tools. The simple statistical tools are employed for the analyses of data are,

- Percentage analysis
- Chi-square test

Data Analysis and Interpretation

The collected data has been analyzed through simple percentage analysis and Chi Square Test. The inferences given below in the table make the reader to understand the problem as well as solution to the problem.

Percentage Analysis Method

Table showing gender of respondents

Particulars	Frequency	Percentage %
Female	40	40
Male	60	60
Total	100	100

Inference

The above table implies that 60 percent of gender respondents are male and 40 percent gender respondents are female

Chart showing gender of respondents

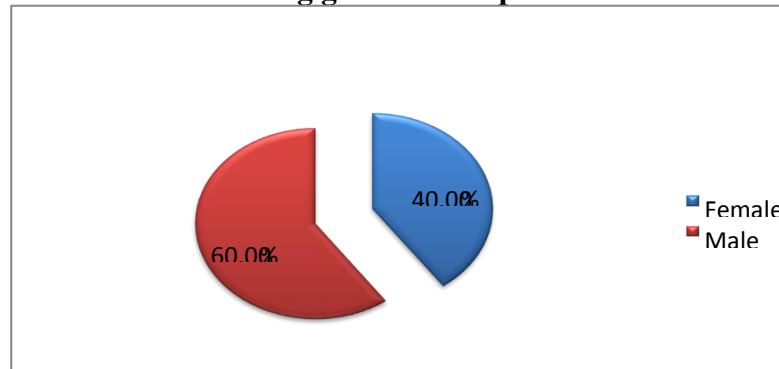


Table showing Level of satisfaction with the co-workers

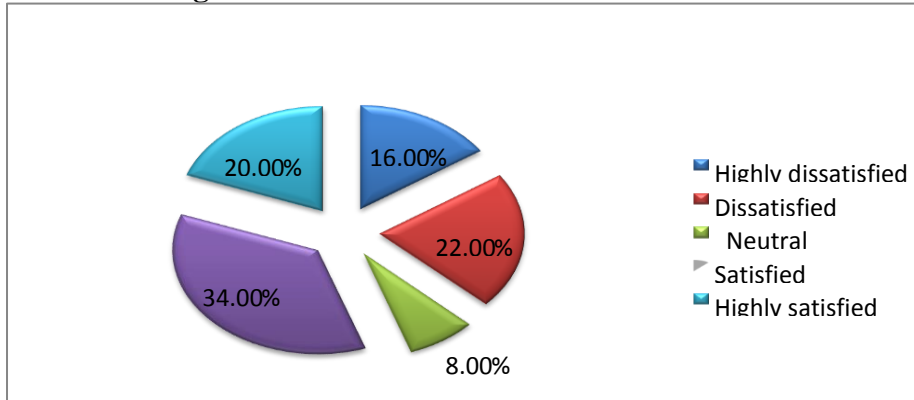
Particulars	Frequency	Percentage %
Highly dissatisfied	16	16
Dissatisfied	22	22
Neutral	8	8
Satisfied	34	34

Highly satisfied	20	20
Total	100	100

Inference

The above table indicates that 16% are highly dissatisfied on co-workers and 22% are dissatisfied and 8% are neutral and 34% are satisfied and 20% are highly satisfied.

Chart showing Level of satisfaction with the co-workers.



Chi-Square Test

Null hypothesis (H₀): There is no significant relationship between age and working environment

Alternate hypothesis (H₁): There is a significant relationship between age and working environment

Age * Working environment Cross tabulation Count

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.295	8	0.186
Likelihood Ratio	11.824	8	0.159
Linear-by-Linear Association	3.428	1	0.064
N of Valid Cases	100		

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.118 ^a	9	.207
Likelihood Ratio	11.937	9	.217
Linear-by-Linear Association	2.105	1	.147
N of Valid Cases	100		

a. 7 cells (43.8%) have expected count less than 5.

Interpretation

The above table shows the value 0.207 exceed the value 0.05 therefore null hypothesis is accepted there is no relation between two significant variable

Conclusion

The employees of the private bank enjoys not only with their job satisfaction but also with various other benefits, welfare activities, payments and promotions in their working condition. Although the organization provides more health and safety measures to the employees it should be even more effective that will help to makes better performance in the working environment. So that the employees extent their maximum support for the improvement of the company. Hence to sustain in such a competitive market it's very important to retain good employees that contribute towards the attainment of organizational goals and customer satisfaction as well.

References

1. Anubhutimonga, narinderverma, o.p.monga, (2015): *A study of job satisfaction of employees of ICICI bank*
2. K.M.Anwarul (2013) : “*job satisfaction and bankers turnover a case on Bangladesh commerce bank limited*”
3. Khushbudoshi made the research (2014) about “*the comparative study on quality of work life balance and its impact on job satisfaction on the private bank employees*”:
4. Robert Ferber and P.J. Veredoorn, *Research methods in Economics and Business*, p. 33-34.
5. Josee Bloemer, Tom Brijs, Gilbert Swinnen and Koen Vanhoof , *Identifying latently dissatisfied customers and measures for dissatisfaction management, international Journal of bank marketing*, Feb, 2002, p. 27-37.
6. Bakeson, J.E.G., (1995), *Managing Service Marketing: Text and Readings*, The Dryden Press, New York.
7. <https://rspublication.com/ijrm/2014/may14/9.pdf>
8. https://shodhganga.inflibnet.ac.in/bitstream/10603/160787/12/12_chapter%203.pdf
9. <http://www.jethr.com/magazine/human-resource-management/employee-welfare-what-isemployee-welfare/article.html>.

Studies on biodiversity of airborne fungal spores in the Onion field at Nashik

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Abstract:

In this investigation 59 spores were trapped to air over onion field throughout the season. Deuteromycotina was dominated the air spora. The total airspora was peak in February. The spores *Alternaria*, *Cladosporium*, *Helminthosporium Smuts*, *Nigrospora*, *Hyphal fragments* and *Pollan grains* were trapped and their concentration increased in February and decreases later. Day on which highest counts of individual spores types were obtained.

Keyword: Airspora, Tilak air sampler, onion field.

Introduction

The need for intensive aerobiological studies has been emphasized by both clinicians and botanists during recent years. Knowledge of diurnal and seasonal fluctuations in the concentration of atmospheric pollen and fungal spores is of paramount value in the diagnosis and therapeutic treatment of human allergic and plant diseases. In an attempt to understand how the atmospheric content of fungal spores vary with weather, Aerobiological studies has been conducted with respect to seasonal variation.

Researches on aerobiology are now gaining momentum in India with the advancement of the knowledge on the air borne agents like spores, pollen grains, fragments of different plants etc., which responsible as the causal agents of certain types of human allergic and plant diseases. Thus, works on aerobiology have been initiated at few centres like Delhi, Mysore, Waltair, Jaipur, Calcutta, Aurangabad, Lucknow, Nagpur, Bangalore and Gauhati. However, no such studies have so far been conducted in Nashik. Keeping the importance of such studies in view, the present study has been conducted. Few workers are also engaged in this field in recent year, A.H. Rajasab *et.al.* (1994), N.V.Hoa *et.al.* (2003), K.Raju *et.al.* (2006), M.K. Naik *et.al.*(2008) N.Laxsgmi (2008), Juri Devi *et al.*(2010), Saadabi Abdulmoneim (2011), Reddy M.K *et.al.* (2011), Pande B.N. *et.al.* (2012) and Patel S.I (2013).

Methodology

In the present study, Tilak Air sampler was implemented to find out the availability of fungal spores in onion field of 4 acres of land area. Tilak air sampler (Tilak, 1989) is an electrically operated machine which runs on electric power supply of (AC 230 V) and provides a continuous air sampling data for eight days. Sampler was kept with its orifice at constant height of 1 meter above the ground in the groundnut field. The air was sampled at the rate of 5 liters for minute and the transparent cellophane tape was fixed on the drum, coated uniformly with white petroleum jelly as adhesive. These cellophane brought to the laboratory, slides were made and scanned. Fungal spores isolation was made from these slides over onion fields.

Results and discussion:

During the period of air sampling, 54 fungal spore types and 5 other types were recorded in the form of airborne biocomponents in air over the onion crop fields during the period of investigation i.e. First season-15th June 2012 to 03rd November 2012 Second season-4th December 2012 to 14th April 2013 Percentage contribution of different spore types to the total airspora was calculated and is given in Table. *Aspergillus*, *Alternaria*, *Cladosporium* and *Fusarium* made a major components of airspora. *Aspergillus* contributing 19.00% and 20.15% spore concentration for first and second season respectively. *Alternaria* contributing 12.00% and 4.02% spore concentration for first and second season respectively. *Cladosporium* contributing 13.49% and 15.43% spore concentration for first and second season respectively. *Fusarium* contributing 9.56% and 9.49% spore concentration for first and second season respectively Deuteromycotina recorded maximum percentage contribution to the total airspora (81.13% and 80.47%) and was followed by the group Ascomycotina (6.31% and 6.44%), Basidiomycotina (4.80% and 3.65%), and Phycomycotina (1.09% and 2.63%). The percentage contribution of different groups in relation to the season was also calculated. Total airspora was found to increase in gradually and reached maximum concentration in the month of October for first season, while in the month of January of second season. The percentage of concentration of Deuteromycotina was throughout the season and there was slight changes in the concentration of spores. Deuteromycotina appeared to dominant air over onion field. The concentration of spore types in relation to the season noticed that the *Aaspergillous* spore was present in the air throughout the season. This appears from the early stage of the crop.

During the present investigation the group Ascomycotina contributed 6.31% and 6.44%, to the total air spora for first and second season respectively. Ascomycotina was represented 13 spore types were recorded. *Sordaria* a potential allergent was recorded throughout the period of investigation. Its total contribution to the total airspora was 1.34% and 0.90% for first and second season respectively. The present studies showed the occurrence of spores belonging to Basidiomycotina were common in the air. Basidiomycotina as a whole group contributed 4.80% and 3.65% to the total air spora for first and second season respectively. The heterogenous group comprises of hyphal fragments, insect scales, pollen grains, protozoan cyst and unidentified spores was contributed 6.66% and 5.66% to the total airspora for first and second season respectively. Thus the present investigation has highlighted the Biodiversity of the airborne bioparticles present in the air of the Onion field. It also shows that the fungal spores are the major component. The Onion field environment had higher population of *Aspergillus*, *Cladosporium*, *Cercospora*, *Fusarium*, *Alternaria*, *Curvularia*, *Helminthosporium*, *Chaetomium*, *Nigrospora* and etc. are some aeroallergic fungal spores recorded in significant concentration in present study. This fungal spore indicates possible source of contamination and possible role in the damage of Onion crop. This fungal spores have also been recorded by earlier worker as pathogenic and aeroallergic.

**TABLES, Table 1-Percentage Contribution of Different spore types to the total airspora at onion field, First season-15th June 2012 to 03rd November 2012
Second season-4th December 2012 to 14th April 2013**

SR.NO	SPORE TYPE	Percentage Contribution per M ³ of air	
		Season I	Season II
	PHYCOMYCOTINA		
1	<i>Albugo Pers.Ex.SF.Gray</i>	0.16	0.92
2	<i>Cunninghamella Matr.</i>	0.67	1.29
3	<i>Rhizopus Enrenberg.</i>	0.27	0.45
	ASCOMYCOTINA		
4	<i>Bombardia Fr.</i>	0.28	0.33
5	<i>Chaetomium Kunz. Ex. Fr.</i>	1.12	-
6	<i>Cucurbitaria Gray.ex Grev.</i>	0.48	0.38
7	<i>Didymosphaeria Fuck.</i>	0.70	0.41
8	<i>Hypoxyton Bull.Ex.Fr.</i>	0.27	0.52
9	<i>Hysterium.Tode Ex .Fr.</i>	0.27	0.29
10	<i>Leptosphaeria ces&de</i>	0.19	-
11	<i>Lophiostoma Ces de Not.</i>	0.41	0.52
12	<i>Melanospora Corda.</i>	0.09	0.86
13	<i>Parodiella.(Speg) Theiss &</i>	0.22	0.47
14	<i>Pleospora. Rabh.</i>	0.32	1.21
15	<i>Sordaria.Ces & de. Not</i>	1.34	0.90
16	<i>Sporormia Ces & de. Not</i>	0.43	0.21
17	<i>Tiechospora. Fuck.</i>	0.19	0.42
	BASIDIOMYCOTINA		
18	Basidiospores	1.38	0.76
19	<i>GanodermaKaitz.</i>	0.21	0.20
20	Smut Spores.	1.42	1.57
21	Uredospores.	1.79	1.16
	DEUTEROMYCOTINA.		
22	<i>Alternaria Nees.</i>	12.10	4.02
23	<i>Aspergillus Michel.ex.Link.</i>	19.00	20.13
24	<i>Beltrania Penzing</i>	0.33	0.22
25	<i>Biospora Corda</i>	0.26	0.51
26	<i>Botridiplodia Sacc.</i>	1.29	0.81

27	<i>Botritis Pers.</i>	0.89	0.89
28	<i>Cercospora Fr.</i>	8.27	5.24
29	<i>Cladosporium Link.</i>	13.49	15.43
30	<i>Colletotrichum Corda.</i>	2.44	1.82
31	<i>Corynespora Guessow.</i>	0.09	0.17
32	<i>Curvularia. Boed.</i>	1.88	1.73
33	<i>Dactyella Grove.</i>	0.21	1.33
34	<i>Diplodia Fr.</i>	0.17	0.56
35	<i>Drechslera Lto.</i>	0.53	0.99
36	<i>Epicoccum Link.</i>	0.96	0.58
37	<i>Fusariella Sacc.</i>	0.60	0.29
38	<i>Fusarium Link..</i>	9.56	9.49
39	<i>Haplosporella Speg.</i>	0.40	0.89
40	<i>Helminthosporium Link.</i>	2.05	7.82
41	<i>Heterosporium Koltz. Sch.</i>	0.36	1.73
42	<i>Lacellinia Sacc.</i>	0.11	-
43	<i>Mammoniella Hohn.</i>	0.22	0.26
44	<i>Myrthecium Tode.Ex.Fr.</i>	0.14	0.16
45	<i>Nigrospora Zimm.</i>	0.97	1.43
46	<i>Periconia Tode .Ex.Schw.</i>	1.65	1.01
47	<i>Phoma Desm.</i>	0.05	-
48	<i>Pithomyces Berk.</i>	0.11	0.05
49	<i>Pseudotorula Subram.</i>	0.56	0.00
50	<i>Pyricularia Sacc.</i>	0.59	0.12
51	<i>Spagazzinia Sacc.</i>	0.22	0.42
52	<i>Stemphyllum Wallr.</i>	1.14	3.02
53	<i>Tetraploa Berk. & B</i>	0.09	-
54	<i>Torula (Pers) Link.</i>	0.42	0.28
	OTHER TYPES		
55	Hyphal fragment	1.73	1.06
56	Insect scales	0.66	0.81
57	Pollengrain	1.44	1.23
58	Protozoan cyst.	1.07	0.99
59	Unidentified spores.	1.76	1.63
	GRAND TOTAL	100.00	100.00

Table 2: Total contribution in percentage of each spore group at Onion field

Name of the Spore	Total %contribution. Season-I	Total %contribution Season II
I] PHYCOMYCOTINA	1.09	2.63
II] ASCOMYCOTINA	6.31	6.44
III] BASIDIOMYCOTINA	4.80	3.65
IV] DEUTEROMYCOTINA	81.13	80.47
V] OTHER TYPES	6.66	5.66
Total	100	100

Reference

1. A.H. Rajasab and H.T. Chawada(1994) Dispersal of the conidia of *Colletotrichum gloeosporides* by rain and the development of the anthracnose on Onion, *Grana*, 33, pp162-165,
2. Juri Devi et al.(2010) Aeromycological study of store houses of Onion and Ginger in Guwahati, *The Bioscan Vol-2*, pp547-552
3. K.Raju and M.K.Naik (2006) Effect of pre-harvest spray of fungicides and botanicals on storage diseases of Onion, *Indian Phytopath.* 59(2), pp133-141.
4. M.K. Naik et.al(2008) Evaluation of different storage structures and monitoring of storage molds in Onion genotypes for managing post harvest diseases, *Indian Phytopath.* 61(3), pp 311-316.
5. N.Laxsgmi (2008) Cytotoxic effect of *Aspergillus Niger* causing Black mould disease on Onion, *J. Indian bot.Soc.* Vol-87(3-4), pp209-212.
6. N.V.Hoa, Y.S. Ahlawat and R.P. Pant(2003) Partial characterization of Onion yellow dwarf virus from Onion in India, *Indian Phytopath.* 56(3), pp 276-282.
7. Pande B.N., Derle P.K. and Arsule C.S. (2012) Atmospheric fungal diversity over the Onion field at Aurangabad (M.S.), *Bionano frontier, Eco revolution 2012-Colombo-Srilanka*, pp 145-150.
8. Patel S.I (2013) Aeromycological approach of some Onion Diseases, *ISST Publication*, Thane.
9. Patel S.I.(2008) Effect of rainfall on dissemination of air-borne cladosporium link spores over tomato fields at Nashik, India., *Giobios Vol-35*, pp.233-236.
10. Saadabi Abdulmoneim M.(2011) Prevalence and assessment of air-borne fungi at vegetable central market of khartoum state, Sudan, *Journal of Applier science Reaserch*, 7(5): pp.550-553.
11. Reddy M.K., Srinivas T. and Lakshmi K.A. (2011) A Study of aeroallergens in area of Visakhapatnam, *International Jaour. Of Environmental Biology*, 1(1), pp. 1-7.
12. Tilak, S.T. AND Srinivasulu, B.V. (1967) Airspora of Aurangabad. *Ind. J. Microbiol*, 7: 168- 170.
13. Tilak S.T. (1989) Air Borne Pollen and Fungal spores Vijayant Prakashan, Aurangabad.

Impact of Covid 19 on Economy

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Abstract

The paper shows that how COVID 19 virus impacts economy. the COVID-19 viral pandemic has been individually experienced, but globally shared. It disrupted lives across all countries and communities and negatively affected global economic growth in 2020 beyond anything experienced in nearly a century. Estimates so far indicate the virus reduced global economic growth to an annualized rate of -4.5% to -6.0% in 2020, with a partial recovery of 2.5% to 5.2% projected for 2021. Global trade is estimated to have fallen by 5.3% in 2020, but is projected to grow by 8.0% in 2021. According to a consensus of forecasts, the economic downturn in 2020 was not as negative as initially estimated, due, at least in part, to the fiscal and monetary policies governments adopted in 2020. Major advanced economies, which comprise 60% of global economic activity, are projected to operate below their potential output level through at least 2024, which will negatively affect national and individual economic welfare. Compared with the synchronized nature of the global economic slowdown in the first half of 2020, the global economy showed signs of a two-track recovery that began in the third quarter of 2020 with developed economies experiencing a nascent recovery, but economic growth in developing economies lagging behind. A resurgence in infectious cases in Europe, Russia, the United States, Japan, Brazil, India, and various developing economies renewed calls for lockdowns and curfews and threatened to weaken or delay a potential sustained economic recovery into mid to late 2021.

Key words; Covid 19 impact on economy. globally covid 19 affect, negative impact of covid 19.

Introduction

The human costs in terms of lives lost will permanently affect global economic growth in addition to the cost of elevated levels of poverty, lives upended, careers derailed, and increased social unrest. Some estimates indicate that 95 million people may have entered into extreme poverty in 2020 with 80 million more undernourished compared to pre-pandemic levels. In addition, some estimates indicate that global trade could fall by an annual amount of 9.0% or slightly less in 2020 as a result of the global economic downturn, exacting an especially heavy economic toll on trade-dependent developing and emerging economies. While the full economic impact of the pandemic is coming more into focus in developed economies where vaccinations are facilitating a return to prepandemic levels of economic activity, the global impact remains less certain as new viral outbreaks have worsened the economic impact in some developing economies.

The infection has sickened over 174 million people globally with over 3.7 million fatalities. The United States reported that by mid-June 2021, over 33 million Americans had been diagnosed and nearly 600,000 had died from the virus. At one point, more than 80 countries had closed their borders to arrivals from countries with infections, ordered businesses to close, instructed their populations to self-quarantine, and closed schools to an estimated 1.5 billion children.

Objectives

Through the various stages of the pandemic-related health and economic crises, governments responded with a number of policy initiatives that often attempted to balance competing policy objectives. As the health crisis subsides and economic activity resumes, policymakers may consider evaluating the various policy approaches for lessons learned and for best practices to employ in addressing similar crises, should they arise. Such an evaluation could include Assessing the short and long-term costs and benefits of fiscal policies that were adopted during the crisis to address employment dislocations and support social safety nets, compared with the potential long-term impact of deficit spending on the rate of inflation and the long-term financial stability of the economy.

1. Evaluating the costs and benefits of economy-wide business and social lockdowns compared with the impact and effectiveness of targeted closures or other types of restrictions.
2. Reviewing the effectiveness of broad monetary and fiscal policies that were adopted to support credit markets and sustain economic activity broadly during the initial stages of the crisis, compared

- with policies targeted to assist specific sectors and businesses as they came under financial distress.
3. Assessing the effectiveness of transfer payments that were directed at supporting the most heavily affected households, the impact of such payments on household saving rates and consumption, the necessary conditions and timing for tapering off the support, and the impact on the long-term rate of growth between public versus private debt.
 4. Assessing the impact that central banks and monetary authorities had on financial markets and market liquidity by intervening in sovereign debt and corporate bond markets during the early stages of the health and economic crisis and the impact, if any, on the ability of the markets to perform their traditional functions of pricing risk and allocating capital.
 5. Assessing the optimal combination and impact of fiscal policies during a national or global economic crisis between assisting households, firms, or state and local governments.
 6. Evaluating the effectiveness of unemployment insurance systems that provide short-term unemployment insurance to sustain workers incomes, compared with European-style job retention programs that maintain pre-crisis employment, even as those jobs could disappear once the support ends.

Impact on Workers

In a report prepared for the January 25-29, 2021, World Economic Forum, the International Labor Organization (ILO) estimated that 93% of the world's workers were living under some form of workplace restrictions as a result of the global pandemic and that 8.8% of global working hours were lost in 2020 relative to the fourth quarter of 2019, an amount equivalent to 255 million full time jobs. The ILO estimated that the loss in working hours was comprised of (1) workers who were unemployed, but actively seeking employment, (2) workers who were employed, but had their working hours reduced, and (3) workers who were unemployed and not actively seeking employment. Based on this approach, the ILO estimated that unemployment globally was equivalent to 0.9% of total working hours lost in 2020, while inactivity and reduced hours accounted for 7.9% of total working hours lost. Total working hours lost in 2020 compared with 2019 were highest in Europe (14.6%) and the Americas (13.7%), where quarantines and lockdowns had been extensive, followed by lower middle income economies. The ILO also estimated that global job losses totaled 114 million jobs in 2020 relative to 2019. The share of lost worker hours due to higher rates of unemployment were highest in Europe (6.0%), the Americas (2.7%), including the United States, and Arab States (1.7%).³¹ The ILO also estimated that an increase in global economic activity through part of the fourth quarter was equal to an increase of 130 million full-time jobs.

Impact on Output

According to the April 2021 World Economic Outlook prepared by the International Monetary Fund (IMF), the global economy is projected to experience a stronger recovery in 2021 and 2022 than indicated in previous forecasts, with global growth projected to increase at a rate of 6% in 2021 and 4.4% in 2022. Within countries, the employment and earnings of youth, women, and the relatively lower-skilled workers has been affected the most. In addition to the asynchronous recovery, the IMF also concluded that fiscal and financial support provided by central banks may have unintended consequences by supporting equity valuations that are misaligned with their model-estimated fundamentals and by increasing financial risks overall that could become problematic should interest rates start rising.⁴⁸ These risks could increase for non-financial firms and households that had high levels of debt relative to income prior to the pandemic crisis should interest rates rise. Accommodative monetary and fiscal policies intended to limit the economic impact of the crisis may have aided non-financial firms and households, but such support may also have come at the expense of higher debt levels for most countries and the prospect of a lower rate of economic growth in the future. Although individually experienced, the pandemic-related economic effects have been globally shared as national efforts to reduce social interaction to contain the spread of the virus disrupted the daily lives of most Americans and added to the economic costs. Increased rates of unemployment raised the prospects of social unrest in developed economies where lost incomes and health insurance threaten living standards and in developing economies where populations reportedly are concerned over access to basic necessities and the prospects of rising levels of poverty.

The World Bank Forecast

In January 2021, the World Bank released its updated economic forecast, which indicated that global economic growth would reach 4.3% in 2020 and 4.0% in 2021, compared with June 2020 projections of -5.2% for 2020 and 4.2% in 2021, but rise by a slower rate of 3.8% in 2022. 131 The assessment also concluded that absent “substantial and effective reforms,” the global economy would experience a decade of “disappointing growth.” The Bank concluded that the forecast was tilted toward downside risks. In particular, the Bank assessed that all regions of the world remain vulnerable to renewed outbreaks of the virus, that there were logistical impediments to the distribution of effective vaccines, that there are financial stresses in addition to elevated debt levels and there is the possibility that the pandemic could have a more negative effect on incomes and growth.¹³² An earlier forecast published on June 8, 2020 indicated the economic recession in 2020 would be the deepest since World War II. It also estimated that the global economic recession would affect 90% of the world’s economies, a percentage that is greater than what was experienced during the Great Depression. ¹³³ Similar to the OECD and the IMF forecasts, the World Bank argued that the economic impact of the global recession would fall most heavily on developing and emerging economies that rely on global trade, tourism, or remittances from abroad, and those that depend on commodity exports. In addition, the World Bank forecasted that most emerging and developing economies could experience rates of growth in 2020 that could be the lowest overall since the 1960s, with 90% of such economies expected to experience contractions in per capita incomes and many millions of people falling back into poverty

Conclusion

The COVID-19 pandemic has led to a dramatic loss of human life worldwide and presents an unprecedented challenge to public health, food systems and the world of work. The economic and social disruption caused by the pandemic is devastating: tens of millions of people are at risk of falling into extreme poverty. The COVID-19 pandemic has led to a dramatic loss of human life worldwide and presents an unprecedented challenge to public health, food systems and the world of work. The economic and social disruption caused by the pandemic is devastating.

Millions of enterprises face an existential threat. Nearly half of the world’s 3.3 billion global workforce are at risk of losing their livelihoods. millions of agricultural workers –waged and self-employed – while feeding the world, regularly face high levels of working poverty, malnutrition and poor health.

As outbreaks of novel infections are not likely to disappear in the near future, proactive international actions are required not only to save lives but also to protect economic prosperity.

References

1. *Congressional Research Service*, , <https://timesofindia.indiatimes.com/readersblog/midweekread, Global Economic Effects of COVID-19 report>.

Covid-19 and Its Impact On Indian Economy

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Abstract:

COVID-19 Is a disease caused by a new strain of Coronavirus.CO stands for corona, VI for virus and D for disease. This rsearch focuses on impact of the outbreak of pandemic Covid-19 on Indian Economy. Covid-19 makes adverse impact on many sectors of Indian Economy. This paper depicts the impact of Covid-19 on different sectors of Indian Economy.This paper also furnishes the policy9 framework of government in this regard. This paper also gives a light on those sectors which see a boots due to outbreak of Covid-19.

Key Words: Covid-19 Indian Economy, Pandemic

Introduction:

The global economy is expected to shrink by 3% in 2020 - the steepest showdown since the Great Depression of the 1930s.-----IMF Report

Coronavirus was first reported in Wuhan, China in December 2019. Let us first consider what Coronavirus is??? COVID is a large group of viruses that creates illness. It is ranges from the common cold to more severe diseases like Severe Acute Respiratory Syndrone and Middle East Respiratory Syndrome. The new Coronavirus is a special kind of virus that has not been indentified in humans so far. The first coronavirus-19 diagnosis in human body. Hername isGoigium age 57 in wuhan province chaina.

I have been pondaring many questions in my mind like will COVID-19 change the way world works, will things go back to normal as before COVID-19, what will the fundamental changetake place in common public, business people, industrialists, and economies. The next few months will be very crucial. We have to alter the concept of normal in this pandemic.

In this research paper, I will explore and describe the impact of Covid-199 on the Indian economy. If past trends of similar infections are analyzed, it can be helpful to bring any con-clusion as to what we should do to move forward. How can we overcome this pandemic? Either through mass vaccination or social distancing. What type of life are we expecting in the time of Covid-19?

Objective of Research

1. To focus on the impact of a pandemic on different sectors of the economy.
2. The reflect the need for policy intervention Research Methodology

This of the research furnishes the research methodology used in this study. This study considers December 2019 to May 2020 as its study period. The review uses secondary data. The data is collected through various magazines, newspapers, and government websites for this study. This study focuses on descriptive research design. The sample design chooses for this study is illustrative.

Impact of Pandemic On Indian Economy

This pandemic created new issues for the Indian economy that leads to a severe disastrous impact on the demand and supply side. Impact of Demand Front: Hospitality, and Tourism are the worst sufferers sectors that arebearing the maximum brunt of the present pandemic Covid-19. Due to the lockdown effect, the closing of shopping malls and cinema theatres has severely affected the retail sector byreducing the consumption of essentials and entertainment purposes items. There is a decline in the level of income, particularly daily wage earners due to slow economic activities in many sectors like retails, constructions, transport, and entertainment, etc. that ultimately leads tofall in consumption front. There is a postponement of buying decisions by consumers due to widespread fear and panic. The transportation sector is severely affected due to the lockdown effect, which causes a restriction in travelling as all schools, colleges, universities, and pri- vate firms are opting for work from home culture approach. Hotels and restaurants are seenas significant sufferers as there is the cancellation of leisure trips, business trips, busines trips, conferences, seminars, workshops, internships, etc.

Impact on Financial Market: Financial market is seen extremely volatile that leads to colossal wealth erosion, huge crashes due to uncertain condition regarding future predic- tion and results of Covid-19. The wreck of the stock market is responsible for declining consumption levels March 12, 2020, was the black day as there were significant slides in domestic equity markets. Both BSE and NSE slipped more than 8% in a single day. There was 2919 points drop in the BSE Sensex, and 868 points fall in NSE Nifty. This is drop has regularly taken place till date as stock investors resorted to continuous selling amid increas- ing cases of Covid-19. Indian stock markets again jumped to a new low

level on March 19, 2020. BSE Sensex closed 581 points low at 28,288, and NSE Nifty closed 205 points lower at 8236. Volatility and wealth erosion of investors are expected in equity markets during Covid-19. Impact on Supply Front: If I focus on the supply front, delay in the supply chain goods from China due to the the shutdown of factories has adversely affected many Indian manufacturing sectors, which depend on China for their raw material and final products. The problem of a shortage of raw material is faced by some crucial areas like electronics, automobiles, chemical products, and pharmaceuticals, etc. Business sentiments, investment, and production schedules of firms get hampered due to the spread of Covid-19. Exports of India has affected adversely due to the slowdown manufacturing activity in China and other markets like Asia, the US, and Europe.

Impact of International Trade: China has been a game-changer for Indian markets dealing in many commodities like gems and jewelry, seafood, petrochemicals, etc. The outbreak of Covid-19 had made a negative impact on the exports of China. For example, the fishing sector is predicted to bear a loss of more than 1300 crores due to a reduction in exports. Even India exports 36 percent of its diamonds to China. Jaipur incurred significant losses of 8000-10000 crores due to the cancellation of our major trade events between February and April. India exports 34 percent of its petrochemicals to China. Because of export restrictions to China, petrochemical commodities are expected to furnish a reduction in prices. Due to Covid-19, the impact on India's trade is about US dollar 348 million as per the report of UNCTAD.

Let's have a definite look of Covid-19 on some sectors of an economy-

- a. Digital and Internet economy forms a new platform that is playing a vital role everywhere which are described below: Online Education and online skills, webinars,
2. conferences, training programs etc; Online groceries, essential goods; Sudden increase in digital content like PPTs, PDFs, audio and video lectures, etc
 - a. Fast moving Consumer Goods and the Retail sector will boom up immensely
 - b. With continuous fear of Covid-19, food outlets, chain stores, malls catering to low consumer demand, so digital platform to purchase the goods will lead a shoot up
 - c. Firms selling chemicals will feel a big jump due to increased consumer demand for sanitizers, drugs, disinfectants, and medicines, etc.
 - d. Pharmaceuticals firms are set to observe growth prospects shortly.

Growth Projections Of India

The Indian economy is experiencing slow growth during the last quarter for the current fiscal. The outbreak Covid-19 may lead to stagnant growth even in the first quarter of FY 2020-21. Many credit rating agencies have revisited and revised the growth part of India in particular reference to the impact of Covid-19 that create travel restrictions, supply chain disturbances, the decline in consumer demand, and investment rate.

The economic growth of India has been reduced by Fitch Ratings from 5.1% projected earlier to disturbances because of Covid-19 which badly makes an impact on manufacturing industries. Standard and Poors have also lowered the economic growth of India from 5.7% projected earlier to 5.2% for 2020.

Covid-19 And Global Growth

The global economy is growing at 3 percent in the year 2020, which depicts far worse situations if compared to the global financial crisis of 2008 as per the IMF Report. Many first countries are expected to shrink by the following percentage in this year 2020.

Source: IMF Report

Italy	Spain	France	Germany	UK	US	Japan
9.1%	8%	7.2%	7%	6.5%	5.9%	5.2%

Developed countries have been poorly affected, and they are seemed to grow by -6% in 2020 on the one hand, and the other hand, developing countries are seemed to shrink by -1% the growth rate story will become worse if China is excluded from this list of countries because the growth rate is seemed to be -2.2% in this year of 2020. GDP figures for China reduced by 36.6% in the first quarter for 2020. On the contrary, output in South Korea dropped by 5.5% even though the country did not follow lockdown but practiced the methodology by aggressive testing, quarantining and contact tracing. If we are talking and focusing on Europe, the figures for GDP in France, Spain and Italy dropped by 21.3%, and 17.5%.

Need For Relevant Policies On Government Front

There is an urgent need to form a combination of monetary, fiscal, and financial markets

measures to help businesses and the common public to cope with this spread of virus and crisis environment. For appropriate action plans and policy, it is significant to know the specific to provide support to Indian industries and economies by the Indian Government and RBI.

1. There is a need to reduce the cost of funds through a reduction in policy rates.
2. There is a need to increase credit limits for all banking accounts by 25 percents.
3. There is need to provide relaxation in the factory compliances to enable the industries to continue operation even in fewer laborers over longer work keeping in mind the healthier and safe environment. Social distancing is followed in this and can bring a positive outcome. If required, health concerns and lockdown decisions must be followed strictly.
4. There is need to raise expenditure on public health to maintain adequate supplies to manage the problem of Covid-19: medicines, medical kits for the medical professionals, masks, gloves, more health clinics, more hospitals, etc.

Conclusion:

This is high time to reset everything as the world has become standstill for a few months due to the outbreak of Covid-19. We all are allowed to rethink, redesign, and restructure everything. If we involve in doing the right things, we may be able to fix challenges in new platforms that can face and bear humankind's environmental damage, maybe it pollution, self centered growth or inequality, or concentration of economic power and wealth....

I think the most significant point is that we must ensure and make the best of efforts that this black phase of life should never happen with all of us again. I am sure that humankind has never taken lessons and wisdom from history. Let's hope for the better, healthy, safe, prosperous, and of course, sustainable future ahead.

Reference

1. <https://indianexpress.com/article/explained/explained-how-has-COVID-19-affected-the-global-economy-6410494/>
2. <https://www.indiatoday.in/magazine/the-big-story/story/20200323-an-economic-coronary-1654645-2020-03-13>
3. <https://www.livemint.com/news/india/coronavirus-outbreak-in-india-could-cost-the-economy-29-9-billionadb-11583480504316.html>
4. <https://www.livemint.com/news/india/india-s-growth-could-be-the-next-casualty-of-the-coronavirus-outbreak-11583175486263.html>
5. <https://www.financialexpress.com/economy/growth-pange-fitch-cuts-indias-fy20-gdp-growth-forecast-check-revised-estimate/1886220/>
6. *News Channel Dy 365 (24.4.2020)*
7. <https://bfsi.eletsonline.com/covide-19-and-its-impact-on-indian-economy>.

The Impact of Agricultural Practices on Environment

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Abstract:

It is accepted that concerning one third of the world's land surface is beneath agriculture. Environment features a direct influence on existence and property of agriculture because it depends upon the use of natural resources. Beyond question, agriculture features a larger environmental impact on Earth than any alternative single act. Standard agricultural farming practices won't give the food and fiber required by burgeoning population within the future. In general, the question arises, will we develop and adopt the agriculture farming practices that may manufacture the food required to feed an increasing population and at the same time sustain our surroundings on future basis. beneath most systems of agricultural production at now, it's not an issue of if, however rather once, just about all of the natural home ground on the earth can become degraded to the purpose that it's not productive and then abandoned for future generations to search out ways in which to rehabilitate and repair. Farmers are beginning to invent, adapt and adopt a good vary of recent technologies and approaches however most of them are not environment friendly. Hence, this paper reviews the linkage between atmosphere and agriculture and the resultant impact of agriculture on atmosphere.

Key Words: Environment, Agriculture, Degraded, land, Technology.

Introduction:

Growing demands on agricultural land for food, fiber, and fuel are predicted to rapidly increase in coming decades with continued population growth (Bommarco et al., 2013). Agricultural land occupies 5 billion hectare of the land surface on earth and increases annually by 13 million hectare (FAO, 2002). Globally environment is changing day by day and now it has become a challenge to living forms due to the very ugly fact that every nation is trying to develop without taking into consideration the environmental impact of degradation and pollution of agricultural lands. People are using plastic bags, which are environmentally dangerous products, for their daily needs mainly for shopping purposes as a result of which, the environment and agricultural lands are there by being polluted. However, both the business sector and the individual consumers have important roles to play in reducing the environmental and agricultural land pollutions. Over the years, while the business sector has strictly reduced its environmental and agricultural land pollution, such as, waste water and solid waste discharge and energy use, consumers have increased environmental and agricultural land pollution. However, the negative environmental impacts and agricultural land pollution have raised the concern of the global community and the caring media around the world.

Objectives:

1. To analyze relationship between Agriculture and Environment.
2. To identify the impact of agriculture practices on Indian agriculture sector.
3. To find the future prospects and solution for India.

Methodology:

The present study has made use of secondary data, mainly from various reports, News papers, E-journals, websites and other reliable sources.

Indian Agriculture Sector

Agriculture is one amongst the foremost superior sectors of the Indian economy. it's the supply of living for nearly 2 third of the rural population manpower within the country residing in rural areas. Indian agriculture provides employment to 65th of the labor force, accounts for regarding 27th of gross domestic product, contributes twenty first of total exports and staple to many industries. The livestock sector contributes associate calculable 8.4% to the country GDP and 35.85% of the agriculture output. In Republic of India regarding 75th individuals reside in rural area unitas and are still dependent on agriculture, regarding 43rd of India's geographical area are employed for agriculture activities. The calculable cereal production is regarding 211.17 metric tons within the country. The total geographical area comes beneath the agriculture are 329 MH out of that 265MH represent variable degree of potential production. India may be a large country with style of landforms, climate, geology, physical geography, and vegetation. Republic of India is endowed with regional diversities for its uneven economic and agriculture development owing to

1. Agro-Climate atmosphere.
2. Agro-Ecological Regions.
3. Agro-based regions.
4. Natural resources Development.

5. Human Resource Development.

6. Level of Investment.

7. Technological Development

Environment And Agriculture

There is good evidence that delaying and reducing the rates of fertilizer application can reduce overall costs and pollution without hurting yields. From the mid nineteenth century to the middle of the 1990s some 150 years, humans converted close to 1 billion hectares of forests, grasslands, and wetlands to farmlands. Almost in every instance, soil erosion rates increased many times from what they had been in the natural habitats. Since, 1950 about a third of U.S. crop land has been abandoned due to erosion. Soil erosion rates in the United States pale by comparison to those in Asia, Africa, and South America, where losses average 30 to 40 metric tons per hectare per year (Pimentel et al., 1995). Since 1945, moderate, severe, or extreme soil degradation has affected 1.2 billion hectares of agricultural land globally, an area the size of China and India combined. Some 80 per cent of this degradation has taken place in developing countries.

Effects Of Agricultural Practices On Environment

➤ **Negative effects of agricultural applications:**

Environmental delineated as associate degree external medium were human, animals, and plants triple lives along. The environment consists of two pieces that human handcrafted and natural environments. Environmental pollution occurred by irregular urbanization and unconscious business and applications. Conjointly the balance between humans and therefore the natural atmosphere wherever humans live breaks. The most reasons for environmental pollution square measure irregular and speedy industry, urbanization, organic and inorganic wastes that left within the atmosphere, unintended usage of agricultural lands, and wrong agricultural applications. Incorrect use of pesticides and chemical fertilizers, irrigation, tillage, plant product applications square measure a number of the incorrect applications. Also, stubble burning, planting while not rotation, and inappropriate animal wastes square measure assumed as mistakes. Evaluating the results of best management practices (BMPs) in agricultural watersheds is commonly difficult by vital temporal variability in weather and hydrologic conditions. BMPs are progressively being used by decision-makers to cut back agricultural non-point supply pollution whereas rising productivity for the farmers. There's a necessity to think about native level policies and apply, educated by a mix of participatory approaches associate degreed sound science at an applicable scale.

✓ **Pesticide usage**

Pesticides that are accustomed eliminate harmful insects, microorganisms, and different pests which they mixing with soil, water, air, and food, cause issues on the agricultural foods and have an effect on each human health and natural balance therefore finally, they become associate degree environment downside. Chemical runoff is a very important contributor to surface-water contamination. A chemical that specialized in harmful doesn't kill the only target; it conjointly kills several harmless organisms. Modeling stream pollution by herbicides in agricultural areas may be a crucial issue since various and incompletely best-known processes square measure concerned. That various implementation styles combining the employment of no woody bank buffers with different practices capable of neutering nutrient and chemical masses, bank geophysical science, and in-stream home ground square measure required. Additionally, fields, streams, lakes, groundwater, and ocean reborn to a sort of poison storage in time. There square measure many pesticides that square measure utilized in the planet. in line with WHO's classification, pesticides square measure terribly dangerous, forty eight of them square measure quite dangerous, 118 of them square measure moderately dangerous and 239 of them square measure less dangerous of altogether 700 principally used pesticides. A seventy fifth rate of chemical usage belongs to developed countries.

✓ **Chemical fertilizer usage**

The fertilizer which are used to improve plant growth, more and qualified product and some features of soil like physical, chemical and biological structure cause to environmental pollution in case of excessive or wrong usage. Using high amounts of nitrogen fertilizer results to soil washing, contaminates to ground water drinking water, stream and sea nonetheless it increases nitrogen amount. This also affects the water organisms and when that kind of waters used to somewhere they break the natural balance of environment. Additionally the lettuce and spinach that are grown in the high amount nitrogen applied soils accumulate NO₂ and NO₃ and some carcinogenic substances like nitrosamine. Drinking waters shouldn't contain more than 20 ppm nitrate. For this purpose many European countries makes limitation to nitrogen fertilizer usage in ground water conservation regions. Unconscious using of phosphorus fertilizers also

breaks natural balance due to increasing phosphate value in water. Excess micronutrient elements in soil are much more important than nitrogen, phosphorus and it is harmful to the domestic plants.

✓ **Irrigation**

Irrigation has any importance to high agricultural yield and quality in arid and semi-arid regions. Wrong irrigations cause environmental issues. Rising of groundwater, salinity, fertilizers and chemical additives residues go too deep with irrigation water, trace components collect in water sources and cause to soil erosion and these types of waters build ill health and harmful on the living organisms thus this kind of waters unit a awfully important environmental disadvantage. Also, excessive irrigation as a purpose of agricultural production finally lands up in soil salinity and action. It unit sometimes same, as agricultural policies have a bearing on land use, they have effects on the number of abrasion in agricultural regions through changes at intervals the economic conditions of agricultural production.

✓ **Rotation**

Bio energy crops play Associate in nursing ecologically and economically basic role as an alternate to agro-food productions and as renewable energy sources. Very little attention has been centered on soil quality following the conversion of agricultural lands to biomass crops. Agricultural applications that are while not rotation due to lack of information or economical reasons entail unidirectional consumption of soil-plant nutrition elements, decrease to soil fertility, degradation, increasing of malady and harms within the soil and it conjointly causes to erosion.

✓ **Animal wastes**

Animal production has caused several changes in forms of business sectors. These changes place forth a large scale of issues regarding the impacts of animal wastes on the setting. In nice business' animal husbandry particularly poultries causes negative effects on the setting as a result of manure, urine, animal and animal product process wastes. These organic wastes contaminate to soil and stream beside dirt, gas, and smell effects on the setting. Animal wastes play a crucial role in environmental pollution.

Positive effects of agricultural applications

As agriculture has negative effects on the surroundings it conjointly has positive effects. As an example, some regions that have ordinarily agricultural applications have varied favorable environmental effects quite natural life, chemical element production, and climate looking on regions and ecology. For instance, though fertilizing has negative effects on air, it's indirect positive effects. Within the fertile fields, O₂ has consisted of photosynthesis therefore it will increase the quantity of O₂ within the atmosphere. Therefore cereal production areas represent twelve tons of chemical element per one angular distance space. Chemical element production in agricultural areas is quite in forests and empty areas. In these areas, the poison of the air decreases looking on greenhouse emission reception.

Concerns Of Eco-Friendly Property Agriculture:

The construct of property has several dimensions. It is wont to mean economic property, social Sustainability, institutional property furthermore as environmental property. The environmental Sustainability agenda in agriculture that is that the topic of this paper, covers the protection of the resource base, the reduction of negative externalities, and therefore the promotion of positive externalities. Principal problems embrace water quality and amount, air quality, eroding, multifariousness, and landscape protection furthermore as food safety and animal welfare. The agenda includes:

Water quality and amount concerns:

Problems here embrace leach of nutrients and pesticides, water extraction and evacuation, and flooding. Contamination of each ground and surface waters caused by high levels of production and use of manure and chemical fertilizers may be a major problem, particularly in areas of intensive stock or specialized crop production.

Air quality concerns:

The problems here square measure emissions of ammonia and greenhouse gases. At EU level, agriculture is chargeable for regarding total gas emissions however because of the pastoral nature of farming; the proportion here rises to half-hour.

Multi furiousness concerns:

Problems embrace genetic, species, and scheme diversity. The intensification of agriculture has diode to the widespread reduction of species and habitats.

Landscape concerns:

The social process of agricultural land will cause its abandonment if farming ceases to be viable. Instead, intensification of agriculture will cause the loss of important landscape options like hedges and ponds, the enlargement of fields, and therefore the replacement of ancient farm buildings with industrial structures. Rights of access could also be restricted in interests of more economical farming.

Soil erosion concerns:

Overgrazing significantly in mountain areas has light-emitting diode to the erosion of Vegetation covers with the ensuing loss of soil, the silting of rivers, etc.

Food safety and animal welfare concern:

The issue here is the impact of agricultural practices on Human health and animal well-being rather than the physical surroundings. There's concern regarding the consequences for the standard and safety of the food provide of the increasing use of pesticides and medicines, as well because the consequences of introducing genetically-modified organisms.

Future Prospects and Solution For India

Agriculture sector is a very important contributor to the Indian economy around that socio economic privileges and deprivations revolve and any modification in its structure is probably planning to have a corresponding impact on the prevailing pattern of social equity. Property agricultural production depends upon the efficient use of soil, water, livestock, plant life science, forest, climate, rainfall, and topology. Indian agriculture faces resource constraints, infrastructural constraints, institutional constraints, technological constraints and policy induced Limitations. Sustainable development is that the management and conservation of the natural resources base and put together the orientation of technological and institutional modification in such a way on ensure the attainment and continued satisfaction of human needs for this and future generations. Such property development (in the agriculture, biology and fisheries sector) conserves land, water, plant and animal genetic resources, is environmentally non-degrading, technically acceptable, economically viable and socially acceptable.

Therefore, to know property agriculture development the optimum use of natural resources, human resources, capital resources and technical resources are needed. In India, the crop yield is heavily hooked in to rain, which is the main reason for the declining rate of agriculture sector. These uncertainties hit the tiny farmers and laborers worst that are typically leading a hand to mouth life. Therefore, one issue have to be compelled to be done to support farmers and sufficient quantity of water and electricity have to be compelled to be equipped to them as they feel insecure and still die of drought, flood, and fire. Republic of state is that the second largest country of the planet in terms of population; it ought to be compelled to grasp it might even be a nice resource for the country.

Suggestion And Conclusion

Modern agricultural practices use several varieties of chemicals like fertilizers, pesticides, cleaners, crop preservatives to supply and keeping an outsized quantity of high-quality food. However each single of those chemicals has dangerous and unforeseen aspect effects as toxicity to non target organisms that cause ecological imbalance. As delineate on the highest, wrong agricultural practices cause environmental pollution in necessary dimensions. In different words, agricultural technical particularly fashionable technology may build setting pollution within the event unless human would sensitive. For this reason, humanity developed a replacement perspective to decrease the negative effects of agriculture. Property agriculture that could be a new agricultural technique appears environmentally friendly and is supported by developed countries. Environmentally friendly agriculture has 3 common applications. These are smart agricultural practices, organic agriculture, and exactitude agriculture. Also, rotation, sowing of legumes that able to biological process, and fallowing scale back the negative result of agriculture on temperature change. We tend to suppose to form many sorts of analysis concerning the agricultural practices that are featured by property and ecologically friendly strategies. As we know, water and air are the abandonment sources of agriculture and every one very important activities. The setting that comprised of uncontaminated air, water, soil, faraway from noise and different dirtiness, clean, beautiful, green, and healthy is that the biggest demand of contemporary humans and guarantee of future.

References:

1. *Agricultural expansion & Environment – World Bank Policy Report – 2007.*
2. *Ecology and Health – 2010 – ISSN – PP-37-44.*
3. *World Conservation Union data base.*
4. *Food and Agriculture organization (FAO) – database.*
5. *Journal of Environmental Management – 2009 – PP-22-44.*

Reducing Income Inequality in India and Sustainable Development Goals (SDGs): A Theoretical Approach

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Abstract

In 2015, all the members of the united nation adopted "The Agenda for Sustainable Development" that includes 17 SDGs. Prosperity depends on sustained, inclusive, and sustainable economic growth. Recent reports and some studies show the increasing situation of income inequality in India. Now a days, due to Covid-19 pandemic large population of income has declined and many of the people have lost their jobs. So, reducing income inequality based on age, gender, disability, religion and economic or other status within the country, as well as among countries is important target to achieve SDGs by 2030.

Keywords: SDGs, Income Inequality, Covid-19.

Introduction

In 2015, all the members of the united nation adopted "The Agenda for Sustainable Development" that includes 17 Sustainable Development Goals (SDGs). These goals are- (i) No Poverty (ii) Zero Hunger (iii) Good Health and Well Being (iv) Quality Education (v) Gender Equality (vi) Clean Water and Sanitation (vii) Affordable and Clean Energy (viii) Decent Work and Economic growth (ix) Industry, Innovation and Infrastructure (x) Reduced Inequalities (xi) Sustainable Cities and Communities (xii) Responsible Production and Consumption (xiii) Climate Action (xiv) Life Below Water (xv) Life On Land (xvi) Peace, Justice and Strong Communication (xvii) Partnerships for the Goal (Unites Nations).

Brundtland Commission developed the most widely used definition of sustainable development as "development which meets the needs of current generations without compromising the ability of future generations to meet their own needs" (United Nations, 1987). "Income inequality is defined as a measure that highlights the gap between different individuals' or households' disposable income in a particular year and in given country" (OECD 2018). India's per capita Gross Domestic Product (GDP) have increased between 2000 and 2019. But it does not mean that income of the whole population has increased. The increase in per capita GDP is control by only few people (Chaudhuri and Ghosh, 2021). GDP growth can't provide positive benefits to the people if there is increasing income inequality, environmental damage and other cost (Costanza, et al 2016). The first wave of Covid-19 pandemic may have doubled the poverty in India. Pew Research Centre based on World Bank Projections of Economic Growth studied that income level of large population declined sharply and people working in formal and informal sector lost their jobs (Das, 2021). The second wave of covid-19 has also exposed the existence of huge gap of wealth inequality in India between the rich and the poor (Das, 2021). During the lockdown, the wealth of Indian millionaires increased, while millions of people lost their jobs. Since March 2020, India's 100 billionaires have seen their fortunes rise by Rs 12,97,822 crores, enough to give each of the 138 million poorest Indians a cheque for Rs 94,045 each (Misra and Patel, 2021). Between 2005-06 and 2015-16, there was a significant drop in poverty. According to the Niti Aayog's SDG Index 2019, more Indians have fallen into poverty, hunger, and economic inequality in the last two years (Mohanty, 2020). According to the State of India's Environment Report 2021, the country's ranking on the 17 Sustainable Development Goals (SDGs) agreed as part of the 2030 agenda by 193 United Nations member states in 2015 has declined two places to 117. However, the country's total SDG score has risen by 6 points, from 60 in 2019 to 66 in 2020-21 (CSR Journal, 2021).

Research question

How can the target of Sustainable Development Goals (SDGs) by 2030 be reached if there exists an inequality of income between the rich and the poor?

Theme or Idea

Reducing income inequality is important to reach the target of SDGs by 2030. The idea behind writing this paper is to analyse the SDGs (from the point of view of reducing income inequalities) through theoretical framework and literature review to understand the research question. Since latest data regarding income and consumption expenditure data is not available the informations are collected from latest newspaper articles and reports of organization or institutions etc.

Discussion: Theoretical Framework and Literature Review

Income inequality and economic growth have an inverted U shaped relationship, according to Simon Kuznet. In his theory, Kuznet (1955) articulated the fundamental phenomenon that during an economy's early stages of modernization, when growth is high, inequality rises, followed by a mature stage of modernization, when inequality falls. Higher inequality tends to stifle growth in poorer countries while promoting it in richer ones. The Kuznets curve, which shows how inequality rises and then falls over time as a function of

economic development, emerges as a clear empirical regularity. However, it does not account for the majority of differences in inequality among nations or across time (NBER Working Paper 7038). The social dimensions of SD (Sustainable Development) are represented by the concept of equity. Environmental, social, and economic justice, social fairness, quality of life, freedom, democracy, participation, and empowerment are some of the ideas covered. In general, sustainability is viewed as a question of distributive equity, or the equitable sharing of human capacity for well-being among present and future generations (Jabareen, 2008). Economic inequality is a major issue that ought to be addressed in the SDGs. Targets for reduction can be set at the national level through public consultations to allow for flexibility. To ensure that these aims are both context-specific and demanding, we recommend that national governments consult their populations before establishing targets based on public preferences (New Economics Foundation). Education is vital for a country's economic development as well as for individuals because it can generate individual income per capita. At the micro level, it can have an impact on a single household (Ozturk and Ilhan, 2001). Hovhannisyanyan, et al (2019) found the inverse relationship between educational attainment and income inequality, because when people are educated it reduces the income gap between the rich and the poor. The study also found the positive correlation between inflation, unemployment and income inequality. Household data for each percentile shows that the bottom deciles of the Indian income distribution is largely made up of small, marginal, and organized farmers, as well as agricultural and wage labour, and that these workers are the most economically vulnerable members of the Indian workforce, with real incomes declining (Sahasranaman and Kumar, 2000). Inflation diminishes one's purchasing power in actual terms. Inflation diminishes real income when the nominal pay is relatively steady, which disproportionately impacts lower-income people. As a result, rising inflation can exacerbate income inequalities (Hong and Voon, 2000). Munir and Sultan (2017) concluded that per capita GDP, fertility rate, urbanization, and globalization have positive impact, while government consumption expenditure, value addition by agricultural sector and per capita arable land have negative impact on income inequality.

Conclusion

From the above discussion it is concluded that there must be adequately addressing of sustainable development both theoretically as well as practically. Reducing income inequalities is important as it has an effect on socio-economic activities. Only few studies have been done regarding income inequality and sustainable development. More study is also required to design a strategy for reducing income inequality in order to meet the 2030 target for the Sustainable Development Goals. Policymakers will need a theoretical framework as well as empirical analysis to build acceptable policies. Income inequality can be drastically reduced if fiscal policy, such as taxation, is utilised to rebalance income distribution in favour of the poor.

References

1. Barro, R.J. (1999). Inequality, Growth, and Investment. National Bureau of Economic Research. NBER Working Paper 7038. <https://www.nber.org/papers/w7038> (Accessed on 17/06/2021).
2. Chaudhuri, D. and Ghosh, P. (2021). "Why inequality is India's worst enemy", Down to Earth, Fortnightly Magazine, 05 March 2021. <https://www.downtoearth.org.in/blog/economy/why-inequality-is-india-s-worst-enemy-75778#:~:text=The%20top%20one%20per%20cent,earned%20only%203.5%20per%20cent.&text=India%20is%20only%20second%20to,world%20in%20terms%20of%20inequality.> (Accessed on 02/06/2021).
3. Chee-Hong, L. and Siew-Voon, S. (2000). "Inflation and Income Inequality: The Dynamic from Institutional Quality". <https://tunisimailalichair.my/2020/09/03/inflation-and-income-inequality-the-dynamic-from-institutional-quality/> (Accessed on 08/06/2021).
4. Costanza, R. Fioramonti, L. and Kubiszewski, I. (2016). The UN Sustainable Development Goals and the dynamics of well-being. *Frontiers in Ecology and the Environment*, Vol 14, Issue 2, March 2016, (59-59). <https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/fee.1231> (Accessed on 05/06/2021).
5. CSR Journal, (2021). India Ranks 117 on its SDG Performance: Report. <https://thecsrjournal.in/india-ranks-117-sdg-sustainable-development-goals-niti-aayog/> (Accessed on 16/06/2021).
6. Das, K. (2021 a). "Covid-19: Poverty doubled in India in 2020. Will second wave make it worse?", *India Today*, Weekly Magazine, April 22, 2021. <https://www.indiatoday.in/business/story/covid-19-poverty-doubled-in-india-in-2020-will-second-wave-make-it-worse-1793826-2021-04-22> (Accessed on 05/06/2021).
7. Das, K. (2021 b). "Explained: How Covid-19 crisis has exposed India's growing wealth gap", *India Today*, Weekly Magazine, April 29, 2021. <https://www.indiatoday.in/business/story/explained-how-covid-19-crisis-has-exposed-india-s-growing-wealth-gap-1795932-2021-04-28> (Accessed on 02/06/2021).

8. Hovhannisyanyan, A. (2020). "The Determinants of Income Inequality: The Role of Education". *Scientific Annals of Economics and Business*, 66 (4), 2019, (451-464).
https://www.researchgate.net/publication/338558846_The_Determinants_of_Income_Inequality_The_Role_of_Education (Accessed on 02/06/2021).
9. Ilhan, O. (2001). "The role of education in economic development: a theoretical perspective". *Journal of Rural Development and Administration*, Volume XXXIII, No. 1, Winter 2001, (39-47).
https://mpira.ub.uni-muenchen.de/9023/1/MPRA_paper_9023.pdf (Accessed on 06/06/2021).
10. Jabareen, Y. (2008). A New Conceptual Framework for Sustainable Development. *Environment, Development and Sustainability*, 2008, 10. 179-192.
https://www.researchgate.net/publication/227033081_A_New_Conceptual_Framework_for_Sustainable_Development(Accessed on 17/06/2021).
11. Kuznets, S. (1955). "Economic Growth and Income Inequality". Volume XLV, No. 1, March 1955, (1-28). <http://piketty.pse.ens.fr/files/Kuznets1955.pdf> (Accessed 08/06/2021).
12. Misra, S.S. & Patel, T. (2021). "The Inequality Virus—India Supplement 2021". Oxfam India.
<https://www.oxfamindia.org/press-release/inequality-virus-india-supplement-2021> (Accessed on 15/06/2021).
13. Mohanty, P. (2020). Budget 2020: Niti Aayog shocker; Poverty, hunger and income inequality up in 22 to 25 States and UTs. *Business Today*, January 9, 2020. <https://www.businesstoday.in/union-budget-2020/news/budget-2020-niti-aayog-shocker-poverty-hunger-income-inequality-up-in-22-to-25-states-uts-poor-indians/story/393404.html> (Accessed on 05/06/2021).
14. Muhibbullah, M. and Das, M. (2019). "The Impact of Inflation on the Income Inequality of Bangladesh: A Time Series". *Analysis International Journal of Business and Technopreneurship*, Volume 9, No 2, June 2019 (141-150).
https://www.researchgate.net/publication/333386135_The_Impact_of_Inflation_on_the_Income_Inequality_of_Bangladesh_A_Time_Series_Analysis (Accessed on 08/06/2021).
15. Munir, K. and Sultan, M. (2017). "Macroeconomic determinants of income inequality in India and Pakistan". *Theoretical and Applied Economics*, Volume XXIV (2017), No. 4(613), Winter, pp. 109-120.
<http://store.ectap.ro/articole/1311.pdf> (Accessed on 02/06/2021).
16. New Economics Foundation, Reducing economic inequality as a Sustainable Development Goal Measuring up the options for beyond 2015
https://neweconomics.org/uploads/files/226c9ea56ee0c9e510_gqm6b9zpz.pdf (Accessed on 17/06/2021).
17. Sahasranaman, A. and Kumar, N. (2020). "Income distribution and inequality in India: 2014-19". Preprint, October 2020.
<https://arxiv.org/ftp/arxiv/papers/2010/2010.03602.pdf#:~:text=We%20study%20the%20evolution%20of,also%20negative%20real%20average%20income> (Accessed on 08/06/2021)
18. Shiller, R. (1996). "Why Do People Dislike Inflation?" NBER Working Article 5539, Massachusetts Avenue Cambridge.
https://www.researchgate.net/publication/344551498_Income_distribution_and_inequality_in_India_2014-19 (Accessed on 08/06/2021).
19. United Nations, Department of Economic and Social Affairs Sustainable Development
<https://sdgs.un.org/goals> (Accessed on 04/06/2021).
20. United Nations,(1987). Report of the World Commission on Environment and Development.
<https://www.are.admin.ch/are/en/home/sustainable-development/international-cooperation/2030agenda/un--milestones-in-sustainable-development/1987--brundtland-report.html> (Accessed on 18/06/2021)

Advancement and Environmental Aspects of Synthetic Dyes

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Abstract

Dyes are colored organic compounds that are used to color various substrates like textile materials as well as dyes are used to dye non textile materials like paper, leather, hair ,staining agents ,DNA markers,food , cosmetics, drugs indicators,security inks and as Laser dyes. etc. Along with these beneficial characteristics properties of dyes ,synthetic dyes are associated with environmental hazards, particularly that concerning the water ecosystem. Effluents generated during the synthesis of dyes and application on textiles cause adverse effects on biological life in water bodies. This paper briefly explains the recent developments in synthetic dyes in various fields as well as the environmental aspects of synthetic dyes.

Keywords : Dyes, ,Environment,Ecosystem,Textile and Nontextile substrates, Recent advancement etc.

Introduction

Dyes are becoming integral part of modern day life. Man has been fascinated by the variety and beauty of colours present in nature. Love for colour is a natural instinct. Synthetic dyes have the capability to impart color fastness with higher intensity than natural organic counterparts. Human beings have been attracted by the extraeamly beautiful color since ancient times, but this fascination noticed an rapid increase with the development of synthetic dyes.Synthetic dyes are organic compounds that tend to absorb photons of the visible regions and then reflect their complementary colors.These synthetic dyestuffs are an combination of the chromophore, auxochrome and conjugated aromatic structure.The prime constituent is the chromophore which is having unsaturated group of atoms that can absorb light energy and is responsible for color. Auxochrome are responsible for the fixation of the dye to substrates and increases the color intensity of dye. The remaining part is the conjugated aromatic structure. Synthetic dyes exhibit chemical structures like azo, diarylmethane, triphenylmethane, nitro, phthalocyanine,nitroso,heterocycles which have a dominating the intense coloration of a dye. Synthetic dyes have revolutionized the textile dyeing industry by imparting fascinating colors to almost every fabric. Dyes are also used to dye non textile materials like paper, leather, hair ,staining agents ,indicators ,food , cosmetics, drugs indicators,security inks and as Laser dyes. etc. Dye is a colored organic substance,which imparts colour to a substrate.A dye is an organic substance,that can be applied in solution or dispersion to a substrate,thus giving it coloured appearance.Most common substrate is textile fibre.Dyes are also used to non textile substrates like ,paper,plastic,foodstuffs,leather,cosmetics etc. The various Textile and non textile uses of synthetic dyes are given as followes, 1. Dyes for Textiles : (a) Cellulosic fibres (Cotton): Ex.of Dyes,Benzo Fast Yellow 5GL ,Indanthrene Brown RRD ,Sulfur black T ,Cibacron Brilliant B (b) Silk and Wool Fibres : Orange II,Methyl violet(c) Synthetic fibres (Cellulose acetates,Nylons ,Polyesters etc.) : Cellitoin fast Brown 3R 2.Non-textiles uses of Dyes a) Leather dyes: Bismark brown, Orange II, Nigrosine-C(b)Paper dyes: Safranine T, Rhodamine B(c)Food colours: Amaranth, Tartrazine, Erythrocin(e)Dyes For cosmetics: Used in nail polish Dibromofluorocein,Tetrabromoderivative is used in lipstics Tetrabromofluorocein (Eosin Y),The dyes used for dyeing Hair are as followes :m-phenylenediamine sulphonic acid,p-aminodiphenylaminosulfonic acid(e)Medicinal dyes: Crystal violet ,Malachite green, Prontosil, Phenplphthalein (f) Dyes as biological staining agent: Methylene blue, Malachite green, Eosin Y (g) Dyes as indicators and analytical reagents : Congo Red, Dimond Black F, eosin(h)Laser dyes : Rhodamine 6G , coumarin 7.

Advances of Synthetic Dyes

Human life is full of different colors. In our life Color has religious, aesthetic, and psychological importance. Many festivals like holi are colorful cultural functions . Appealing of Synthetic dyes due to their economic viability and characteristic properties .Therefore synthetic dyes find their usage in a many of fields like food , drugs textile, ,paper and leather dyeing, cosmetics,etc. The progression in synthetic dyes has made possible multifunctional textiles with antibacterial assets,better moisture management, UV protection . The development in the field of food coloration, pharmaceuticals,dye-sensitized solar cells,liquid crystal displays, halochromic textiles, efficient dye-sensitized solar cells, LCDs fluorescent sensors,G-quadruplex DNA, and DNA targeting, is largely credited to the advancement in synthetic dyes. Recent advancement in synthetic are given as followes,

- 1.Synthetic Dyes in Dye-Sensitized Solar Cells
- 2.Synthetic Dyes in Liquid Crystal Display
- 3.Synthetic Dyes in Fluorescent Sensors
- 4.Synthetic Dyes in the Detection of G-Quadruplex DNA

Environmental Aspects

Along with these beneficial characteristics of dyes in various fields, dyes are associated with environmental hazards, particularly that concerning the water ecosystem. Adverse effects of textile dyes on biological life in water bodies is due to Effluents generated during the synthesis of dyes and application on textiles. Many synthetic Dyes formed from various toxic chemicals have adverse effects on environment. Also dyes which are used need to be Environment friendly. Dyes should be synthetically prepared which are used for many applications.

Environmental pollution is one of the major and most urgent problems of the modern world. Industries are the greatest polluters, with the textile industry generating high liquid effluent pollutants due to the large quantities of water used in fabric processing. Color is usually the first contaminant to be recognized in a waste water because a very small amount of synthetic dyes in water (< 1 ppm) are highly visible, affecting the aesthetic merit, transparency and reflect the sunlight entering water, thereby interfering with the aquatic species growth and hindering photosynthesis. Dyeing and finishing processes are responsible for health problems because these processes arise from exposure to chemicals acting as irritants. These may cause, itchy or blocked noses, sneezing and skin irritation. These chemicals include ammonia, some shrink-resist chemicals, some optical whiteners, acetic acid, soda ash, caustic soda, formaldehyde-based resins, and bleach. Disperse, reactive, and vat dyes are also recognized as skin sensitive. Although synthetic dyes have brilliant technical characteristics, they are found to have several adverse effects on working people in the industry. There is relationship between synthetic dyes and the environment or the water ecosystem, the impact on biological life in water, and advanced approaches to deal with these associated hazards. The presence of residual colour, high levels of electrolytes, toxic substances in dye application processes produce wastewaters that possess unacceptable environmental risks. Development of dyes which may be economical, environmentally viable and exhibit improved color asset and fastness on the dyed fabric are carried out using various strategies like ultrasonication, gamma and ultraviolet irradiation. In new, efficient, and improved decolourisation technologies, regulatory agencies are increasingly interested. A broader validation of these new technologies and the integration of different methods in the current treatment schemes will be most likely in the near future, rendering them both efficient and economically viable.

Conclusion

The environmental problems associated with the synthetic dyes that limit their usage has been largely reduced by technological advances like supercritical dyeing, dyeing using UV-technology. To achieve high performance in dyeing, there is need to develop synthetic dyes which are more compatible with these technologies. This paper briefly explains the impact of dyes on the environment. Environment friendly synthetic dyes should be used for many applications because they do not cause any harm to human health and environment.

References

1. VRM11.8088-Final Report, European Commission (Draft no.7). Study on the Link between Allergic Reactions and Chemicals in Textile Products (January 7, 2013).
2. Zhou, Q., Rather, L.J., Ali, A., Wang, W., Zhang, Y., Haque, Q.M.R., Li, Q., Environmental friendly bioactive finishing of wool textiles using the Innovative and Emerging Technologies for Textile Dyeing tannin-rich extracts of Chinese tallow (*Sapium sebiferum* L.) waste/fallen leaves. *Dyes Pigm.*, 176, 108230, 2020.
3. Benkhaya, S., Mrabet, S., El Harfi, A., A review on classifications, recent synthesis, and applications of textile dyes. *Inorg. Chem.*, 107891, 115, 2020.
4. Nambela, L., Haule, L.V., Mgani, Q., A review on source, chemistry, green synthesis, and application of textile colorants. *J. Clean. Prod.*, 246, 119036, 2020.
5. Abrahart EN (1977). *Dyes and their Intermediates*. New York: Chemical Publishing. pp. 1–12.
6. Allen RLM (1971). *Colour Chemistry*. London: Thomas Nelson and Sons Ltd. pp. 11–13.
7. Anon (1996). *Ecological and Toxicological Association of Dyes and Pigments Manufacturers*,
8. Vikas Jangra, "Green Printing: Inevitability for Printing Industry Sustainability", *International Journal Of Engineering And Management Research*, 2016, 6(4), 16-19.
9. Priyanka Das, Nani Goswami, Pranjal Borah, "Development of Low Cost Eco-Friendly „Holi“ Powder", *International Journal of Agriculture Innovations and Research*, 2015, 4(3), 466-468.
10. L.Pereira and M.Alves, dyes-Environmental Impact and remediation.

Socio-economic empowerment of Muslim women in the epoch of globalisation

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Abstract

The term "empowerment" has become widely used in the context of women. Women's empowerment refers to increasing and improving a woman's socioeconomic, political, and educational power in our society. In our country, Muslim women are the most backward. People have been seeing the emergence of modern globalisation since the nineteenth century. The third age of globalisation has begun in the twenty-first century, with developments in transportation, interaction, and communication technology causing an increase in the tendency of interaction between individuals or corporations on a global scale. Women become more skilled and informed as a result of their education, and their property rights enable them to play a more active role in family matters. Globalization has gone a long way in rehabilitating women in a male-dominated environment by providing them with opportunities. Women have been successful in achieving increased status and economic freedom in the new world of globalisation. New chances have arisen to improve the situation in which gender apartheid has given way to a new world of women's liberation. In current age of globalisation, the Indian government recognises the right to equality, freedom of religion, and protection of minorities' interests in education. To achieve an egalitarian human society, equality is essential. In today's world, one of the most important concerns when it comes to human rights and development is empowerment. So, in the twenty-first century, women's empowerment, particularly among Muslim women, is a major challenge, with the goal of strengthening women's self-reliance, self-confidence, and internal strength to make their own decisions in their lives. The role of globalisation in empowering Muslim women will be discussed in this study.

Key words:- *Empowerment, Globalization, Liberation, Employment, Exploitation, Superiority, Pessimism, Personality.*

Introduction

The world is becoming increasingly interconnected, interdependent, and interrelated as a result of globalization's magic. Globalization, on the other hand, has posed a new threat to the lives and security of women, particularly those who do not belong to the privileged class. There is no doubt that globalisation has increased women's employment opportunities by expanding the workforce, but we cannot overlook the fact that it has also increased their vulnerability to exploitation by placing them in dangerous occupations where they are overworked. Women's prejudice and violence are becoming more visible as a result of globalisation. By generating new jobs for women and implementing constitutional provisions for their political rights, the concept of globalisation becomes a new threat to the changing status of women. It has been noted that society is rapidly progressing, yet the status of women is not improving at the same rate. Empowerment varies from region to region, state to state, and even across rural and urban areas, as well as from community to community. Education provides us with self-assurance, courage, and inner power. With her lofty thinking, moral behaviour, and noble and integrated personality, an educated woman should inspire the society. Liberalization, Privatization, and Globalization (LPG) are the three wheels of the international forum. This trio has had a significant impact on the lives of both men and women all around the world. Rapid social change, greater education, increased job prospects, rising violence, and a loss of tolerance are all characteristics of today's globalised society. Women all throughout the world are blessed and cursed by globalisation. Women have gained a new identity, financial independence, freedom of expression, social prestige, and other benefits as a result of globalisation. Globalization has given women the power to fight poverty and exploitation by putting them into the workforce. Privatization of the education and health sectors has had the most negative influence on women in the country throughout the globalisation era. Globalization has spawned new phenomena such as feminization of poverty and feminization of employment. Men and women, as well as women of different races and cultures, are affected differently by globalisation as a result of gender inequality. However, we cannot deny that globalisation has had a significant impact on women's empowerment around the

world. Muslim women have long been exploited in many aspects of life. Globalization has had an impact on Muslim women in our country and in our state of Kerala

Muslim women empowerment in the context of globalization Muslim women's empowerment has emerged as one of the most pressing issues of the twenty-first century. However, in practice, women's empowerment remains a fantasy. In our daily lives, we see how women are afflicted by a variety of social evils. Muslim women's empowerment is a critical tool for increasing women's ability to access resources and make meaningful life decisions. Muslim women's empowerment is defined as the process of improving the economic, social, and political position of traditionally underprivileged women in society. It refers to the process of protecting kids from all types of violence. Despite current feminist movements and government efforts, the study finds that Indian women are generally disempowered and have a lesser status than men. It has been discovered that women continue to accept unfair gender standards in society. The most important aspect of women's economic empowerment in Islam is that it recognises their separate and independent identity and grants them numerous economic rights, including the right to own property, share inheritance, and engage in various economic activities to increase their fortune, among others. In Islam, the broad notion of division of labour governs their economic roles. Their natural comparative advantages are the basis for this division of labour. The man is responsible for the affairs outside the home, while the lady is responsible for the affairs inside. In his or her region of jurisdiction, everyone is responsible. Her services are valuable in the same way that men are valued. As a result, husbands are obligated to spend money on their spouses. Islam's labour division and diverse spheres of activity are relevant in general and under normal circumstances. In the event of an emergency or other unusual circumstance, they may switch roles or join hands to share responsibilities. A woman, on the other hand, is never obligated to spend money on herself or her family. Her father provided financial support before marriage, while her spouse provided financial support after marriage. In their absence, another close relative is responsible for her costs. If this fails, society and, eventually, the state will be forced to shoulder this responsibility. Inequality and vulnerability exist among Muslim women and men all across the world, including in our own country. Muslim women must be empowered in all aspects of their lives. Because women account for half of India's population, establishing a new social order without the active participation of women from all communities is unlikely to succeed. Muslim women should be aware that they have constitutional rights to adequate health care, financial security, educational opportunities, and political power. Mahatma Gandhi is adamant that law alone will not improve women's position; it must be accompanied by changes in women's social surroundings and situations. In our country, fertility rates, marriage age, health, and nutrition are all quite low. Participation of Muslim women in local political processes improves their social position and aids in the resolution of local issues, such as drinking water, health, education, child development, social security for the elderly and disabled, and grass-roots planning. Globalization aids the empowerment of Muslim women all across the world. It enables women from all walks of life to participate in several domains such as politics, social issues, economics and culture. Muslim women's empowerment is critical not only for improving women's social and economic position and achieving social justice in society, but also for ensuring long-term economic growth and reducing poverty among Muslim populations. Women's empowerment, on the other hand, has long been a subject that has gotten more attention in recent years. Islam is a religion in which women have a high status and share the same rights and obligations as males. Muslim women have played important roles in the establishment of Islamic society and have made substantial contributions to its growth throughout history. Khadeeja, the Prophet's wife and first Muslim, is an excellent example of this. Her wealth and social standing ensured the Prophet's safety and protection. Her wisdom and strength of character also enabled her to offer the Prophet advise, counselling, support, and consolation. Thus, the lack of empowerment for Muslim women is due to colonial past, traditional traditions, misinterpretation of Islamic laws, and orientalist methods that portray Muslim women as timid, shy, repressed, weak, and submissive. Most Muslim women, on the other hand, see their Islamic identity as a source of strength, dignity, liberty, and empowerment that helps them achieve personal and professional success. Empowering Muslim women entails providing them with the knowledge, skills, and personal traits that enable them to take charge of their lives and make well-informed decisions that result in positive outcomes. Women's empowerment will not be realised unless all parties involved work together to ensure equal rights and opportunities for Muslim women. Muslim women's empowerment should be a top priority on the government's agenda, and it should be reflected in constitutions and laws. Taking on leadership roles and actively participating in politics would also enable Muslim women to influence and change organisational and/or governmental policies, structures, and practices that promote

women's rights and ensure equality with men. Muslim women's empowerment contributes to personal development in ways such as having a vision and sense of purpose, conscientiousness, and self-reflection; seeking higher education and increasing religious knowledge; having access to media and technology; exposure to different life experiences; being economically independent; participating in all aspects of life; and acting as a role model. Family norms and practices such as family headship, women's participation in decision-making, educational and economic status, domestic and emotional support, and freedom of movement all play a role in women's empowerment. In the age of globalisation, it has been demonstrated that there is no fundamental difference in men's and women's mental abilities. Women should be given the same chances as males. Inequality based on male-female differences creates a separating society with a sense of superiority on one side and a sense of inferiority on the other. As a result, sexual inequality has a greater dividing effect than any other form of inequality, instilling a sense of pessimism in women because their sex is not the result of their own actions. With excellent leadership, a feasible solution on economic, political, and educational power within the reach of women might be put in place throughout the modernising era. Finally, organisational factors such as establishing policies and procedures that ensure women's equality of rights and opportunities, providing flexible working options, developing a culture of inclusion and tolerance, providing childcare services, establishing mentorship programmes, and hiring supportive leadership would all help to empower women. Women's empowerment is hampered by factors such as a lack of education, ignorance of Islamic teachings, traditional practises that contradict Islamic teachings, Islamophobia and orientalist assumptions about women, a lack of support from family and supervisors, and the lack of organisational policies and procedures that ensure equal rights for women.

Conclusion

Increasing women's educational attainment is critical to their empowerment. It has also been noted that some women are unable to work due to their physical limitations. They eat less, but they work harder. As a result, women who are weaker are to be made stronger from a health perspective. Another issue is female harassment in the workplace. There have been several incidences of rape, girl kidnapping, dowry harassment, and so on. Muslim women's empowerment has become one of the most pressing issues of the twenty-first century, not only on a national but also on an international basis. Initiatives by the government alone would not be adequate to attain this goal. Society must take the initiative to create a climate in which there is no gender discrimination and women have full autonomy in making their own decisions and participating in the country's social, political, and economic life on an equal footing. As a result, they demand all forms of empowerment in order to protect themselves and maintain their purity and dignity. In the empowerment of Muslim women, the national education system will play a positive interventionist role. Globalization gives education, economic freedom, and property rights to Muslim women, boosting their self-esteem and concentrating their fantasies of empowerment. Men and women would live in partnership, which is critical for women's empowerment and upliftment. The government has now made initiatives to address the female foeticide problem. The Indian constitution promises equality between men and women, and a number of laws have been established to put these provisions into practise in areas such as property inheritance, employment, marriage, maternity benefits, and crimes against women. Globalization aims to educate the ignorant masses through radio, television, news, and periodicals in order to abolish gender inequality. Muslim women's empowerment can be facilitated by globalisation.

References

1. *Abdul Waheed, et. al. 2014. Empowerment of Muslim Women in India: A Sociological Analysis", Bangladesh e-Journal of Sociology, vol. 11, p. 41.*
2. *Acharya, I. 2016. Globalization- A Gateway to Women Empowerment. IOSR Journal Of Humanities And Social Science, Vol. 21, Issue 8, 01-02.*
3. *Ahmed, Leila. 1992. Women and Gender in Islam. New Haven: Yale University Press.*
4. *Batliwala, Srilatha. 1994. The meaning of empowerment: New concepts from action. In Population Policies Reconsidered: Health, Empowerment and Rights. Edited by Gita Sen, Adrienne Germain and Lincoln Chen. Cambridge: Harvard University Press, pp.127-38.*
1. *Bennett, Clinton. 2010. Muslim Women of Power: Gender, Politics and Culture in Islam. London: Continuum.*

2. *Charmes, Jacques, and Saskia Wieringa. 2003. Measuring women's empowerment: An assessment of the gender related development index and gender empowerment index. Journal of Human Development 4: 419-435.*
3. *Chauhan C.P.S. 2012. Participation of Indian Muslims in Educative Process, in Mirza Asmer Beg and A.R. Kidwai (ed.) Empowerment of Indian Muslims, Perspective, Planning and Road Ahead, New Delhi: Concept Publishing Company PVT. Ltd.*
4. *Desai, Manisha A. 2010. Hope in Hard Times: Women's Empowerment and Human Development. Human Development Reports. Paris:United Nations Development Programme.*
5. *Dhruba Hazarika, „Women Empowerment in India: A Brief Discussion“, International Journal of Educational Planning & Administration, vol. 1, (2011), p. 200.*
6. *Hafez, Sherine. 2003. The Terms of Empowerment: Islamic Women Activists in Egypt. Cairo: American University of Cairo Press.*
7. *Kruk, Remke. 2014. The Warrior Women of Islam: Female Empowerment in Arabic Popular Literature. London: I. B. Tauris.*
8. *Naples, N.A. & Desai, M. 2002. Women's Activitism and Globalization. New York and London: Routledge.*
9. *Neera Desai, ed., 1988. "A Decade of Women's Movement in India", Bombay: Himalaya Publishing House, p. 7.*
10. *Neumayer, E. & de Soysa, I. 2007. Globalization, Women's Economic Rights and Forced Labour. World Economy, 30 (10), 1510-1535.*
11. *Panchal, N. (2015). Impact of globalization on women empowerment in India. International Journal For Innovative Research In Multidisciplinary Field. Vol-1, Issue -3, 38 - 47.*
12. *Promilla Kapur, 2001. "Empowering the Indian Women", Publications Division, New Delhi, Preface.*
13. *Shivalingappa, P. & Nagaraj, G.H. 2011. Women Empowerment and Gender Equality- A Study. Southern Economist, Vol.50(10), 15-17.*
14. *Singh, Sachinanda Kumar, 2010. Women Empowerment in India, London: Oxford Publication.*
15. *Suguna, M. 2011. Education and Women Empowerment in India. International Journal of Multidisciplinary Research, Vol.1(8), 219-317.*
16. *Walther, Wiebke. 1993. Women in Islam: From Medieval to Modern Times. Princeton: Markus Wiener.*

The Assessment of the Merits and Demerits of Online Education System In India During Covid 19 Crisis.

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Abstract:

The Indian Education System is well-known due to its quality in the world. From U.G to P.G. the education in India has been designed in very proper structure. It always explored the different visions for the development of various sector. The education provided in the Regional, Hindi and English medium is of unique importance as far as the productivity of its results is concerned. However; the emergence of Covid -19 pandemic has completely damaged the education system of India. It had affected the large no of students, teachers, professors and faculties of premier institutions in India. The shutting down of schools and colleges and shifting them from traditional class room to digital platforms has increased the learning inequalities among the students. The pandemic has also pushed a large number of students out of the education system due to the digital divide. According to the guidelines of world health organisation, the online learning system was adopted worldwide in order to continue the education in the country. This paper aims at the assessment of online learning technology on the basis of its merits and demerits.

Key Words: Indian Education System, Covid-19 Pandemic, Digital Learning Platform, Merits- Demerits

Introduction:

On 22nd March the government of India declared the nationwide lockdown. All the educational institutions were also shutdown. The closure of educational institutions resulted in the degradation of the education system in India. However, the Human Resource Ministry conducted a survey for the online education system to be followed throughout the country. The Zoom Cloud Meeting, Microsoft Teams and Goggle Meet applications were authorised for the online education system. It was the first time in the history of India that the mode of online education was introduced as a learning platform in the educational institutions. The system was entirely new mode for students, teachers and parents as well. Unfortunately, the system could not fetch the expected results. It has socio-economic and technological issues for its less productivity. The online education system has its own merits and demerits and they vary from institutions to institutions. The system has adversely affected the schools run by Municipal Corporations and Zila Parishad because they did not have proper infrastructure and training for teachers and students. The developing country like India which did not have advanced technology, could not uplift itself educationally. Hence; the merits and demerits of online education system should be focused for structural improvement.

Merits of Online Education System:

1) Provide Digital Platform:

The impact of Covid-19 on education sector has been very adverse. Hence; the online education system was very much required for India far as its population is concerned. When the entire Nation was locked down, the question of education was one of priorities of Government of India. The offline education was not possible due to the spread of Covid-19 hence, the online education system was applied at different levels of education. Though it was a new and difficult concept for students and teachers, it was necessary to continue with education. It provided a new digital platform to education sector through which it could be possible for students and teachers to connect with the education. The students could attend their classes from the different places they resided and the teachers could add into their advanced knowledge through online mode.

2) Save Time and Energy:

It has been observed that in the offline education system, the physical presence of students was mandatory as far as the traditional education in India was concerned. However; the Covid-19 pandemic disturbed the traditional education system. Now the physical presence of students has been restricted in the educational institutions. This can be taken as positive sign for students and teachers. The online education system has saved the time and energy of students. They can now attend their classes from their homes with the help of mobile phones and laptops.

3) Time Friendly:

Traditionally, the classes in the educational institutions would be conducted either in the morning session or in the afternoon session. However; the timings of the classes have been changed due to the pandemic. Now the classes are conducted flexibly. Though the classes are conducted as per time table, some flexibility is provided due to network issues. The students can join the classes even if they face difficulties in the network. The teachers can get their students connected at any time in the lecture. So the online learning system is very much time friendly.

4) Fastest Mode Learning:

Unlike the traditional offline education system, the online education system is updated and fastest mode of learning. The teachers can answer the questions raised by the students with the help of the online connected devices. The students can learn many things in the form of PPTs and diagrams. The online education system is more effective in order to explore the new things than the traditional education.

5) Enhancement of Digital Literacy:

The Covid-19 pandemic has certainly brought out many positive changes in the society. The Digital Literacy is not exception for the fact. It has been found that the students and teachers from semi-urban and rural areas do not have digital proficiency due to the non availability of technical devices and negative mind-set about the use of technology. The Covid-19 pandemic has forced us to have command over the digital learning platform. Today, the online learning process is being carried out throughout urban and rural parts of the country.

6) Restrict the Spread of Infection:

The online learning system is very much useful in the education sector as it has restricted students from attending the institutions. The system helped the students, teachers and parents to stay away from Covid-19 infection. The online learning system is safe and sound.

Demerits of Online Learning System:

1) Economically Expensive:

Although the online education system is useful, it is expensive for some sections of society. The people engaged in the unorganised sector do not have the enough employment due to the Covid-19 lock down. Such people face the starvation. Many of the people migrated to their hometowns in order to survive on whatever money they earned. Such sections of society face the bitter reality of poverty. They did not have enough money to spend on the basic needs so internet facility for online education system was out of their capacity. It has been observed that the large number of students could not attend the online classes due to poverty.

2) Technical Illiteracy:

it is a general observation that many of the students are not technically sound. Such students could not relate themselves to the technology. There were some students who went back to their villages where they did not have any access for online education system. Unfortunately, such students could not continue with the education due to technical illiteracy. The uneducated parents could not understand the complicated online process due to their own illiteracy. Such parents were unable to guide their children. Hence; technical illiteracy was the barrier in the way of online education.

3) Less Attendance:

The traditional offline education system had a great impact upon the minds of students. They used to attend the classes regularly due to physical presence in the class. However, the online education is a very complicated system and many students have created negativity in their minds about the present situation. Hence, such students do not attend the classes regularly. The less attendance of students is a matter of serious concern.

4) Less Productivity:

It has been observed that the online education has not benefited to the entire student's community. The students who are poor in their performance in the subjects like Mathematics, Science and English, they do not pay attention to such lectures. They find it very much boring to attend the lectures of these technical subjects. The skills of teachers are also not developed up to the expected level so they cannot teach the subjects as effectively as in the offline classes. This resulted into the less productivity of the online education system.

5) Constant Use of Devices:

In the online classes, the students have to use their mobiles and laptops for quite a long time. They have to use the headphones for better audibility. However; the constant use of mobile is harmful for eye sight. The more sound in the headphone can create hearing problems.

6) Lack of Social Interaction:

In the offline classes, the students - teachers' interaction takes place with great productivity. The students can get know so many things from their teachers in and out of classroom. Unfortunately, such social interaction does not take place in online classes. As far as the personality development of students is concerned, such social interaction is of unique importance.

7) Network Issues:

This is the most worried problem in the online education system. The lack of the internet connectivity causes the anxiety among the students and teachers. In the smaller villages, cities and towns, a consistent

connection with decent speed is a problem. Many of the rural areas do not have facility of mobile towers hence, there is not internet facility. This also reduces the interest of study among students. Without consistent internet connection for students and teachers there can be lack of continuity in the online learning process. This is detrimental to the education system.

Conclusion:

The education plays a very vital role in the process of Nation building. The process is directly associated with the quality of education in the Nation. The Covid-19 pandemic has adversely affected the normal life of human beings. The human beings have experienced the ups and downs in the personal and professional life. The present pandemic can be considered as both positive as well as negative implications. The online learning process is not exception for this fact. The nationwide lock down closed the doors of our development. However; the use of online learning platform was one of the most important and essential services as far the future of the country is considered. In the country like India, where the large numbers of classes are held only in offline mode, the concept of online education has its merits and demerits in its application. The online education is a completely new concept that is being followed in Indian education system. Its requirements are very different and difficult as far as the traditional education system is considered. Such requirements can be fulfilled in the developed cities as they are technologically very sound. The rest of the semi-urban and rural areas do not have internet connectivity, trained teachers, digital devices and positive mindset. Hence; India has witnessed the concept of 'Digital Divide'. However; the online education has not only created many challenges but also evolved various opportunities to cope up with the present crisis of Covid-19. The fact that online education system has enhanced the hidden capacities of students, teachers and parents cannot be ignored. Every technology has its own limitations into implementation but no technology is entirely harmful to the entire targeted community. Hence; in the present crisis, the use of online education platform is only way out to maintain the educational development in India.

References:

1. Kundu, Protiva (2020a): "Indian education cannot go online"- only 8% of homes with young members have computer with net link" <http://scroll.in/article/960939/>
2. Ministry of Human Resource Development (MHRD) (2020b): Report Digital Education; http://mhrd.gov.in/sites/upload_files/mhrd/files/India_Report_Digital_Education_0.
3. UNESCO (2020a): Global Monitoring of School Closures Caused by COVID-19; accessed as on 25th August 2020; <http://en.unesco.org/covid19/education> response.
4. Press Information Bureau (PIB) (2020b): "for training the remaining 24 lakh teachers and school heads NISHTHA has been customized for online mode" MHRD https://www.mhrd.gov.in/sites/upload_files/mhrd/files/PR_NISHTHA_0pdf.
5. Ranjan, Abhishek. "ICT in Schools: A ray of hope in Covid-19 darkness" *The Daily Guardian*; August 21, 2020. <https://thedailyguardian.com/ict-in-schools-a-ray-of-hope-in-covid-19-darkness/>
6. Bhatnagar, Nandini. "The pandemic baring digital divide in India". *Global Goals 2030*; July 7, 2020 <https://www.oneworld.net/updates/news/pandemic-baring-digital-divide-india>.
7. Sankar, Apurva. "Education in Times of COVID: How Students, Teachers & Parents are dealing with the Pandemic" *The Bastion*; April 29, 2020. <https://thebastion.co.in/politics-and/education-in-times-of-covid-how-students-teachers-parents-are-dealing-with-the-pandemic/>
8. "How important is technology for education in India during the pandemic". *Express Computer*; July 27, 2020
9. <http://www.education.ie/en/schools-colleges/information/information-communicationstechnology-ICT-in-Schools/Digital-Strategy-for-schools/building-Towards-alearning-Society-Anational-digital-strategy-for-schools-consultative-paper.pdf>.
10. Manodarpan Portal: <http://manodarpan.mhrd.gov.in/>

Cyber Attacks: With Special Reference To Cyber Security In Higher Education

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Abstract

If the weather condition serves as an unpleasant reminder to fix a leaky roof, then COVID-19 has been an ideal storm for colleges and universities. The pandemic has made addressing cyber security weaknesses as an urgent operational necessity in higher education. Between the changing nature of how education is delivered, and emboldened threat actors, higher education now faces an unprecedented threat level. The number of attacks on educational institutions has grown faster than in any other sector. While the move to remote learning is an obvious culprit for this dramatically increased threat level, it's not the sole cause for concern. Higher educational institutions were already vulnerable before the pandemic, the rise in remote learning has only exacerbated the existing problems. Therefore, there is a need to have a proactive approach towards cyber security in higher education as the higher educational institutions are prone to the rising cyber threat levels due to the lack of cyber security systems. There has to be a combination of cyber security awareness training programs targeted at students, faculty and staff coupled with stringent cyber security solutions. This will enable effective cyber security practices in the education sector. This article aims to lay the foundation for future discussions on the subject of handling cyber threats and cyber attacks in higher education.

Keywords: COVID-19, higher education, cyber attacks, cyber threats, cyber security.

Introduction

“The University of Hertfordshire has suffered a devastating cyberattack that knocked out all of its IT systems, including Office 365, Teams and Zoom, local networks, Wi-Fi, email, data storage and VPN” reported ZDNet, a business technology news website on 16th April 2021.

The cyberattack against the New York's Monroe College in July 2019, was considered as a serious setback in the education sector. The attack brought down Monroe College's website and e-mail system and created disruptions to its online courses and operations at its three campuses. The computer system hacked by someone demanded a \$2 million ransom. Before the pandemic, in September 2017, University World New, the world window on higher education reported, “Among the continent's most recent targets were Zimbabwe's National University of Science and Technology and the Harare Institute of Technology. According to a report in the online Chronicle, the institutions' websites were hacked and the servers hosting both website and emails were temporarily out of control”. The education technology, as it is famously referred to, always existed but, the Covid-19 pandemic has completely changed the educational forums and has brought the education technology to mainstream. It would be correct to state, that there's a 360-degree change in how educational institutions, including colleges and universities operate today and the harsh reality is that these changes are here to stay. While educational institutions adopt the new-age virtual platforms for imparting education, concerns of digital equity and cybersecurity are growing expeditiously. Cyber threat is a fast-emerging universal problem. Irrespective of a small or medium enterprise, a company listed in fortune 500, an individual buying a smart device or being a cyber security expert, one must be conscious of cyberthreat. Likewise, the education sector is not immune to cyberthreat and is rather considered as most vulnerable to cyber adversities. The abuse of technology by cybercriminals not only ruin the education sector but also impact numerous lives undercover in the sector like staff, students, alumni etc. In the midst of these, awareness of Cybersecurity in higher education fraternity including students, faculty, and employees is vital in prevention of cyber-threats. It must begin from building a resilient mind-set. The question is no longer a matter of “if”, rather “when”. To add, the concept of higher education cybersecurity encompasses applying bandages too after an institution has faced a threat. It suggests of implementing more effective security measures in place.

Cyber Attacks, Cyber Threats and Cyber Security

With the advancement in computers, internet, Bluetooth, Wi-Fi, and other digital system and devices, the terms “Cyber Attacks”, “Cyber Threats” and “Cyber Security” are recognized as popular buzzwords.

“Cyber threats are the chances of malicious attempts to damage or disrupt a computer network or system and are called cyber attacks when these possibilities turn into a genuine effort.” A cyber-attack

can be originated through viruses, worms, trojan horses, rootkit, botnet, or spyware that disrupt the digital system. The aim of cyber attacks is to obtain unauthorized access to personal data, to destruct and steal away the sensitive information. In most cases, the words terms cyber-attack and cyber threat are used interchangeably in several literatures but the underline difference between these two words is intention and actions. ***“When a malicious program is developed with an intention to breach cyber security is called a cyber threat and when it is actually used for intrusion into the system is become the potential attack”.***

The cybercriminals can employ numerous techniques, including socially engineered attacks like phishing, spear phishing and spoofing, which deceive users to share login credentials or other sensitive personal data that can help to breach system. Cyber threats can broadly be of three forms:

- malware,
- distributed denial of service (DDoS) attacks and
- ransomware.

Primarily, malware, in general is a type of malicious program that can damage the computer system, provided however, the victim clicks on the link shared. Whereas the second type i.e. ransomware automatically downloads from an email or website and does not require the victim to click a link to download the malicious program. Lastly, the DDoS attacks are meant to overload web traffic and are not intended to acquire access to the computer system. Such attacks cause the websites to temporarily shut down, and the owner may face loss in revenues.

The International Telecommunication Union (ITU), a specialized agency of the United Nations for information and communication technologies states, ***“Cyber security is the collection of tools, policies, security concepts, security safeguards, guidelines, risk management approaches, actions, training, best practices, assurance and technologies that can be used to protect the cyber environment and organization and user’s assets. The general security objectives comprise of the following:***

- ***Availability***
- ***Integrity, which may include authenticity and non-repudiation***
- ***Confidentiality”***

Cyber security is pertinent since different organizations, be it governmental, military, corporate, financial, or medical collect, analyze, transmit, process, and store large amounts of sensitive information and data on various electronic devices. The organizations have wide range of data including intellectual property, monetary data, sensitive personal information, or other forms of data of which unauthorized access or exposure could have adverse consequences. With growing volume and complexities of cyberattacks and cyber threats, the agencies who are assigned to protect information, need to keep upgrading in order to safeguards its and its user’s data.

Cyber Attacks And Cyber Threats Affecting Higher Education

When one speaks to people from other industries not belonging to education sector, the general reaction is always surprising. People at large are unaware about the cyber security challenges faced by higher education. Commonly, one doesn’t realize that unlike national level cyber security, the colleges and universities are equivalent to small cities which possess almost every kind of critical and sensitive data. Indeed, colleges and universities store and process a large volume of data, from student records to valuable intellectual property, which, if robbed or compromised, could pose substantial damage beyond the walls of the university. The risks that ranks first in the list for an educational institution is reputation. The prime responsibility of a university is welfare and wellbeing of its students, more specifically, when the students are on university’s virtual space. When a university faces data breach which compromises the critical personal data of a parent or a student, it affects the trust and relationship, eventually trickling down to substantial enrollment loss of the university. Another major setback is operational loss. Cybercriminals are aware of monies spent by the premium institutions on safeguarding student’s records and ongoing operations. This gives them a chance to demand huge ransoms for a returning to normalcy. Particularly, in a ransomware cyber attack, students, staff and teachers may be unable to access virtual space and servers must be temporarily shut until the status quo is maintained. This results in loss of working days, monies on hold, no classes or tests for students and above all the headlines that ruin reputation etc. are the far-reaching effects that an institution faces. Apart from the above, there are new virtual modes of payment using which the parents prefer making payments. The payments and related data as well need protection such that cyber-attackers are unable to find a weak spot to interrupt. Universities are an easy target for espionage too, as they are data points of research and hold valuable intellectual property. Cybercriminals implement cutting edge technologies to exploit institution’s systems which are often outdated and difficult to perceive for two main reasons: First, the universities mostly don’t have sufficient finances to invest either in cyber security tools or softwares. Secondly, the bring your own device (BYOD) is most prevalent

practice in educational institutions. Taking into consideration that BYOD extends the network perimeter to huge extent, it becomes wider and more vulnerable for cyber attacks. The new addition with the pandemic is remote access to the education fraternity.

Higher Educational Institutions and Cyber Security in India

The Indian Cyber Crime Coordination Centre (I4C), which falls under Ministry of Home Affairs (MHA), is a focused on strengthening the capabilities of prevention, detection, investigation and prosecution of cybercrimes in a coordinated and comprehensive manner. The University Grants Commission (UGC) had written to all universities in India on various measures which can be taken to create awareness like publishing Twitter handle @CyberDost of MHA, to arrange competitions, workshops on cybercrimes etc. In addition to these actions, the Indian cyber jurisprudence needs the following legislative steps for protection of rights of the cyberthreats in education sector

- appropriate amendments to the mother legislation Information Technology (IT) Act, 2000
- enforcement of Personal Data Protection Bill, 2019
- a dedicated National Cyber Security Strategy

Suggestions and Conclusion

Due to the dramatic shift to remote learning and operations from 2020, threats are at an all-time high. We've seen a rise in menacing activities and challenging risks to institutional security and privacy. However, this doesn't mean colleges and universities should feel helpless. Although there's no single tool to prevent all cyberattacks, higher education leaders can take proactive steps to curb and remediate many breaches by prioritizing several basic cyber security strategies:

- 1) Installation of threat detection tools, such as data loss prevention software which analyzes a security ecosystem to quickly identify malicious activity so that mitigation efforts (sometimes as easy as changing passwords) can be put in place.
- 2) The development of a formalized and well-documented policy for IT security that sets standards of behavior for faculty, staff and students' digital activities as well as those in the executive suites. This must also outline which systems should be in situ to guard data and assign roles and responsibilities.
- 3) Institutions must offer regular information security education and training to students, faculty and staff and must not wait until a data breach occurs to put a cyber security strategy in place.

While there exists no magic bullet to prevent all breaches, protection is a must which can be enhanced through continuous training for all users. In the era of BYOD, the responsibility of preventing attacks lies with all and not the IT teams alone. To conclude, "Zero Trust" is the principle that nothing attempting to interact with your network environment should be trusted by default. For education institutions in this new normal, it is the only way to operate effectively.

References:

1. <https://www.zdnet.com/article/cyberattack-on-uk-university-knocks-out-online-learning-teams-and-zoom/>
2. <https://www.nydailynews.com/new-york/nyc-crime/ny-monroe-college-hacked-bitcoin-20190711-uhmv5a4mz5gxja6od7lme37h7e-story.html>
3. Abomhara, M. (2015). Cyber security and the internet of things: vulnerabilities, threats, intruders and attacks. *Journal of Cyber Security and Mobility*, 4(1), 65–88
4. Awan, J. H., Memon, S., Memon, S., Pathan, K. T., & Arijo, N. H. (2018). Cyber Threats/Attacks and a Defensive Model to Mitigate Cyber Activities. *Mehran University Research Journal of Engineering and Technology*, 37(2), 359–366. <https://doi.org/10.22581/muet1982.1802.12>
5. <https://www.universityworldnews.com/post.php?story=2017092208032052>
6. <https://www.intechopen.com/online-first/bibliometric-analysis-of-cyber-threat-and-cyber-attack-literature-exploring-the-higher-education-con>
7. <https://www.unicef.org/bulgaria/en/press-releases/unicef-launches-campaign-digital-literacy-teenagers-and-online-safety>
8. <https://www.itu.int/en/ITU-T/studygroups/com17/Pages/cybersecurity.aspx>
9. <https://collegiseducation.com/news/technology/cybersecurity-higher-ed-understanding-vulnerabilities-preventing-attacks/>
10. <https://www.theleaflet.in/ugc-asks-higher-education-institutions-to-publicize-mhas-cyber-security-twitter-handle/>

Literary Depiction of Kashmir: An Analysis of Shahnaz Bashir's Novel *The Half Mother* *Ifshana Wahid*¹ and Dr. Nancy²

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Abstract

*Kashmir is a significant theme in the artistic writings of various academicians and professional authors all over the world. Some have acknowledged its fascinating beauty, while others have shown a different aspect in the depiction of paradise. The Ministry of Utmost Happiness, the second novel by Booker Prize winner Arundhati Roy, is an example. Similarly, the novelist, Kashmir gave rise to such outstanding ingenious authors who burn the midnight oil to provide a voice to the problems and sufferings of the people of Kashmir regarding their unending battle for freedom, and Shahnaz Bashir is one of them. The present study will focus on his novel *The Half Mother*, which chronicles the terrible narrative of a woman fighting for her existence, honour, and justice. The study seeks to investigate all of the issues inherent in the novel that provided a new meaning to the phrase "Kashmir, a paradise on Earth."*

Key Words: Kashmir, Conflict, Humiliation, Assassination, Disappearance.

Introduction

The uppermost alpine area of North India, Kashmir, has long been a favourite destination not just for visitors, but also for renowned artists, musicians, and poets from throughout the world. Kashmir was considered "Paradise on Earth" by the Mughals because of its mild climate, the snow-capped Himalayas, lush green valleys, coniferous kissed hills, fresh ponds, glacier-fed rivers and waterfront gardens. Pandit Jawahar Lal Nehru, the first prime minister of India, was so fascinated with Kashmir valley that he usually compared its beauty to a beautiful lady. He goes on describing the valley, "Like some supremely beautiful women, whose beauty is almost impersonal and above human desire, such was Kashmir in all its feminine beauty of river and valley and lake and graceful trees" (Akbar 436). Amir Khurusu, a prominent Persian poet, once expressed the same notion when he said, "Agar firdous baroye zameen ast, hami asto, hami asto, hami ast," which means as "If there is paradise on earth, it is here, here, here" (Sande 119). There is no doubt that the poet's statement might have been changed if he had been a poet of our century since the full picture of Kashmir has shifted and it has become no less than John Milton's 'Pandemonium'. The valley has been engulfed in terror and upheaval since 1989. In the so-called paradise on earth, uprising, crackdowns, interrogation, arrest, assassinations, staged encounters, and curfews have become regular occurrences. In fact, "half a million heavily armed soldiers have made Kashmir the world's most militarised zone" (Roy 57). It is also estimated that more than one lakh persons have been slaughtered and many have gone missing throughout the violence, and there are others who have left their homes, as Agha Shahid Ali describes:

Empty? Because so many fled, ran away,
and became refugees there, in the plains,
where they must now will a final dewfall
to turn the mountains to glass. They'll see
us through them-see us frantically bury
houses to save them from fire that, like a wall,
caves in. The soldiers light it, hone the flames,
burn our world to sudden papier-mache... (Ali 26)

The Kashmir conflict has been a recurring issue in the writings of well-known writers such as Arundhati Roy, Basharat Peer, Mirza Waheed, and others, whether indirectly or directly. Similarly, the idea has found its way throughout the story of the novel *The Half Mother* by Shahnaz Bashir, the most powerful voice among modern revolutionary authors. The novel was published in 2014 and is the gut-wrenching record of maternal affection.

Depiction Of Kashmir In The Novel

In the narrative, Kashmir is portrayed as a region where killings, bloodbaths, brutality, and torment, both physically and emotionally, have been embedded in the inhabitants who are living there. As previously said, the work is a chronicle about the life of a woman named Haleema who fights for her existence, honour, and justice. The novel is set in Natipora, Kashmir's core region, and is the principal portrayal of maternal affection who becomes a victim of army brutality. As the narrative progresses, it becomes clear that Haleema, the tragic character, must suffer catastrophe after calamity. Her education was

jeopardized when her mother died and she was forced to handle home responsibilities. Her childhood is as bleak as her marriage to a medical assistant who falls in love with a nurse. As a result, her only hope is that her son Imran, who would bring solace to her from her wounded self. However, it is also worth noting that the boy grew up in the environment of the 1990s, when the land was being burned in the name of independence. The novel's plot takes an unexpected turn when Imran's grandfather, Ab Jaan, is humiliated by army troops who wish to build a banker near their home. The boy, who has boiling blood in his veins, cannot stand the disrespect, which Bashir describes as, "Imran furiously sprinted towards the trooper who had punched Ab Jaan, ramming into his legs and pummelling his thigh. 'How dare you touch my Ab Jaan? How dare... I'll kill you,' Imran screamed and growled fiercely" (Bashir 27).

Another tragedy for the family is the cold-blooded assassination of Ab Jaan, Haleema's father, by security forces led by Major Kushwaha. Bashir put it as:

Three bullets were pumped into Ab Jaan. One on the neck. One in the heart. One in the stomach...Haleema frenetically slapped her face and her chest and pulled her hair. Blood began to gurgle out of Ab Jaan's throat. She fainted. The entire neighbourhood was watching... Men and boys jumped off and rushed to help. Major Kushwaha coked his gun... The major fired some warning shots. 'No one will come here. Whoever does shall meet the same fate!' he announced. (Bashir 49)

This jolt is accompanied by an even more shocking episode, which shapes the novel's core principle, when Imran is abducted by the aforementioned major on the basis of mere guess and false pinpointing by an informer. Haleema is not able to believe that her beloved son has been forcibly taken, and she begins appealing and asking Major Kushwaha, as recounted by the novelist, "What is his crime? What has he done? You are mistaken! You know you are mistaken! Why do you this to me... 'I beg you, *balaai lagai*, he is innocent!" (Bashir 56). The appeals don't affect the major, which exposes his brutality and heartlessness. She goes on to appeal more, "Please brother, I have no one except him. Leave him for God's sake! (Bashir 57). Haleema is forced to accept the harsh and undeniable fact of her son's abduction. She shouts, and all of her neighbours' rush to comfort her distressed heart. Bashir writes:

In a few minutes the whole neighbourhood was shaken awake. Shafiq pulled a stupefied Haleema into her lap. '*Gaed ha kaertham, patro!* I am a perforated soul, my son', Haleema muttered in a singsong voice. Two frozen trails of tears glistened on her cheeks. (Bashir 57)

It was now her major responsibility to find Imran, for whom she moved from one place to another, visiting police station after police station, prison after prison, approaching officials, and even selling all her belongings, however, all her efforts were futile. Dr. Ihsan Milk writes in this regard:

Imran's arrest makes the beginning of the most agonizing phase of Haleema's life, the repercussions of which take a heavy toll on her physical and psychological health. She now embarks on a long, interminable, and demoralizing journey. A journey of the unavailing endeavours of trying to find out the whereabouts of her only son. She moves from one army camp to another looking for her only son but no officer or cop at any of the camps claims to have seen him, she runs to the official electronic media to request them to bring her plight to the notice of the authorities only to come across a few abrasive men whose harsh words push her further down the vortex of despair. (Ihsan)

She becomes a mental patient and dwells in the company of Imran's clothing. The only activity she could do now is take off the clothing and embrace them while singing a heart-breaking song:

Kyazi tscaa 'i roodham maah-i-nam ke hilaal tai?

Doh goum pyaraan, chhi na tsalaan malaal tai?

O crescent moon, why do you hide from me?

Sulking as you are, why have you kept me? (Bashir 70)

The story's denouement is more tragic when Haleema is admitted to a hospital and passes away with an unachieved longing and wails on her death bed only three words that signify the maternal affection of those women whose children have vanished and are displaying their pictures but have no information about their loved ones, if they really are dead or alive. The words are, "Imran Saeba? Aakha? Imran. Have you come?" (Bashir 178).

Conclusion

In light of Shahnaz Bashir's, *The Half Mother*, one can say that military subjugation and crimes have severely harmed the lives and fates of the people of Kashmir. It is the armed force's atrocities that result in orphanages and widowhood. The author has bravely challenged the Indian army's injustice and brutality on the naive and feeble people of Kashmir. On one side of the narrative, portrays the panoramic image of life in Kashmir valley as well as the mothers who are being brutalised by the armed forces. On the other side, the novel addresses the problems of Haleema in particular, and Kashmiri people in general,

who are forced to live in the abyss. This novel, like *Curfewed Night* by Baharat Peer and *The Collaborator* Mirza Waheed, draws our attention to the suffering of the people of Kashmir valley.

Works Cited

1. Akbar, M.J, *Nehru: The Making of India*. London, Penguin Group, 1988.
2. Ali, Agha Shahid. *The Country Without a Post Office*. Mumbai, Modern Classics, 2013.Print.
3. Bashir, Shahnaz. *The Half Mother*. Noida, Hachette, 2014. Print.
4. Malik, Ihsan. "The Half Mother- A Novel to Cherish". *Greater Kashmir*, 2014
<http://www.greaterkashmir.com/news/gkmagazine/thehalfmotheranovelt cherish/127928.html>
5. Roy, Arundhati, et al. *Kashmir: The Case of Freedom*, London, Verso, 2011.
6. Sande, Sukhi. *Kurbani: The Ultimate Sacrifice*. Lucknow: Online Gtha – The Endless Tales, 2017.Print.

Impact of irrigation facilities on cropping pattern in Sangli district of Maharashtra

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Abstract

Since 1950 India has passed through several phases in agricultural development. After the green revolution, there has increase in agriculture production due to increase in irrigation facilities, use of high yielding varieties, fertilizers and insecticides. Considering this fact, an attempt has been made to study the changing cropping pattern and find out impact of irrigation on them for present study. The tables and calculations are made with available secondary data sources. Rice crop is major in Shirala tehsil. However Sugarcane is concentrated in Walwa, Miraj and Palus tehsil. The major reason of the changing cropping pattern in the study area the availability of various major irrigation projects which are undertaken by government of Maharashtra to overcome the frequent drought conditions in the district.

Introduction:

India is predominantly an agricultural country. Nearly 65 per cent of the Indian population is engaged in agriculture sector directly or indirectly. In spite of the rapid growth of industries and service sector in the study area, agriculture still is an important economic activity. It is mostly of the intensive subsistence type with an emphasis on the production of food grains. Some crops like sugarcane, oilseeds, vegetables and fruits etc. are grown for the market validating their classification as commercial crops. (Tirth, 2002) Irrigation development in the study area has to be viewed in the context of the climatic conditions, especially rainfall which is unevenly distributed and irregular. The study area is semi-arid and not a large difference in the rainfall, therefore famines have occurred several times in the study area. Therefore irrigation is vital for the success of agriculture in the study area. Irrigation facilities are well developed in some parts of the study area. At present, the irrigation is practiced in the study area and it is from wells, rivers, tanks and various major irrigation projects.

Rational Of The Study:

Over large areas in the study area are found the rain fed crops. This is known as 'Jirayat'. Here the farmers are entirely dependent on the nature of the crop production. Most of the farmers have successfully adopted dry farming techniques. In contrast, 'Bagayat' is an irrigated land where labour and water intensive farming is practiced. Some crops like sugarcane are entirely dependent on irrigation. However irrigation usually supplements rain to strengthen the main crops. The regional variations in the cropping pattern are apparent because of spatial differences in agronomic, economic and cultural conditions. In the study area various soil types, irrigation facilities and rainfall also affected the cropping pattern. The zones of low and unreliable rainfall support millets and pulses. High and reliable rainfall zones support rice cultivation. The higher the intensity of irrigation, there is the lesser the area under millets and pulses and vice versa (Singh, 1975).

The study area:

Sangli district is one of the district of Maharashtra states. It is lies between 73° 42' to 75° 40' east longitude and 16° 45' to 17° 33' north latitude. It is bounded by districts Solapur and Satara in the north, Bijapur in the east and Belgaum in the south. The total geographical area of the district is 8572 sq. kms. The average height of the district is 553 m. above mean sea level. There are 10 tahsils, 731 villages and 8 towns in the district. Out of the total geographical area 629200 hectare net area is under agriculture. In the study area Basalt is the main rock type. Some parts of the district especially the river valley are occupied by the black soil. Bauxite deposits are found in the western part of Shirala tehsil. The climate of the Sangli district is typically monsoonal. The average rainfall of the district is 413 mm in 2019. Highest rainfall observed in Shirala and lowest in Atpadi tehsil.

Objectives:

1. To study the cropping pattern in Sangli district.
2. To study the impact of irrigation facilities on changing cropping pattern in the district.

Database And Methodology:

The present data is based on only secondary sources. It is collected from District Census Handbook, published and unpublished books and materials. Collected data processed with various

statistical techniques. Data and information of crops were analyzed on the basis of using percentages, statistical techniques. Tables and graphs are prepared.

Data Analysis:

Intensity of Irrigation in Sangli District:

Table I Sangli District: % of Net Irrigated Area to Net Sown Area (2000-01 to 2018-19)

Sr. No	Tehsil	2000-01			2018-19			Change in Volume
		Area Sown	Area Irrigated	%	Area Sown	Area Irrigated	%	
1	Kadegaon	0.00	0.0	0.00	51701.1	29276.8	56.63	56.63
2	Khanapur	115370.0	21664.0	18.78	47331.6	18749.1	39.61	20.83
3	Tasgaon	92667.0	20527.0	22.15	63599.5	29544.4	46.45	24.30
4	Miraj	108013.0	30798.0	28.51	95182.9	46975.7	49.35	20.84
5	K. Mahankal	50594.0	11425.0	22.58	56358.7	19966.6	35.43	12.85
6	Jat	154886.0	31038.0	20.04	152295.3	44218.2	29.03	9.00
7	Shirala	45036.0	13440.0	29.84	37925.1	19757.1	52.10	22.25
8	Walwa	97054.0	35456.0	36.53	76808.6	48983.4	63.77	27.24
9	Palus	0.00	0.00	0.00	35796.5	22758.9	63.58	63.58
10	Atpadi	48972.0	12152.0	24.81	44823.8	17550.3	39.15	14.34
District Total		712592.0	176500	24.77	661823.10	297781	44.99	20.23

Source: District Socio-Economic Review and Statistical Abstract, Sangli District. (2005-06 and 2018-19).

Note: Data of Kadegaon and Palus is included in Khanapur and Tasgaon tehsil for year 2000-01.

In 2018-19, the highest area under irrigation has about 63.58 per cent in Palus tehsil, followed by Kadegaon 56.63 per cent and Walwa 27.24 percent. Tasgaon 24.30 per cent, Shirala 22.25, Miraj 20.84, Khanapur 20.83 per cent, Atpadi 14.34, Kavathe Mahankal 12.85 per cent and Jath 9 per cent.

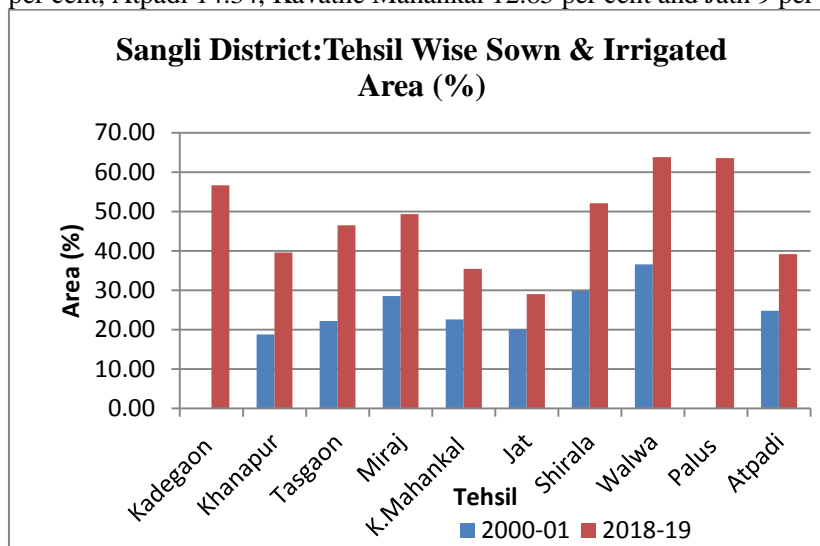


Fig .1

In year 2000-01 percent of total irrigated area in district is 24.77 which is increased up to 44.99 percent in year 2018-9. The change of volume is 20.23 percent in 18 years period. It is observed that the area under overall irrigation has increased.

Changing cropping pattern in Sangli District:

Table II. Sangli District: Tehsil wise Cropped Area (Area in %.) 2000-01

Sr. No.	Tehsil	Crops									
		Rice	Wheat	Jowar	Bajara	Total Pulses	Total Grains	Groundnut	Soybean	Cotton	Sugarcane
1	Shirala	67	4	5	2	4	67	10	4	0.0	12
2	Walwa	5.4	13.8	7.9	0.1	6.7	6.4	8.6	15.5	0.0	31.9
3	Palus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	Kadegaon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

5	Khanapur	2.7	13.7	15.0	9.8	22.0	14.7	19.0	10.4	15.9	9.1
6	Atpadi	0.0	11.6	15.1	19.4	3.3	12.7	1.0	0.0	14.0	2.8
7	Tasgaon	8.4	10.8	14.9	0.7	11.2	11.1	26.0	21.8	0.3	16.0
8	Miraj	0.5	15.4	9.0	3.8	13.1	9.1	9.9	24.4	8.4	20.8
9	K. Mahankal	0.0	10.3	9.9	15.0	9.4	10.4	2.2	2.5	8.0	3.7
10	Jath	16.3	20.3	23.1	49.0	30.2	28.8	22.9	21.5	53.5	3.7

Source: District Socio - Economic Review and Statistical Abstract, Sangli District. (2005-06).

Note: Data of Kadegaon and Palus is included in Khanapur and Tasgaon tehsil.

Table II reveals that the tehsil wise percentage of different crops to the total cropped area in year 2000-01. The table observed that the highest percentage of rice is found in Shirala tehsil due to heavy rainfall. Atpadi and Kavathe Mahankal tahsils have no rice crop because these tahsils are under drought prone region. In Jat tehsil, highest percentage of pulses is shown in the table. The highest percentage of the total grains is shown in Shirala tehsil (66.5%) and lowest in Miraj tehsil which is 9.1 per cent. The table also shows the highest percentages of sugarcane in tehsil Walwa because of the availability of abundant irrigation facilities.

Table III. Sangli District: Tehsil wise Cropped Area (Area in %) 2018-19

Sr. No.	Tehsil	Crops									
		Rice	Wheat	Jowar	Bajara	Total Pulses	Total Grains	Groundnut	Soybean	Cotton	Sugarcane
1	Shirala	78	4	2	0	3	6	7	7	0.0	8
2	Walwa	17.9	24.3	3.4	0.0	11.6	6.4	12.5	31.9	0.0	29.2
3	Palus	2.6	9.9	2.1	0.0	1.2	2.3	7.1	11.3	0.0	12.4
4	Kadegaon	1.0	9.3	7.8	1.5	5.8	6.2	8.6	7.9	7.7	19.3
5	Khanapur	0.0	5.3	8.2	5.1	11.5	8.2	11.7	5.8	6.0	5.1
6	Atpadi	0.0	2.4	8.4	17.9	1.7	7.4	7.7	0.0	31.3	1.1
7	Tasgaon	0.0	5.3	11.9	1.0	10.4	9.5	8.9	9.8	0.0	5.7
8	Miraj	0.4	24.2	11.2	5.3	16.9	12.6	9.7	25.5	0.0	14.7
9	K. Mahankal	0.0	3.7	11.0	18.6	11.6	11.1	11.9	0.9	9.7	3.2
10	Jath	0.0	11.9	33.8	50.3	26.8	30.5	14.7	0.0	45.3	0.9

Source: District Socio - Economic Review and Statistical Abstract, Sangli District. (2018-19).

Table III reveals that the tehsil wise area of different crops in year 2018-19. The table shows that 78 per cent area of rice is in Shirala tehsil. It is increased from year 2000-01 to 2018-19. The highest percentage of sugarcane is found in the tehsil Walwa which is 29.2 per cent, Kadegaon tehsil 19.3 per cent and Miraj 14.7 per cent. Because in this tahsils more water available due to the lift irrigation projects irrigation facilities.

Temporal changes in cropping pattern:

In last two decades some changes of cropping pattern in Sangli district are observed. The farmers have been adjustment that irrigation and intensification marketing facilities. The volume of change from 2000-01 to 2018-19 in the percentage for every tehsil is calculated for the individual crops. These are positive as well as negative also. In Shirala tehsil, the percent of rice is increased but total grains are intensively decreases. In irrigated tahsils area under soybean and turmeric crops increased. In Jat tehsil the area under rice, wheat, cotton and sugarcane have decreased and Jowar and Bajara increased in the last two decades. In Miraj tehsil all crops area is increased. Thus heavy rainfall area like Shirala tehsil rice is most important crop than other crops. Sugarcane is mostly cultivated in irrigated areas because availability of water and in drought prone region food grains and pulses are most important crops.

Conclusion:

In Sangli district in the irrigated areas farmers taken the cash crops and used modern techniques, but in low rainfall areas in the district existing cropping pattern is more oriented to animal husbandry and grow drought resistant crops. It may be stated that the farmers used new agricultural technology based on fertilizer use and efficient cropping pattern. The trend of the farmers have taken to cash crops like cotton, soybean and sugar etc. is increased.

References:

1. *District Socio - Economic Review and Statistical Abstract, Sangli District. (2005-06). Pp. 61-65.*
2. *District Socio - Economic Review and Statistical Abstract, Sangli District. (2018-19). Pp. 58-64.*
3. *Singh Jasbir (1975): 'An Agricultural Atlas of India: A Geographical Analysis'. Vishal Publications, Kurukshetra. Pp. 242-244.*
4. *Tirth Ranjit, (2002): Geography of India, Rawat Publication, New Delhi. P 18.*

Covid -19 and Educational Issues in India -An Analysis

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Abstract

corona virus has impacted negatively in each segment of the society. As a developing country, India is facing many challenges and issues and education sector is one of them. According to UNESCO report, more than 157 crore students across 191 countries impacted by closure of educational institutions due to covid-19 pandemic and over 32 crore students are affected in India .That is why; to provide good education to the students ,the teachers or educators have adopted new approaches and methods. But Indian education is not free from challenges and issues. Through this paper it is an attempt to find out the major issues or problems which are associated with education in India and are tried to provide suggestive measures.]

Key words -covid-19, education, educational issues, challenges, educational institutions, developing country.

Introduction

Covid-19 is an infectious disease which badly affects on human body. Along with other countries of the world, India is also fighting against covid-19 since January 27, 2020 when the first corona virus case was discovered in Kerala. Slowly, this virus spreads to other states and remote corners of India. By observing the whole situation, the prime Minister of India announced a-21 day's lockdown for the entire country on March24, 2020 for the first time in India. Besides this, from 2020 to present date the government of India has taking several steps and proactive measures to control the virus .Some important steps are-all cross national borders are sealed, restriction for foreigners, international railway services are suspended, all social institutions are closed etc. The lockdown system during covid -19 has impacted negatively in all segments of the society-economy, transport, education, tourism, employment etc. According to the UNESCO report, it is estimated that around 32 cores students including in schools and colleges are affected in India during this covid pandemic. The educational institutions of India have been applied a different way to fight against this crisis. The parents, the teachers, the students all have to face a big challenge to make a good education process.

Objectives

The major objectives of this study are-

1. To enlighten various educational initiatives taken by Indian government during covid-19
2. To analysis about different educational issues of India which arise during covid -19.
3. To provide some remedies to prevent educational issues in India.

Sources of the Study

Newspapers, e-contents, reports of national and international agencies, published journals, e-books, authentic websites etc are the sources used for developing this research study.

Initiatives Taken By Indian Government In Educational Purpose During Covid-19

During covid-19 pandemic, Ministry of education in India has taken many initiatives so that all students can continue their education. .MHRD has developed online platform of learning resources so that the students who live in rural areas without any difficulty can easily take proper education. The initiatives are-

1. **DIKSHA**-It is an online platform only for school education. The full form of DIKSHA is Digital Infrastructure for Knowledge sharing. It provides large number of contents and curriculums. ([website-https://diksha.gov.in](https://diksha.gov.in))
2. **E-PATHSHALA**-It is one kind of mobile app or web portal developed by the National council of educational research and training. It prescribes audios, videos, e-contents, e-books, flip books for class 1 to 12 in different languages. (<https://epathshala.ncert.org.in>)
3. **SWAYAM**-It is an online free course which covers around 1900courses.It includes all subjects of humanities, social science, management, engineering, low etc .It covers subjects of both school and higher levels from class IX to P.G. (<https://swayam.gov.in>)
4. **SWAYAM PRABHA**-It is a group of 34 DTH channels which provide high quality educational programmed. It is much benefitted for those students who live in remote areas and have no internet availability. (<https://www.swayamprabha.gov.in>)
5. **NISHTHA**-The full form of NISHTHA is national initiative for school heads and teachers holistic advancement. It was first launched in online mode at Andhra Pradesh .It is a capacity building programme for improving the quality of school education through integrated teacher training. (<https://itpd.ncert.gov.in>)

6. **National Digital Library**-It has built a repository named 'COVID -19 research resource repository'. It provides various contents for all age group. It is the largest online library which is very relevant for academic purpose. It is managed by IIT Kharagpur .NDLI includes a large study materials such as-e books ,thesis, reports, journals, lecture materials, audio clips ,data ,tables ,tools etc.(<https://ndl.iitkgp.ac.in>)
7. **Educational Issues In India During Covid -19**
8. The education sector of India has badly affected during covid-19 pandemic due to shut down of educational institutions. The major educational challenges or issues in India during this crisis are-
9. **Education through online** –Most of the teachers from school to university level have assigned work to the students through online mode. Zoom, Google meet, you tube, what's up, and Skype etc are different online learning apps are used by the teachers for providing education to their students. Teacher-student meet, parent-teacher meet, educational discussion, conversation all are done through online mode .The higher educational institutions have organized various programmes such as-seminar, conferences, workshops, faculty development programmes, refresher, orientation etc through online mode. Instead of these, students admission, examination, evaluation etc all the important functions are done through online mode. It is also very significant that there are many advantages of online education such as-(a) learning can be done own pace. (b) Economy from time, money, effort. (c) Creates self-motivation. (d) Develops technical skills. (e) Flexibility in learning. (f) improves communication skills etc. Though all the teachers and educators provide education through online mode to their students regarding as the best means but it is observed that online education is unable to provide better education because of some issues, these are-
 1. Adaptability-There are many students who have felt difficulty to cope up with online learning specially, the problems are created for kids learning. Small children can learn in better way in face to face classroom situation rather than online system of education.
 2. Technical issues-There are many students they are totally unaware how to take online classes, they do not know how can be used laptop, computer, Smartphone. For those students online education is useless.
 3. Besides this, for taking online class there must be proper internet connectivity but unfortunately, in India broadband penetration is limited to a mere 29.2% only.
 4. Communication-Teaching-learning both can be succeed through proper communication between the teachers and the students. But it is notified that in online learning many students play the role of passive listeners.
 5. Problems for practical subjects-The students who have more practical papers they are much hampered. Without laboratory, instruments, and apparatus, conducive- environment some subjects cannot be taught.
1. **Problems of rural students**--Covid -19 has badly impacted on rural students of India. The ASER (Annual state of education report) 2020 has reported that around 20% rural students of India had no text books at home,29% children had not engaged in any educational activity ,only 11% students had attended live online class.
2. **Poverty**- Poverty is a major social issue of India. A report conducted by pew research center showed that the wave of covid -19 pushed 75million more people in India into poverty. In India around 22% people of India live in below poverty line. It means in this pandemic situation poverty creates a barrier in educational development in India.
3. **Deteriorate quality education**- online system deteriorates quality education in India because this type of education can provide information only but cannot develop student's level of understanding.
4. **Employment problem**- Employment problem is another serious problem in India which indirectly connected with education sector. India's unemployment rate in 2019 was 5.27% and it raised to 7.11% in 2020 and in June 16, 2021 it increases upto11.4%.There are many causes of increasing of unemployment rate of India. Many people lose their jobs due to shut down of the factories, companies, workshops .Basically the workers of private sectors are badly affected. Instead of this, India witnessed a massive crisis among migrant workers.
5. **Problems for differently able students**- During this covid -19 pandemic situation the physically challenged students, mentally retarded, learning disable etc students are badly impacted. Because they need a special classroom environment with adequate facilities .current online system of education is not very reliable way of education for those students.
6. **Affect on student psychology**- Due to shut down of educational institutions, over loaded home work create mental stress among the students. Many students have suffered from mental diseases such as-

tension ,anxiety, frustration ,depression, hyperactivity ,maladjustment etc. covid -19 pandemic and its related causes which create mental diseases of students are-(a) feeling of loneliness (b)fear of physical disease (c)lack of freedom(d)not having enough work at home.(e)facing a big social change(f)uncertainty towards career(g)fear of losing jobs, unemployment(h)fear of social isolation(i)static life(j)fear of failure etc.

7. **Parents' attitude-** In Indian educational scenario the role of parents cannot deny. In this pandemic situation also many parents create barrier in student's education.poverty, low economic condition, illiteracy etc are some causes for which the parents are unable to realize the importance of education of their children.
8. **Malnutrition-** The students of poor families, remote areas also suffer from nutrition problem .Many studies show that the students were able to find better nutrition through mid-day-meal which are provided in the government schools but due to shut down of the schools they are affected which indirectly hampers in educational progressment and enrolment also.

THE SUGGESTIVE MEASURES

- There is needed suitable governmental plan and policies on education especially in this pandemic situation.
- All the educational institutions must prepare a systematic plan to provide quality education to their students and plan should base on students potentialities, social condition, requirements and needs.
- Mass-media should take much initiative for creating awareness among the people towards education.
- Internet connectivity should be increased in the rural areas in India.
- State governments should take proper initiative to distribute curriculum so that all the students under government schools are able to find in appropriate time.
- Initiatives must be taken to job seekers, researchers, project programmers who are affecting during this pandemic mostly
- Financial assistance must be provided by government to the scholars who studied in abroad.

Conclusion

The covid -19 pandemic has led to a dramatic loss of human life worldwide. As a developing country, India is facing many unique challenges and issues and education is one of them. Indian government adopts various free online learning platforms and open and distance learning courses to cope up with the present crisis. But In India, digital mode of learning is unable to achieve its goal. This digital system creates a disparity between urban and rural students which indirectly decreases quality education. India's socio-economic condition, governmental plan-policies, financial support, social attitude, equal access to education etc are many factors which are associated with educational development. Education is considered as the main instrument of all-round development of the society and it is considered as primary need of any individual. That is why; in this pandemic situation also we all need to be more conscious towards education to make a better future.

References-

1. *Wikipedia: Education in India. Retrieved onJULY26, 2020 from http://en.wikipedia.org/wiki/Education_in_India.Pravat ku,Jean Challenges and opportunities created by covid 19for ODL;A case study International journal for innovative Research in Multidisciplinary Field ,issue 6,p 217-222 posted:2020*
2. *The Indian Express. (2020, June)Digital divide may turn shift to online classes operational nightmare, warm experts*
3. *Kumar, D.N.S (2020).Impact of Covid-19 on higher education. Retrieved from <http://www.highereducationdigest.com>*
4. *Niranjan, P.S (2020).corona virus pandemic Impact on Global Education: A Blessing in Disguise, Sustainable Human sphere, 16, 68-72*
5. *School closure caused by coronavirus.UNESCO Retrieved 21 January 2021*
6. *The impact of covid 19 on education (n.d) VOX .CEPR policy portal.*
7. <http://voxeu.org/article/impact> covid-19-education
8. <http://www.setav.org/en/conronavirus-a-human-security-issue>.
9. <http://www.who.in/csr/disease/coronavirus-infection/faq/en>
10. [http.coronavirus site.www.who.int](http://coronavirus.who.int)
11. <http://www.education.nic.in/htmlweb/edusta.htm>
12. <https://en.wikipedia.org/wiki/Education>

The Study of the Impacts Of Covid 19 Pandemic On Indian Education System

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Abstract:

The Covid-19 pandemic has affected all parts of the country and also affected every sector of the world. It had a reflective effect on education in India and around the world. This led to lockdowns around the world, which had a very bad effect on the lives of students. All students stopped going to school or college and all education system was disrupted. The covid 19 pandemic taught everyone that change is unavoidable. From lockdown, new technological concepts like online education and work from home came into existence as preventive measures. This was not used before. As a result of this, new changes were seen in the education system. This study highlight on some of the positive and some negative effects of this pandemic situation on the education system.

Keywords: Covid 19 Pandemic, Lockdown, Online Education, Indian Education System

Introduction:

Covid 19 is also known as corona virus. Covid 19 is a virus that shakes the whole world. It has been confirmed in many countries of the world. The World Health Organization has declared its pandemic. After witnessing the pandemic status of the corona virus, the WHO suggested that social distance should be maintained as a first preventive step. As a logical solution to maintain a social distance in the society, the Government of India has declared a nationwide lockdown after March 24, 2020. The closure of schools and universities having a huge impact on education across the country. Due to the dominance of traditional classroom teaching and learning in the Indian education system, the performance of the educational institutions at the present circumstances has made very difficult. It is an unprecedented event in the history of Indian education system that the education institutions, including schools, colleges and universities, were shut down. Classes were canceled and schools, colleges and universities postponed all exams for indefinite period. The structure of the Indian education system has a profound effect on learning methods, teaching techniques and evaluation methods. There is a growing focus on virtual learning to meet learning goals and objectives. The covid 19 has been able to transform the classroom into a new era of digital medium from a holistic teaching model. Due to the corona virus pandemic, many schools, colleges and universities have asked teachers and professors to use online teaching methods and tools like Zoom, Google Meet, YouTube, Skype, Facebook Live, etc. to give lectures and complete the syllabus. While some teachers are familiar with this new paradigm, some teachers are trying their best to complete the syllabus given to them through all teaching modes available to them. However, the sudden shift from classroom learning to Smartphone and computer has led to some difficulties as no one has a clear idea of exactly how to proceed in terms of online learning and teaching. In addition, the pressure on teachers and students is high because they have to complete the course before the end of the exam, and also through the online teaching methods. Current students are facing online learning for the first time. Therefore, the success or failure of online education totally depends on the success or failure of these students.

Positive impact of covid 19 on Education System:

The educational institutions of India have acknowledged all the difficulties and are making every effort to provide continuous educational services to the students at the time of pandemic. Corona pandemic has provided an opportunity to transform the Indian education system from a traditional system to a new technological age.

Increased technical literacy:

The Corona pandemic leaves no alternative to online education so it motivates people to learn and use digital technology and consequently increases digital literacy;

Boosted in collaborative work:

The traditional education system has limitations for invited universal experts for guest lecturers. But online education has made it easy. This is a new opportunity for collaborative teaching and learning. Faculties can also collaborate to benefit each other globally.

Enlarged use of electronic media for communication and knowledge sharing:

Learning materials are shared easily using whatsapp, facebook, e-mail, SMS, phone calls and students' queries can be easily resolved. The use of electronic media made it easier to share information from teacher to student and from student to student.

Convenient time management:

In the traditional teaching method, if the students were absent for some reason, they would not be able to re-learn what was taught by the teachers. But in online education, the teacher sends the lesson to the

students in the form of audio and video so that the student can watch or listen to the lesson according to his or her time. During corona pandemics, students can handle their time in online learning more effectively.

Increased participation of Students in the conferences:

In the past, if there was a conference, the students had to be present at the venue, but now, due to the online conferences, webinars the attendance of students has increased.

Encouraged to become more knowledgeable in technology:

Covid-19 has accelerated the acceptance of digital technology for teaching. It encourages all teachers and students to become more knowledgeable in technology and because of this new avenues for the delivery and evaluation of education have opened up.

Rise in online meetings:

The Corona pandemic led to increase telecommunications, webinars and virtual meetings. This allows students and their parents to attend these meetings easily from home.

Increased the modes of learning materials:

The traditional teaching method is to write notes only in the classroom but due to online learning, students are getting notes in the form of audios, videos, power point presentation, hard copies and soft copies

Negative impact of covid 19 on Education System:

The covid-19 pandemic has caused a lot of damage in the education sector. Many negative impacts on education system have increased. Some of them are as follow.

Unaffordable online education:

Many students may not afford computer, laptop or mobile phones. Lockdown has done a lot of injustice to poor students as many of them cannot study online due to lack of digital medium. In rural areas have limited or no internet access. Online education can create digital differences among rich or poor and urban or rural students.

Passive learning by students:

The sudden shift from traditional education to online education without any planning especially in India where the education system is not ready for online education and the curriculum is not designed for such online education. As a result, many students are at risk of becoming passive learners and are losing interest in education.

Declining quality of evaluation:

Exams conducted through online education are based on objective questions only, so the Goals and Objectives of knowledge, comprehension, and skills based education are not achieved.

Teachers and students not ready for online education:

Online teaching is a special teaching method and all teachers are not good at technical knowledge and this method of learning is completely new for students. Some teachers as well as students are having difficulties in the online education system. So they are not yet ready for online education.

Increased responsibility of parents:

Digital media is not accessible to most school going children. So parents have to pay much attention on their children's during online education. It is also the responsibility of the parents to complete the studies given to them by the school. But even some uneducated parents cannot use digital media so it can be barrier their children's education.

Affected of children's health:

In the past, when students went to school, they used to play on the school grounds. But now with online education, children constantly have to use digital media like mobiles, computers, laptops, tabs. This can have a harmful effect on children's eyes and physical health.

Less cross-border movement of students:

Universities in several countries like UK, Australia, Canada and New Zealand depends on the movement of students from India and China. Many parents will stay away from transfer students abroad for higher education because of the high risk of corona pandemic.

Conclusion:

Covid 19 pandemic has both positive and negative effects on India's education system. This pandemic has created many challenges, but also developed a variety of opportunities. The Government of India has explored the possibility of distance education by adopting various digital technologies to address the current crisis of covid 19. India is not yet completely equipped to distribute education across the country through digital platforms. The new digital platforms of education are not affordable for the students with poor financial status and the students from weak network connectivity areas. The center and state level education policy makers and universities are constantly trying to find a solution to this dilemma. For successful delivery of distance education all over the country, Indian policies need to include people

from different backgrounds, including remote areas, deprived and underprivileged tribes. India should develop a creative strategy to ensure that all children have sustainable access to education during the covid 19 pandemic.

References:

1. Jena, P.K. (2020a). "Impact of pandemic COVID -19 on education in India" *International Journal of Current Research*, 12(07): 12582-12586. <https://doi.org/10.31235/osf.io/2kasu>
2. Jena, P.K. (2020b). "Online learning during lockdown period for covid-19 in India". *International Journal of Educational Research*, 9 (5): 82-92 <https://doi.org/10.31235/osf.io/qu38b>
3. Koul Priyanka Pandita, Bapat Omkar Jagdish. "Impact of on Indian education sector in India", *Journal of critical reviews issn- 2394-5125 Vol 7, Issue 11, 2020:3919-3930*
4. <https://educationasia.in/article/the-impactof-covid-19-on-education-and-education-sectors-knowhere>
5. <https://www.indiatoday.in/educationtoday/featurephilia/story/covid-19-4-negative-impactsand-4-opportunities-created-for-education-1677206-2020-05-12>
6. <https://en.unesco.org/covid19/educationresponse>

Dealing with Shadow Pandemic: Women under Health and Economic Crisis

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Abstract

Devastating Pandemic has left countries across the globe, threadbare on two spheres: health infrastructure and existing social inequalities on gender basis. With people hushed into their homes to prevent the spread of covid, travel or movement restriction, suspension of work and studies, prolonged and forced contact between family members, reduced means of entertainment, boredom, loss of contact with wider social circles, and economic difficulties led COVID-19 pandemic turn into a psychosocial crisis. Mental health concerns linked to the lockdown saw the rise all across the world. According to the survey done by BBC world there has been rise of 45% in the distress calls made by women reporting domestic violence or abuse. The Pandemic is both exposing and amplifying pre-existing inequalities between women and men. Our past experiences also testifies that whenever or whatever the crisis had hit mankind violence against women and girls has been worse. Women are especially affected by the economic and social fallout: as victims of domestic violence, locked down with their abusers, as unpaid caregivers in families and communities, picking up slack where schools, childcare and other services are shutdown or scaled back and as workers in job which lack social protection and which is shrinking at an alarming rate. Globally, nearly 243 million women and girls between 15 to 49 years were subjected to sexual or physical intimate partner violence in the last year. In another survey of 122 community organization shows that 85% of them reported a rapid increase in violence against women and girls during March– September 2020. The present work deals with the two most affected areas, concerning women during pandemic: health and economic crisis that has led to the shadow pandemic growing amidst the COVID-19 crisis and the urgent need of a global collective effort to stop it.

Devastating Pandemic has left countries across the globe, threadbare on two spheres: health infrastructure and existing social inequalities on gender basis. With people hushed into their homes to prevent the spread of covid, travel or movement restriction, suspension of work and studies, prolonged and forced contact between family members, reduced means of entertainment, boredom, loss of contact with wider social circles, and economic difficulties led COVID-19 pandemic turn into a psychosocial crisis. Mental health concerns linked to the lockdown saw the rise all across the world. According to the survey done by BBC World there has been rise of 45% in the distress calls made by women reporting domestic violence or abuse. The Pandemic is both exposing and amplifying pre-existing inequalities between women and men. Our past experiences also testifies that whenever or whatever the crisis had hit mankind violence against women and girls has been worse. Women are especially affected by the economic and social fallout: as victims of domestic violence trapped in homes with their abusers, as unpaid caregivers in families and communities, picking up slack where schools, childcare and other services are shutdown or scaled back and as workers in job which lack social protection and which is shrinking at an alarming rate. “Globally, nearly 243 million women and girls between 15 to 49 years were subjected to sexual or physical intimate partner violence in the last year.” In another survey, “of 122 community organization shows that 85% of them reported a rapid increase in violence against women and girls during March– September 2020.”¹ The present work deals with the two most affected areas, concerning women during pandemic: health and economic crisis that has led to the shadow pandemic growing amidst the COVID-19 crisis and the urgent need of a global collective effort to stop it.

The pandemic has surfaced with the lethal effects on mental health of women who have always been the victims in society deep-rooted in unjust and unequal power and gender relations. Even before COVID-19, domestic violence was already one of the greatest human rights violations. This number has grown in last two years with multiple impacts on women’s wellbeing, their sexual and reproductive health, their mental health, and their ability to participate and lead in the recovery of our societies and economy. Women role as the one who sustains families had found herself with increased domestic responsibility, caring for children, older relatives, and ailing family members. With “work” and “home” became inseparable spaces, social inequities and expectations — and the fact that men do not have even half a share in domestic chaos than their female colleagues — lead to women falling further behind their male counterparts at work, and it lowered their ability to be productive. Women feel helpless and tied down with significant emotional impact. Stress, anxiety, and fear combined with “social isolation and mandatory confinement with potential abusers increase the risk of domestic violence. A 2020 found a 131% increase in domestic violence complaints in May 2020 in the districts that saw the strictest lockdown measures relative to other districts.”² Everyone has to go through psychological pressures experiencing anxiety and

emotional fatigue because of the pandemic, however women suffered almost three times more significant mental health consequences. A recent study by CARE International found that, “27 percent of women reported anxiety, loss of appetite, sleeplessness, etc., across the world, compared to the 10 percent reported by men. Another survey by Total Brain showed that depression has increased by 83 percent in women compared to 36 percent in men.”³

Lockdown has given rise to economic turmoil and it's none other than women who are the hardest hit. The domestic violence on women is directly related to the economic and financial condition of the family and their dependence. Economic impacts are felt especially by women and girls- who have no earnings or earn less, save less, and are holding insecure jobs or are living close to poverty. Between March and April 2020 alone, an estimated 17 million women in both the formal and informal sectors, were left jobless. “In situations of crisis, women's rights and needs are pushed aside because they are seen as a bonus or privilege rather than a necessity. The trajectory is always the same — women make up the vast majority of care workers and are also overwhelmed with informal care duties, yet their contribution to decision-making is lacking. According to recent research, only 3.5% of 115 COVID-19 decision-making groups across 87 countries contained an equitable number of men and women. The consequences are a rise in domestic violence, women being pushed out of the paid workforce, the contesting of abortion rights, and discrimination.”⁴ Apart from all the other factors women are more likely to cut back on working hours in light of rising demands at home, whether it is supervising children's remote learning, cleaning or preparing family meals and working for communities unpaid, which often results in lasting negative implications on their economic security and autonomy. “Women are facing massive job and income losses. Between March and April 2020, 15.4 million women lost their jobs, or 37% of the female workforce, versus 28% of men. The labor force shrank by 10.5% for women versus 2% for men between October 2019 and October 2020. Women-owned small businesses, which largely operate in consumer-facing sectors such as textiles, food processing and handicrafts, witnessed a sharp demand shock, with revival being slow. In the informal sectors, anecdotal evidence points toward men being preferred for re-employment as the economy open.”⁵ So even if economies will pick up again, we already know that women employment will recover much more slowly than men's.

“The new problem that we are seeing now, one year into the pandemic, is not only that women lost jobs. It's that even as economies open up, you are not finding women going back to their jobs in the same numbers,”⁶ As discussed above women has been the victims of gender disparity and face restriction, they are not free to take decisions on their own or to decide where to go, whom to meet. And in this progressive 21st century world women in India are not even free to use cell phones or internet technologies without male governing and supervising their use. Women face mobility restrictions which has become even severe with pandemic. “Even before COVID-19, only 54% of women were allowed to go to a nearby market alone. Only 48% could visit places outside their village or community by themselves, according to the National Family and Health Survey conducted in 2015-16. With COVID-19, Women now require strong reasons to leave home, inhibiting their ability to work, run business, study, or even avail health care services and government aid.”⁷ With digitalization taking over the world in all spheres of life anybody can guess women are at risk of being left behind, unable to acquire the skills required to participate in a digital economy. With lesser option for jobs, mobility restriction and lack of knowledge of technology even women who were self-employed and held small scale business are losing their visibility in society along with the income.

Low income and job losses during pandemic have given rise to another social problem that is higher dropout rate of girls and women from schools and colleges. “It is estimated that nearly 10 million secondary school girls in India could drop out of school due to the pandemic, putting them at risk of early marriage, early pregnancy, poverty, and violence.”⁸ Educational intuitions being closed, the scheme of mid-day meal rolled back by the state governments, has only added to the reason for parents not to send their ward to school. Besides mid-day meal used to take care of the nutritional requirements of the girls and was the major cause of parents sending daughters to school so as to save the money for other necessities. To add to this, alternative methods of teaching evolved quickly by most schools have led to serious problems for students, especially to those from families of low income groups. “The ASER survey shows that 38.2% children did not have access to smart phones. A positive feature of the pandemic, though, is that 11.1% children got the phone post the lockdown to help their study. In spite of this, online learning is available to only 11%. Of these, the share of those who were in government schools was 8.1%.”⁹ Other modes and methods like video, t.v., and radio were also used to keep the studies going but do our villages and remote areas have the infrastructure and electric supply to keep the smooth conduct of studies.

However, we still have a long way to go. From tackling gender inequalities, recognizing women carry disproportionate care and domestic burdens to providing additional support such as access to child care at work place. From addressing biases that influence recruitment, pay gaps, selection and evaluation during times of crisis to alongside reversing male-dominated institutional cultures and power structures. At the household level there is a need to redistribute care work and remove gender roles to allow for equality. "The pandemic virus, SARS CoV-2, may not discriminate by gender but the impact of the pandemic and the response of the state have been gendered. It has been observed that the autonomy of women is compromised during any health emergency."¹⁰ This pandemic was no different and if experts are to be believed, with pandemic staying longer it is certain that the situations are going to get worse from here, long-term impact could be significant enough to roll back gains made over decades for women's empowerment globally, partly because in the rush to address the looming public health crisis, most nations have failed to take a gender-intentional approach when planning their responses.

References

1. <https://timesofindia.indiatimes.com/blogs/irrational-economics/with-covid-19-comes-the-shadow-pandemic-how-the-surge-of-domestic-violence-gripped-indias-women-in-2020/>
2. <https://blogs.adb.org/blog/it-time-address-covid-19-s-disproportionate-impact-india-s-women>
3. <https://in.news.yahoo.com/the-devastating-impact-of-the-pandemic-on-the-mental-health-of-women-in-india-030038439.html>
4. <https://www.medicalnewstoday.com/articles/its-time-to-change-the-narrative-women-in-covid-19-science-and-academia>
5. <https://blogs.adb.org/blog/it-time-address-covid-19-s-disproportionate-impact-india-s-women>
6. <https://www.thehindu.com/news/national/covid-19-negatively-affected-womens-income-health-security-says-un-womens-top-official/article34012585.ece>
7. <https://blogs.adb.org/blog/it-time-address-covid-19-s-disproportionate-impact-india-s-women>
8. <https://www.globalcitizen.org/en/content/covid-19-impact-india-girls-education/>
9. <https://www.nationalheraldindia.com/india/six-million-children-out-of-school-in-india-due-to-the-impact-of-covid-19-girls-most-affected>
10. <https://www.hindustantimes.com/india-news/>

Cultural Identity and Problems in Assimilation in *the Reluctant Fundamentalist*

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Introduction

Mohsin Hamid is a Pakistani writer who is well recognized for his two novels The Reluctant Fundamentalist and How to Get Filthy Rich in Rising Asia. Mohsin is known for writing about identity issues emanating from the pursuit of global citizenship. He, like Zadie Smith, has remained an advocate of cultural mongrelisation. His novels are found to hold dear to heart similar concepts and dare to expose the disparities, cultural differences, and cultural vanity leading to disillusionment and disappointment.

The novel, The Reluctant Fundamentalist, published in 2007, centres on the protagonist, Changez, a highly educated, Pakistani native who joins a New York-based, multinational company, Underwood Samson. The novel explores the challenges that underlie cultural clashes and dilemmas affecting mutual relations through the recapitulating narrative by the protagonist. The protagonist, dismayed by the treatment given to Muslims after the 9/11 terrorist attack, ponders on the insults and humiliations and retreats to Pakistan, determined to raise his culture to seek resistance against what he thinks to be the advancement of neo-colonialism. The disillusionment and disappointment caused due to cultural-encounter, in the life of Changez distinctly throw light on the declining fate of multiculturalism.

Changez, a promising Princeton bud, is an analyst at Underwood Samson, a consultancy firm that ensures a bright future. Erica's love, the attractive package, and the reputation of the firm leave a marvellous effect and make his life in America full of joy. However, the terrorist attack of 9/11 turns down his hopes and aspirations when Muslims are harassed and ill-treated by the Americans. The cultural enmity makes Changez highly emotional and propels his detestation for the American civilization. Triggered by the subject position and the recurrent insults, he shoves off the fundamentals of the business world and becomes a reluctant *fundamentalist*. Back in Pakistan, he vows not to be a janissary anymore; instead, he determines to be a firefly for his community.

The novel using a fascinating narrative recounts the fundamental transition brought about in the character of Changez. The use of the first-person narration helps to offer a stunning interplay between limitations of subjective perception and facts. As per his claims, it appears that the treatment he received after the terror attack and Erica's sick demands dismantle his life in America. The 9/11 attack bears a devastating impact on Changez, who incensed by the attacks on the Muslim population and countries, feels depressed and paranoid. The suspicious looks and the racial discrimination bring about a *fundamental* change in the character of Changez, who begins to perceive the American culture and the economic system as a kind of neo-colonial advancement. He develops disgust and distrust in him against the capitalist practices undertaken by the Imperial power.

Both on the level of his relation with Erica or broadly America, he faces disappointment and disillusionment. He feels that Erica or America is demanding and cannot make a compromise with insane or intolerable demands about his identity. He realises that he has made sufficient adjustment and sacrifice while living in America. He does not like mimicking Christ for Erica or a Christian for America as he wants to secure his own cultural identity. Because of this, he ends up his affairs in disappointment.

What happened in America on 9/11 and afterwards was tragic and disheartening. The maddening incident contributed to increasing distrust in American citizens against the emigrants. It led to the humiliation of the Muslims, in particular, as the link of the attack went to the Muslim countries. It gave rise to communal tensions and brought cultural harmony in danger, pushing the communities on a wider cultural split. Although the reaction on the part of the Americans was unfortunate, it was natural and spontaneous. It cannot be justified; it can be called an unfortunate incident only. Hence, the distrust or the reaction he develops against this treatment is definitely in excess. Ironically he perceives it as a western capitalist invasion and shows his grumble against it.

America is a multi-cultural state and has embraced the multi-cultural policy long-back. Since the beginning, it has seen many upheavals challenging its polyvalent cultural identity. It is a country replenished with many resources and science and technology. It is a land of opportunities providing access to people of all countries and religions. People from across the world including the Third-world have sought America as their destination and settled down there. According to Ishmael Reed, "America is the first Universal Nation." (Gray, 2011, 21) Capitalism is the driving force in America and has brought massive economic changes and reforms. It is not a Utopian policy; it does have weaknesses. Yet, it will be unjust to justify it by using sham communist practices. Despite drawbacks, it can be considered as the most

successful policy. Its success lies in its implementation by numerous countries and individuals over the world. Keeping aside the drawbacks, it is the most acceptable, workable, and effective method.

As an adolescent, Changez shows typical attraction and repulsion-attraction for the culture being foreign and repulsion as he does not want to be swallowed by it. He gets similar experiences in the company of Erica. He feels that his identity is at stake. However and ironically, he reaps physical pleasure and gloats on his relation with Erica. Such an attitude is finely exposed by the narrator of Zadie Smith's novel *White Teeth*. "These people who would exchange all faith for sex and all sex for power, who would exchange fear of God for self-pride, knowledge for irony, a covered respectful head for a long strident shock of orange-hair." (Smith, 198)

Changez is from an educated upper-middle-class family. Though the charm and the social privileges have shrunk due to declining economic conditions, he retains the air. The same cultural vanity instigates him to show resistance by keeping a beard when his identity is challenged. It becomes the symbol of hurt pride. Things begin to slip away from his hands when he retains this tempo on his assigned work in Chile. The resistance grows so intense that he refuses to work there, which culminates in his dismissal. His involvement with Pablo Neruda, who is a communist, shows the inclination of his mind. He gets deeply hurt when he receives an insulting comment from Erica's father about his people and country. Her father remarks, "Economy is falling apart though, no? Corruption, dictatorship, the rich living like princes while everyone else suffers. Solid people, don't get me wrong. I like Pakistanis. But the elite have raped that place well and good, right? And fundamentalism. You guys have got some serious problem with fundamentalism" (Hamid, 2007, 54). Though the remarks are insulting, they are brimmed with some solemn thoughts, to which the people from the third-world countries have to attend seriously. Hence, prejudice and idealistic view of one's culture dominate Changez's life, which, consequently, does not enable him to comprehend the gap that underlies the true reality. Instead, he ruminates on America-Afghan relations and considers it an injustice to his Muslim brothers living in Afghanistan. Ironically he fails to conceive the boundaries that exist between two nations. That is why sentiments supersede global politics and policies. This view upsets him and leads to challenging the policy accepted by his own country during the America- Afghan war.

Changez's further resistance to American civilization is reflected in promoting himself as an alma-mater for Pakistani students and raising them against the Federal power by imparting them the knowledge of global economics and politics. His struggle to build the frontier is filled up with discontent and disappointment. That, according to him, would help him to repel the further aggression of the corporate world. However, instead of developing harmony, such efforts are found to increase enmity, transforming people into extremists. The wounded or defeated feelings appear to widen than bridge the gap that exists between civilizations. Idealistic or communist inclination, opposition to capitalism or progressive civilization, idyllic attachment to poverty, culture, and religion affect Changez deeply. In many instances, Changez appears to romanticize his cultural affinity. He views Urdu as a humble and melodious language and the burly waiter as an epitome of kindness and humility. Poverty is eulogized; tea, as a refreshing favourite drink, uniting them to brotherhood. Cultural identity has acquired increasing importance in the age of globalisation as it is bringing people of different races and religions together. It is significant as it incorporates a sense of belongingness or attachment in individuals. Unfortunately, the gatherings are stimulating unnecessary glamour to one's cultural identity. In reality, it is not something fixed or glamorous; it is constantly changing and developing. It should be informed by the past rather than regretting it. The tendency to reminisce the past glories and ruminating on them would bring disappointment only. On the other hand, the relationship between persons of two different countries, cultures, or races can be mutual or full of suspicions, doubts, and prejudices. An ultimate mutual or harmonious relation is unimaginable. Despite weaknesses and disparities, human beings have to show acceptance than resistance. Cultural prejudices, religious discrimination, ill-treatment, hate, jealousy, though unfortunate and unavoidable, are found deeply rooted in human civilization. Mostly, the affinity and the subjective involvement in one's own culture blind us to the unbridled discriminations. Human society constitutes a complex web of feelings, experiences, thoughts, and ideologies. In a situation of conflict, culture should be always given the upper hand to individual sensibility. Avoiding hatred, rejection and developing a proper sense of one's culture towards other, and becoming a responsible citizen can help to develop mutual relation. Hence, Changez's reaction to his ill-treatment is over-brimmed, corrosive, and disappointing. He fails to consider it as a natural reaction from the American community after the 9/11 terror attack. The ill-treatment of his community makes him offensive. He begins to feel inferior and cherishes identity vaingloriously. Apart from this, the imaginary threat perceived by him to his culture embitters his living in America. The inferiority added with rejection by the foreign culture intensifies

hatred in Changez. Thus instead of negotiating space of interaction, he regresses to acquire a fixed identity based on narrow conception.

Thus the story reveals how social, economic, cultural, religious, and ideological differences can add to increasing split between communities. It shows how hurt feelings, sensitivity, individual perception about cultural identity differentiate the gap that exists between cultures. The novel explores the difficulties encountered by individuals while assimilating or adjusting to a foreign culture. It also reveals the prevalence of hate, discrimination, prejudices, suspicions, and rivalry that lies between communities.

References:

1. *Hamid, Mohsin. The Reluctant Fundamentalist. New Delhi: Penguin Books, 2007, p. 54*
2. *Gray, Richard. After the Fall: American Literature Since 9/11. UK: Wiley- Blackwell, 2011, p. 21*
3. *Smith, Zadie. White Teeth. Vintage International, 2001, p. 198.*
4. *Bhabha, Homi. The Location of Culture. London: Routledge Classics, 2004.*
5. *Hall, Stuart. "Cultural Identity and Diaspora." Identity: Community, Culture, Difference. Ed. Jonathan Rutherford. London: Lawrence & Wishart, 2000.*

Changing Perspective of the Life: Change Your Mind and Change Your Life

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Abstract:-

When you thought yourself, it can feel like life is beyond your control. And, to be fair, life is often beyond our control. It is all a matter of perspective. And we know very well about our real perspective of life. In which type we think about it, at that way we behave like our mindset say. When it comes to experiencing life and other people –when life throws the good and the bad at you- was it really good or bad? (Rahmanova) We all have our own ways of seeing things. That's the way; we decide our attitude of life, which is achieved by changing perspective of life. Determination and belief are the starting points for success. They open you to new opportunities to do and be anything you desire, and we only need a subconscious thought to plant the seed. For this success of life, we need to open our mind.

Keywords:- Perspective, Mind, Subconscious,

Introduction:-

According to Dr. Wayne Dyer, 'When you change the way you look at things, the things you look at change'. It is true for everything in the life. Being successful is a two-part process, determination and belief, both are begins in the mind. And we need to open our mind for subconscious and conscious thoughts. It is important to be consciously on our path to success, and equally important to prepare our mind, spirit and body for the success we seek. A closed mind seals off creative solutions and eliminates any possibility for new opportunities. A closed mind keeps us where we are in life, where we always have been and will continue to be. A closed mind creates constant struggle to achieve, constant conflicts and obstacles for each new situation we encounter, remorse of not doing. These feelings are conducive to success. (Dove, 19) There are many ways where we have the power to change our lives in significant ways. Let's take a dive in various perspective shifts that will change our life. We can know better ourselves and our mental states. These shifts are simple but not easy. It will take time and patience. Daily practice will ultimately feel more empowered to be the best version of ourselves. We become better by expanding our mind and acquiring new knowledge. It lets you from your opinion and worldview. There is a certain weight and an overwhelming thrill when it comes to finishing an important theme that we know will ultimately change our life. When we finish it at that moment we set it down, look out at the world in front of our, and let out a breath that feels as if we have been holding it in for years. When we change our mind, we change our entire life perspective on the world.

Analysis and Discussion:-

No one exactly sure, when his understanding of the power of perspective really began but once learned a point where we are tired of repeated situations. Which we believe is often brought to us by other people. We often start craving another way of thinking and seeing life. If we choose to do so we are doing ourselves a huge favour because it takes the power away from many of the storms that hit us. We can all see a situation in a different light and our perspective becomes a shield of protection in a good way. The most important mental principle is that *you become what you think about most of the time*. Our outer world is very much a mirror image of our inner world. What is going on outside of us is a reflection of what is going in inside of us. We can tell the inner condition of a person by looking at the outer condition of his life. To understand our inner condition we focus on to open our mind (Tracy, Introductory para.). When we truly open our mind, the anger, resentments, hatred and envy are gone. A mind thought just like an action, is energy in motion. Emotional thoughts carry even more energy. When we create a thought, we feel emotional about our thoughts succession, and our energy allows us to explore, create and grow the thought. But we don't all achieve our dreams. That's because thoughts may be negative or positive in nature. So, we should believe that there are only positive thoughts and focus also, because it keeps the goal constantly in our mind and you actions are expands energy. For that we need self -speeches, to be right always and examine our thoughts. To develop an open mind, it is essential to take an honest look at who you truly are. It's a difficult question to answer. In 1955, Joseph Luft and Harry Ingham developed the Johari Window, named for both their first names of Joseph and Harry (Dove, 46). The Johari Window helps us to better understand our personality. There are four areas of personality. First area is, Only You Know, this is the area of ourselves that we do not wish to disclose to anyone else. It is the very private and vulnerable part of our personality that holds our fears and doubts. It holds any embarrassing or hurtful event that you did. We choose very carefully whom we allow to know this part of us. Second area is, You Show to Others, this is the area of our personality that we share with others in varying degrees, depending upon our trust level with each individual. We feel safe and confident with this part of our personality. Third area is, Only

Others Know, where we may not be aware, there is a part of our personality, information about us, which other people know, but we do not. Forth area is, No One Knows, this holds any knowledge and potential that we or anyone else has yet to discover. Science has proven that we use only a small portion of our brain's capacity. The majority of it, we will never know. This is the area where dreams are made real, where new theories are born, where new science is first thought and then discovered, and where creativity is given birth. New thought develops here, that change the world of our life. Johari Window's forth area of our personality that no one knows which holds the infinite possibilities for success. For that we need to rewrite our reality. To do this, we need to change our thinking, our speech and our actions and reactions. First we cannot change the current life, without changing the way of our thinking. Thinking becomes habits. Thoughts are related to minds, which includes the conscious and the subconscious part of the brain, the warehouse of thought. Conscious mind's thoughts are readily accessible memory. Subconscious mind's thoughts are stored information but not accessible without a key to open the door. As we allow negative or positive thoughts into our mind, they are stored in the brain. What we have most recently thought is in the conscious mind. As we continue to have thoughts, eventually the older thoughts are pushed into the subconscious mind, specifically to the front of the warehouse of the mind. To make room for these thoughts are pushed into unconscious mind. To access the unconscious and the subconscious thoughts, we need only have the desire to do so, and the thoughts are automatically again in the conscious mind of our brain for use. Next we will decide about our awakening inspired thoughts, which are used by us for helping others. After all, it is better to give than receive. Always we think about ourselves and our self-interest. Above discussion on the expansion of energy, what we have inside us. We only focus on receiving, which means we don't give. If we don't give, the universe doesn't give back to us. When we freely give only to help others without concern for what we will receive in return, then the universe gives back to you in greater amounts. To move into the realm of purpose, we must give and serve others. Then next step of our changing the life, The World of Silence. It is a place to explore who we truly are, to create and to connect to the universe. In the silence we connect to love and access the power of the universe. It clears our mind and gives us extraordinary ideas, allowing success to flow freely. The silence is within that part of us that no one knows where we may encounter the true purpose of our life and what we need do to achieve it. This silence is located in the space between our thoughts. For getting silence we need meditation. In meditation, the main thing is to be quite our mind, be at peace and connect our real-self. There are many forms of meditation. When we focus on hearing and feeling nature, we will find peace in our mind. On the other form is to mentally review in our mind with the help of various mantras. And now believe it and become inspired, along with determination and belief is being enthusiastic about our goal. Everything that happens along the way is another joyous milestone. Enthusiasm adds to our positive perspective to change our life.

Conclusion:-

In this way, we see how we can change our life with the help of our positive attitude. Not only we open our mind, but explore deep thoughts of the subconscious minds. In this process we understand the importance of our reality, silence of mind and purpose of meditation. Which is help us to change our perspective toward joyfully and cognitive life. So, for changing perspective of the life, we definitely needs first change our mind and then automatically our life will change, which gives us silent and wise personality.

References:-

1. *Rahmanova Simona. Changing Perspective on Life and Human Interactions. medium.com, 2020.*
2. *Dove White. Change Your Mind Change Your Life. Private Label, 2006.*
3. *Tracy Brian. Change Your Thinking, Change Your Life: How to Unlock your Full Potential for Success and Achievement. New Jersey: John Wiley & Sons, Inc., 2003.*

Environment and Environmental Edifications in Ancient Indian Epics and Shakespearean English Plays: A Selective Study

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The environment has become a common ground where both literature and science converge in order to instruct and enlighten us so that we may live in a sustainable harmony with the natural world. In this respect, by arousing our interest, literature contributes indirectly to the enhancement of our environmental sensitivity. Creation of a society of ecologically sensitive and caring human beings can be done not only through scientific research and publications alone but also through the environmental humanities which also include literary scholarship and representation. The reading and understanding of literature with an environmental perception has a didactic, pedagogic and inspiring effect on people. It is a fact that we are integrated to our past which is always on its journey. From centuries to centuries we are constant travellers. We never ever stop. We cross through rivers & dales, mountains & hills, trees & plants, face extreme weathers, enchanting beauty of Nature as well as destructions created by it. We are the products of it and we produce it. Our existence is interdependent. Writings are the record of our journey. Since time immemorial, our scriptures give divinity to Nature and ask us to conserve it. All religions of India have kept Nature above man. Our ancient Indian scriptures proclaim that God sleeps in the rocks, dreams in the plants, stirs toward wakefulness in the animals, and spreads in mankind the message of *Vasudhaiva Kutumbakam* i.e. "The Whole Universe is one Family" the current environmental crisis has its genesis in human perceptions and attitudes, man's real nature, his relationship with Nature, the then environment policies and edifications on environmental awareness to conserve Nature have been explicitly described in the *Ramayana* that has vivid descriptions of the diverse seasons of India and its rich natural wealth at nearby 500 places, including mention of about 170 species (125 trees, 30 mammals and 15 birds) and variety of marine creatures and forests such as Dandakaranya, Panchavati, Kishkindha, Chaitrarathvana, Nandanvana and Matangavana, the forests of Lanka, the Himalayan Forest Dronagiri where Hanuman found the Mahasanjeevani herb to restore the life of Lakshmana. In the *Ramayana*, Rama with all his virtues is described as a lover of Nature. Rama's urge to draw attention of his consort Sita in exile to the blossoming Kingsuka trees, Bhallataka trees with their crowds of monkeys, bowed down under their load of fruits and flowers and untouched by human hands, answers of the peacock to the crooning Chataka, Chitrakuta with its many varieties of trees and creepers and its abundant roots and fruits, with its lofty peak and haunted by herds of elephants and resounding with the cries of flock of birds reveals Rama's interest to live along with Nature rather than overcome it and subdue it for one's own use. During their exile Rama, Sita and Lakshmana lived in the most eco-friendly way in the forest. They observed the sustainable ways of the Ashramas. On one occasion, while going to the Ashrama of the great Sage Agasta in Southern India, Lord Rama points out to Lakshman, the peaceful attitude of animals in the surrounding forest, which he links to the positive vibrations emanating from the Ashrama. There are references about wild animals living peacefully in the vicinity of Ashramas of Rishis like Atri, Viswamitra. Rishi Mandkarni said to have created the artificial Panchapsar Lake, which held water throughout the year, satisfying the thirst of animals and humans. Rishi Matanga – the Guru of Shabari – had nurtured a forest for the purposes of meditation and education. The *Ramayana* gives us the message that Nature is divine and has to be worshipped, loved and protected. It describes the divine nature of man and Nature by explaining that they were created by God Himself and thus they contain the spark of divinity in them so that the extrinsic respect man has nowadays for Nature can be converted into an intrinsic love and reverence for Nature by realizing its divinity. This reverence for Nature can in turn help in changing the following beliefs of modern man responsible for environmental misuse: Man alone who is only one among the many species created in this world cannot monopolize the use of Nature created by God for the benefit of all. The more he disturbs Nature in his selfish needs, the more Nature would react adversely. The understanding of the divinity of Nature can lead to a profound change in the attitude of man towards Nature and thus can effectively solve the present day environmental crisis. Flora and fauna, the vast environmental glory that existed the then time mentioned in the *Ramayana* is not a figment of Valmiki's imagination but nourish some thoughts in our mind on how we can better co-exist with our natural surroundings even in today's world. Plants and Animals mentioned in the *Ramayana* are not imaginary but they can be found along the route from Ayodhya to Lanka, As we read through the *Ramayana*, at least some of us will start to dwell on and visualise the environmental glory that existed then and nourish some thoughts on how we can better co-exist with our natural surroundings even in today's world.

The *Ramayana* stories are full of animals and birds as characters – great birds Jatayu and Sampati; the Vanaras (monkeys) Hanuman, Bali, Sugreeva, Angada, Nala and Nila; the bear king, Jambavan, and even the squirrels who helped in building the Ram Setu. All these lead us to believe that the characters of *Ramayana* – even the evil characters – lived in good harmony with the environment and knew the importance of conservation of Nature and its resources. Another interesting aspect was the divinity showered on Natural resources like rivers – Ganga, Yamuna, Alakananda and Sarayu to name a few – and mountains were all treated and given respect in those days, in contrast to how we treat them in the present day as a place for conquering or dumping waste. In the then time of *Ramayana*, the state's policies towards environment that include water supply, agricultural policies, protection of animal species were based on a clear perception of man's real self and the divinity of Nature and show the care and interest taken by the state in protecting and conserving the environment as it was its responsibility to protect all biological species and conserve Nature. Vyasa wrote the great epic of Nature, the *Mahabharata* to give a very detailed view on environment of his time. Its sky is clean; its weather is fine. Its rivers are full of neat and clean water, the breeze is pure and nourishing and the flow of life around is healthy. The importance of forests in Indian epics can be understood from the fact that the *Mahabharata* devotes a book to the forests called Aranya Parva *i.e.* 'The Book of the Forest'. Vyasa has also given minute details of the variety of fruits, trees and flowers most of which have special significance in auspicious rituals of Hindus; the vast treasure of Medicinal plants; variety of birds and animals. There is no denial of the fact that the *Mahabharata* has given birth to Ayurveda which was brought by the divine-medicine-man, Dhanvantari during Samudra Manthana. Description of Meru mountain with varieties of flora and fauna, medicinal plants different types of trees, fearful beasts are beautifully depicted in the Adi Parva. Like the river Ganges, the river like Sukumari, Kumari, Mahanadi, Manijala, were also considered as sacred. In the Kingdom of Chedi the lakes in the forests were full of sacred and clean waters and have a good healing power because of the cane tree. Each of the warriors in the *Mahabharata* had their own special Conch. Though known as battle horn Paanchajanya, of Lord Krishna and Devdutta of Arjuna was used in war of the *Mahabharata* to win over evil spirits, avert natural disasters and sway dangerous animals. In the *Mahabharata* it is seen that in spite of being born to a royal family Lord Krishna also known as Balagopal and Govinda chose himself to be raised in a low-caste cow-herder family and through his Maya taught the whole mankind the whole creation of this universe is for love and the cow is next to mother. Krishna and Balarama stand as planners, initiators and finishers with their roles developing the plans of cow protection and ploughing. Before Being a God Krishna wanted to stop humans from the sin of killing cows. While he played his flute, he was surrounded by cows, deer, goats and other animals. Trees gave more fruits, dried trees became green, flowers blossom. Even Kamadhenu, one of the outputs from the Churning of the Ocean is a wish- fulfilling cow and also vehicle of several deities and is considered as a gift to mankind. Again Shibi story of the *Mahabharata* has close resemblance with Shakespeare's the *Merchant of Venice*. In the *Mahabharata* it is seen that king has a duty to look after the environment. Yudhisthira also sees the protection of the balance of the forest as his responsibility which is also shown in *The laws of Manu (Chapter VII)*, where the duty of Kings is set out. The *Puranas* also give lessons about protection of Nature. Surprisingly the source of all these lessons is the *Mahabharata*. Although people of the then time used to go for hunting in the forest it was regarded as a sinful act and the person who killed the animals had to go to hell. Indeed variety of highly destructive weapons which were well known for their horrifying destructive capabilities was invented in the period of the *Mahabharata* but most of the times those were used for the wellbeing of humanity. In the *Bhagavad Gita* Lord Krishna advises that all beings should be treated alike as He is the Self seated in the heart of all creatures. "O son of Kunti (Arjuna), I am the taste of water, the light of the sun and the moon, the syllable "om" in the Vedic mantras; I am the sound in ether and ability in man. ^(Gita-7.8) He Himself says that he accepts a leaf, flower, fruit or water or whatever is offered with love and devotion. ^(Gita-9.26) The *Bhagavad Gita* reminds us our responsibility to conserve Nature for the future generations and also advises us not to try to change the environment but to improve it and uplifts the highest ideal, very much needed today to make our Global Village fit for us "Friendliness towards all that lives." *Sarva-bhootasuhritva*. Again, Shakespeare was certainly not an environmentalist in the modern sense, he was an ecologically sensitive playwright and can therefore be related to our environmental literacy. Both as environmental history, and in prefiguring today's more urgent ecological threats, Shakespeare is our eco-contemporary. In fact, many of his plays engage with or even directly interrogate early modern environmental shifts.

His depiction of the natural world and his use of ecological settings and landscapes in some of his plays can be read in terms of an environmental awareness. While in the comedy, misrule affects the weather, misrule in the tragedy is caused by the weather, and climate, therefore, acts as an agent of fate.

The relationship between man and Nature is much more ambivalent, and much more subtly treated in *King Lear*, a mature tragedy in which the playwright presents the influence of weather upon man, and of man upon weather, in an acute awareness of the environmental problems posed by man's behavior. The tragedy conveys the "ecophobia" of an audience traumatized by bad harvests and cold weather, and the play proves particularly vivid in its foregrounding of environmental unpredictability and in its dramatization of a fear of nature. Although *A Midsummer Night's Dream* has been traditionally regarded as one of Shakespeare's festive comedies, ecologically it also problematizes man's relationship with the natural world and, hence, can be read as an environmental allegory. The Forest of Arden, in which the action of the play is set, in fact becomes an ambivalent epitome of the natural world. *As You Like It* is embedded with a remarkable amount of environmental reference and that explicitly displays some degree of ecological sensitivity among the urbanities in the play. Shakespeare's ecological discourse as such, which is strongly worded through his character Jacques who protests that ecologically it is unacceptable to fright the animals and to kill them up / In their assign'd and native dwelling-place certainly signifies a sensitivity somewhat unusual for his time. In his tragi-comedy *The Winter's Tale* Shakespeare presents through a pastoral setting a similar kind of dichotomy which involves another juxtaposition of the country and the court in terms of moral values and excellence. Especially through the story of Perdita, who after being rejected in infancy by her father has grown up as a pastoral beauty of most rare note in a physically unpolluted and unspoiled environment, has been tutored by Nature whereby she has become the moral embodiment of a naturalness which is unpolluted by courtly artificiality and corruption and her moral perfection is revealed through her humility, chastity, hospitality, generosity, self-restraint, inborn nobility, and prudence. In the *Hamlet* by the depiction of Ophelia's suicide by drowning herself in the water of a stream Shakespeare seems to have intended to play down the horror of Ophelia's tragic death and turn the scene into a pleasance where Ophelia with her garland of flowers and her touching song becomes part of Nature and ultimately attains peace and comfort in it through death.

Shakespeare's supernatural play *The Tempest* makes us aware of man and man's fate on the island. Nature itself is part of this action. The negative capability we find in *The Tempest* allows us to read the play in context to our current era and reflect upon our own interactions with Nature. So, it seems that Shakespeare refuses and refutes any idea of divine intervention. Parabolically, the storm and its violent effects on humans and Nature may be regarded as a graphic representation of the kind of fears and anxieties that we today face through the destruction of the environment. Last but not the least, Shakespeare who manages to put to the fore a complex, changing, and interactive relationship between man and Nature gives us a clear indication of the impact of harsh weather on early modern habits. While his plays offer us warnings of the follies of human excess, greed and power, Shakespeare shows us opportunities for salvation. Characters tend to change when they spend time in forests: relationships heal and families are brought back together. We see Shakespeare thinking ecologically in ways that resonate with our own perceptions of the environmental challenges we face today. There is no iota of doubt that Valmiki and Vyasa through their epics and Shakespeare through his plays registered the interactions between man and Nature which are in delicate and intricate balance. Just as we do not know fully the consequences of our actions upon the environment or how it will react in response, we do know that we need to leave something of Nature behind, and allow the environment which we have damaged to heal. Thus, reading the ancient Indian epics and the English Plays of Shakespeare from socio-ecological perspective can satisfy the purpose of reminding man about his duties and responsibilities to the mother Nature in the vortex of present environmental crisis. There is no denial of the fact that the reading of these texts also provides man with a scope for orientation for his activities towards the protection as well as preservation of Nature for sustainable and ecological living on our global village.

References:

Primary Sources:

1. Brooks, Harold F., ed. *A Midsummer Night's Dream* by William Shakespeare. Arden Edition. London & New York: Methuen & Co. Ltd., 1979.
2. Foakes, R. A., ed. *King Lear* Third Series by William Shakespeare. Arden Edition. UK: Thomas Nelson and Sons Ltd., 1997.
3. Latham, Agnes., ed. *As You Like It* by William Shakespeare. Arden Edition. UK: Thomas Nelson & Sons Ltd., 1997.
4. *Mahabharata*, Gita Press, Gorakhpur.
5. Pitcher, John., ed. *The Winter's Tale* by William Shakespeare. The Arden Shakespeare. Kindle Edition, 2012
6. *Shrimadvalmiki Ramayan*, (Sanskrit Text With English Translation), Gita Press, Gorakhpur.

7. Thompson, Ann & Taylor Neil, ed. *Hamlet* by William Shakespeare. The ArdenShakespeare. Revised Edition (Third Series) Paperback – Illustrated, 2016.
8. Vaughan, Virginia Mason, & Vaughan Alden T., ed. *The Tempest* by WilliamShakespeare. Arden Edition. UK: Thomas Nelson and Sons Ltd., 1999.
9. Wels, Rene, ed. *Romeo and Juliet* by William Shakespeare. The Arden Shakespeare. Third Series Paperback, 2013.

Secondary Sources:

1. Aurobindo, Sri. *Essays on Gita*. Sri Aurobindo Ashram, Pondicherry, 2013.
2. Aurobindo, Sri. *On The Mahabharata*. Sri Aurobindo Ashram: Pondicherry, 1991.
3. Dutt. M.N. ed. *Mahabharata*. Parimal Publications, Kolkata. 2013.
4. Dwivedi O.P., A Companion to Environmental Philosophy, Edited by Dale Jamieson,
i. UK: Black Well Publishers Pvt. Ltd., 2001.
5. Estok S.C. *Dramatizing Environmental Fear: King Lear's Unpredictable*
i. Natural Spaces and Domestic Places. In: *Ecocriticism and Shakespeare. Literatures, Cultures, and the Environment*. Palgrave Macmillan, New York.
https://doi.org/10.1057/9780230118744_2. 2011
6. Gambhirananda Swami, *SrimadBhagavadgita* (Eng. Tr.), Kolkata: AdvaitaAshrama,
i. 2000.
7. Kodandaramayya, P. *The Message of Mahabharata*. Bharataiy Vidya Bhavan. 2004.
8. Miller, G. Tyler: *Living in the Environment- An Introduction to Environmental*
i. Science, Belmont, California, Wadsworth Publishing Company. 1985.
9. *Plant and Animal Diversity in Valmiki's Ramayana* by M. Amirthalingam And P.
i. Sudhakar. Published by C.P. Environmental Education Centregarry420, Apr 7, 2015.
10. Rajagopalan, R. *Environmental Studies: From Crisis To Cure*. OUP, India. 2015.
11. Sahitya Akademi. *The Mahabharata Revisited*. New Delhi, 1990.
12. Sharma, Arvind, ed. *Essays on The Mahabharata*. Motilal Banarsidass Publishers Pvt.
i. Ltd. Delhi. 2007.
13. Vyasa and Valimiki, Sri Aurobindo, Sri Airobindo Ashram, Pondicherry, 1964.

Websites:

1. <<https://www.academicjournals.org>>
2. <<https://www.bartleby.com>>
3. <<https://www.books.google.co.in>>
4. <<https://www.cliffsnotes.com>>
5. <<https://www.en.academic.ru>>
6. <<https://www.goodreads.com>>
7. <<https://www.india-seminar.com>>
8. <<https://www.iosrjournals.org>>
9. <<https://www.mahabharatabook.com>>
10. <<https://www.press.uchicago.edu>>
11. <<https://www.sacred-texts.com>>
12. <<https://www.shakespeare-online.com>>
13. <<https://www.shodhganga.inflibnet.ac.in>>
14. <<https://www.thehinduforum.com>>

A Comprehensive Study of Changing Perception of Human-Environment Relations and Its Impact on Habitat: A Geographical View

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Abstract

Environmental perception is the awareness of or feelings about the environment and is the act of apprehending the environment by the senses. The perception of any environment is influenced by individual past experiences and current value orientation. The approach to man-environment relationships adopted in the 1960s movement toward behaviouralism in geography. The behaviouralist geographer focused attention on the environment as perceived to assert that the individual responds to their physical and social environments. Mental map studies the primary paradigm of man-environment relations in which man is depicted by mental processes and cognitive representations of the external environments. Behavioral movement in geography led to a thorough reappraisal of the methodological approaches to man-environment relations. It countered the environmentalist and neo-environmentalist doctrines by recognizing the true complexities of human behavior. Environmentalism linked to promoting and reorienting practical action towards the environment. Early, investigations of an interface between human and physical systems were mainly technical, involved with strategies of environmental management but later investigations of 'control systems' have at least recognized the importance of ethical issues as well. The changing perception and the current thinking on environmentalist are very close to the concept of 'sustainable development. The present study carried out the changing perception of human-environment relations as on geographical view.

Keywords: *Environmental Perception, Man-environment relationship, Behavioural Geography, Neo-environmentalist, Environmentalism, Changing Perception, Sustainable development.*

Introduction

The old concept of the man-environment relationship and that of the concept of environmentalism has changed with a change in man's capacities and capabilities. The central objective of the current view on the environment is to place humankind in the ecological setting, simply as one of the sentient species. The changing perception of environmentalism aims at human well-being and is focused on the belief that this is possible only if nature is accorded its rightful place. The ecological analysis concerns itself with the study of the connection between human and environmental variables. The ecological analysis appears to have a close affinity with chorology and regional geography which seeks to understand the region as an entity. 'Geocratic' type of geography deals with nature itself plays a great part in determining the type of life which develops in a particular area or region. Alexander Von Humboldt attempted to seem to man's dependence upon his environment. The growth of Darwinism in the late 1850s placed great emphasis on environmental and environmental changes. The 'theocratic' type of geography seeks to understand various kinds of phenomena, observable on the surface of the Earth, in relation to their underlying purposes. 'Weocratic' type of geography seeks to suggest that the environment offers a number of possibilities and their utilization is dependent almost entirely on human selection. The environment is a comprehensive term that refers to surroundings but in geographical perspectives environment includes Abiotic (physical land, air, and water) and biotic (plants and animals including man) components of the life-supporting layer of the biosphere. The fundamental study unit of environmental geography is the life layer of the earth having atmospheric, lithospheric, and hydrospheric components that are responsible for the support of all types of life. Environmental management, therefore, compromises between ecosystem and ecological balance and human material progress. Nature is the natural, physical, material world of the universe. Isaiah Bowman (1878-1950), who was earlier a follower of the doctrine of environmental determinism. On the role of environment, he said, the geographical elements are fixed only in the narrow and special sense of the world. Ideas of natural selection and adaptation formed the basis of statements regarding environmental determinism that tended to identify the relationship between the physical environment as the control, and human behavior, the response. George Perkins Marsh (1847-1899), wrote an extended work on the subject with the title of *Man and nature as modified by human action*, it indicates the character and the extent of the changes produced by human action. Man's role in changing the face of the earth received little attention in the nineteenth century. Environmental determinism became predominant by Darwinian evolutionary doctrine. Man as an agent in the transform action of the surface of the earth has become in the twentieth century a central theme of investigation among geographers. The conservation of natural resources has become a matter of increasing concern, especially in the new lands of the world though there is still a wide gap between the theorist and the practitioners. The present study divided into two parts. Part-A studies the

man-nature relationship, the deterministic perspectives, modes of nature-society or environment relations, the possibilist perspectives and the current view of man-environment relations and Part-B concentrates on factors influencing habitat, environmental gradients, and habitat pattern, and changing perception of human-environment relations with environmental aspects.

Hypothesis

The following are certain hypotheses, which have been formulated for the present study:

1. Development needs to be looked at from an ethical angle also in view of extensive irreparable damage to the environment of the earth.
2. If the interest of society and the country outweigh narrow selfish interests sustainable development is possible.
3. Environmental activities lead to study of natural construction and creative skills will provide the basis for the practice of healthy living.
4. Wide diversity of economic, social, cultural and institutional practices and traditional knowledge at the local level promotes interaction between local, and regional communities, conflict prevention and resolution in critical environmental situations.

Objectives

This research paper avails to concentrate on following objectives –

1. To know man-nature relationship
2. To know the environmentalism and deterministic perspectives
3. To know the modes of nature- society
4. To avails about environmental gradients and habitat pattern
5. To know environmental determinism that tended to identify the relationship between physical environments as the control human behavior.

Methodology

The data and information have been collected from different source such as published and unpublished work. The primary and secondary data have been collected from different book reviews and encyclopedias on environmental aspects. The data obtained provided a number of interesting features that brought out a picture indicating change nature-environment relations.

Literature review

Ellsworth Huntington studied with Davis at Harvard and was associated with Bowman at Yale. Huntington's generalizations on climatic determinism seems to be identical with those of Montesquieu, especially the one which he developed in his second book 'Civilisation and Climate (1915). He referred to the cool temperate oceanic regions because he found these regions highly civilized and developed. Ellen Churchill Semple (1891-92), for her book 'Influence of Geographic Environment' (1911), which is an explicit peoples of all stages of cultural development, living under similar geographic conditions. Jones (1984), states that, the focus of all geographical enquiry is placed, this implies location on the Earth's surface, the relationship between it and other locations, and the processes affecting changes in those relationships. As O'Riordan wrote, "Environmentalism is a collage of values and views of the world, a general patterning foremost a social movement." Indian philosophy has, from the beginning, recognized the basic unity of man and nature. For Indian thinkers man has always been a part of nature, and there has been a basic cosmic brotherhood between man and other species in the plant and animal kingdom. According to James Lovelock (1979), life upon the Earth is manipulated by living organisms which through their naturally coordinated interaction help smooth out disturbances in the atmosphere, lithosphere and hydrosphere so that a complicated life-sustaining state is maintained on the earth surface.

Part-A

Man-Nature relationship

The relationship between mankind and the physical environment starts from civilization. In wet tropical or subtropical environments of South and East Asia, the traditional realms of Chinese and Indian cultural influence in a definite direction. The Hebrew and Greek cultures which grew through a process of hard struggle against unfriendly and harsh environment were altogether different. Nature had clear the for cultural development.

The Deterministic Perspectives

Geographer's interest in the study of man-environment relationships got a new lease of life after the publication of Darwin's 'The Origin of Species (1959), owing to the underlying emphasis on the ecological relationship between an organisms and its environment in the evolutionary thesis, and the notions new respectability to geography as a field of learning. Hudson (1977), argued that, the rise of geography as a great deal to its usefulness in the task of justifying the current phase of the different 'racial'

groups. The justification was carried out through a disciplinary focus on environmental determinism. Rise of political economy perspective in human geography deterministic perspective on man-environment relationship was opposed by the anarchist Russian geographer Kropotkin (1924). Kropotkin argued in favour of the qualities of cooperativeness and sociability, through his was almost a lone voice in the wilderness; environmental determinism in geography.

Modes of nature-society or man-environment relations

Glacken (1967), describes the three different modes of nature-society or man-environment relations:

- Humanity in harmonious relationship with nature.
- Humanity as determined by nature; and
- Humanity as modifier of nature.

The men as modifier and conqueror of nature view has dominated modern thought through the other two perspectives have by no means been completely absent.

The Possibilist Perspective

The geography around the beginning of the twentieth century found wide acceptance in France according to which the physical environment offers opportunities for a range of possible directions of development, and it depended on human initiative as to which particular direction of development, and it depended on human initiative as to which particular direction of progress was chosen. This basic premise that the environment presents a range of opportunities came to be known by the name of possibilism. This view is generally identified with the French school of human geography that developed around the turn of the twentieth century under the leadership of Vidal de la Blache. The possibilistic view of man-environment relations developed by Blache represented a middle course between the views of the French sociologist Emile Durkheim who proposed the study of human geography as social morphology. The Vidalian approach to the environment followed a middle course between extreme (radical) possibilism and strict environmental determinism.

The current view of Man-environment relations

It aims at human well-being, and us focused on the friendly partner survival of mankind is dependent on the survival of a healthy and ecologically balanced with environment. Environmentalism resolves two fundamental issues first, resource exploitation and the survival of the species. Modern geographical writing distinguishes two alternatives on environmentalism, the conservative view of society-nature relationships.

Part-B

The sum of the effective conditions under which the plant or the community lives called a habitat. Every species and every community has a certain range of habitat which may be wide or narrow. Species are distributed over a large portion of the globe under a considerable variety of climates; others are confined to a very restricted set of conditions, which may be realized only within a small area.

Influencing factors of habitat :

1. Climatic factors: It includes the general features of regional climate and season, light, temperature of the air, rainfall, humidity of the air; winds are in local time and even in extremely restricted areas (micro-climate).
2. Physiographic factors: It includes geological strata, topographical features, such as altitude, slope, and exposure and by geodynamic process like erosion, the blowing of sand etc.
3. Edaphic factors: Those are dependent on the soil as such its physical and chemical constitution, water content, aeration etc.
4. Biotic factors: All living organisms, either animals or plants.

Environmental gradients and habitat patterns

The habitat is the place occupied by a population or a community in which a particular combination of environmental conditions. The environmental conditions within one kind of habitat exhibit variation from irregularities and suddenly, since climatic, topographic, edaphic and biotic. Gradients may occur on a medium scale such as these formed in small mountain valleys in arctic and subarctic regions, where snow accumulates during the winter. In gradients a landscape many of them caused by micro relief.

Changing perception of human-environment retaliations:

Human activities that causes damage to the environment by a systematic manner on a global scale, it includes-

- Population growth
- Overconsumption of resources
- Over exploitation
- Pollution
- Deforestation

Threat to environment

According to World Economic Forum studies found that air pollution play vital role in the largest current environmental threat to public health.

The Challenges for future

- Post-modern, post structuralism and post- colonial approaches are radically changed in human-environment research in the subject field of social sciences.
- Global problems or changing ideology of post-modern world induced science to investigate human environment relations.
- The geographical science has to renew connections between physical and human geography.
- Bennet and Chorley (1978), Sustain environmental imperatives changes in social values towards a more conservation-oriented system in a human-mankind.

Conclusion

The environment includes all surroundings natural and man-made factors affecting life. It has complex variables which surround man as well as living organisms. The study of the man-environment relationship is the core of environmental geography, as an ecological analysis of spatial attributes of interrelationships between technologically advanced man and the natural environment of the earth. As society developed, man's impact on the environment grew in scope and strength. Mankind has long trusted in nature's potential and restorative powers, though there was no reason to believe that these powers were inexhaustible. The concept of the man-environment relationship has been developed during the initial stage of the development of geography and still forms the basis of geographical knowledge and research. On the earth, location is an ensemble of celestial, terrestrial and human phenomena and geography must represent an approach to the empirical knowledge of these phenomena which is necessary for philosophical research. A habitat meets all the environmental conditions an organism needs to survive. Environmental perception important because individuals base their judgment on the environment as they perceive it or warm feelings for an environment for understanding environmental impacts on habitat.

References

1. Anderson, J (2009). *Understanding of Cultural geography: places and Traces*, Rutledge, London.
2. Blout, J. M (1999). *Environmentalism and Eurocentrism*, *The geographical review*, 89. (3), pp. 391-408.
3. Castree, N (2011). *Nature and Society*, *SAGE Handbook of Geographical knowledge*, SAGE Publication, London, pp.287-299.
4. Frenkel, S. (1992). *Geography, Empire and Environmental Determinism*, *Geographical review* 82. (2), pp. 143-153.
5. Livingstone, D. N. (2002). *The Geographical Tradition*, Oxford, Blackwell.
6. Nunn, P.D. (2003). *Revising ideas about environmental determinism: Human-environment relations in the Pacific Islands*, *Asia Pacific Viewpoint* 44(1). pp. 63-72.
7. Peet, R. (1955). *The Social Origins of Environmental Determinism*, *Annals of the Association of American Geographers*, pp. 309-333.
8. Radcliff, S.A. (2010). *Environmental thinking in geography*, *Progress in Human Geography review* 34 (1), pp. 98-116.
9. Sluyter, A. (2003). *Neo-Environmental Determinism*, *Nature Society Science, Antipode* 35 (4) pp. 813-817.

Ethnobotanical Studies in Darjeeling Himalaya in Relation to Birth, Marriage and death

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Abstract

Darjeeling is an important part of the Eastern Himalaya and has a rich ethnobotanical heritage. The Gorkhas with their large number of races unified together are the most dominant inhabitants among the aborigines in the region. Ethnobotanical studies have been carried out on the multi-ethnic groups. The present paper deals with the plants related to the three important phases of life, the birth, marriage and death in all the ethnic groups. The uses of plants have their own importance and philosophy in the life of the people. Five plants are associated with rituals in birth nine in marriage and six in death. Most of the plants so used have been found to have medicinal and other social value.

Keyword: Medicinal Plants

Introduction

Darjeeling district is an important part of the eastern Himalaya and lies between 26° 31' 05" - 27° 13' 10" N latitude and 87° 59' 30" - 88° 53' E longitude. While the total area covered by the district is 3254.7 sq. km, the 2329 sq.km area is occupied by the hills with an altitudinal variation between 130m (at Sukuna) and 3636m (at Sandakphu). The region harbours a large number of plant species with wide range of diversity and distribution (Das 1995, Bhujel 1996). Larger percentage of the population of the district is distributed in the village and far-flung areas. The people living in these areas depend on the forest resources for meeting their daily needs like food; fuel, medicine and house hold articles and also for articles needed in performing their rituals. The history of various ethnic uses of plants of Darjeeling district probably dates back to the time of the arrival of Lepcha and the Gorkha people in the region (Rai *et al* 1998). The existence of traditional knowledge on different plant uses is more common to the people living very close to the forest areas. However, the detailed picture of the direct man-plant relationship with their diverse cultural heritage is not yet made available in documents. A few assorted publications on ethnobotanical observation has been made by Bhujel (1996), Bhujel *et al* (1984), Yonzon and Mondal (1982), Yonzon *et al* (1984, 1985, 1996), Lama (1989), Rai *et al* (1998) and Rai and Bhujel (1997, 1999, 2002, 2003). But most of these studies are concentrated on the medicinal and wild edible plants. The Darjeeling Himalaya along with its neighbouring state of Sikkim, with which it has its more than one similarities in geography, cultural heritage and vegetational wealth, finds an important place in the nation, for the vast knowledge and experience its people have in the use of plants in many ways.

Description Of The Studied People

Gorkha- They are the dominant race in Darjeeling. They are the born cultivators, resourceful and hard working. They have taught agriculture to the aboriginal Lepchas (O'Malley, 1907). Gorkha is a generic category, which subsumes a large number of communities within a cluster of endogamous group or caste. It includes castes like Bahun (Brahmin), Bhujel, Chhetri, Damai, Gurung, Kami, Subba (Limbu-Kirant), Mangar (Thapa), Newar, Rai (Khambu-Kirant), Sarki, Sherpa, Sunuwar (Mukhia), Tamang (Murmi), Thakuri, Thami, Yakha (Dewan) and Yolmu (Kagate). However, they are professing different religions, speaking different languages and having different positions in the social hierarchy (Subba, 1992). It was in 1768 AD when the Gorkha king Prithivi Narayan Shah completed the conquest in Nepal and extended his border in the east when more Gorkha people entered this region. The process continued until his death in 1775. In the year 1794 the Gorkha kingdom was extended from Sikkim in the east and Kashmir in the northwest. Gorkha in general is known as one of the warrior group of Himalayan origin of the present day Nepal. During the British dominance in south Asia the first three Gorkha battalions of the British India army was raised in 1815 (Morris, 1933). Basically there are two distinct races (of Aryan and Mongoloid origin) within the Gorkha community. The Aryan race is known as *tagadhari* (sacred thread wearer) to which Bahun and Chhetri belong and they have privilege of falling in the upper category of caste hierarchy. The mongoloid race is known as *matwali* (the class of people who drink alcohol). However, Bhujel, Damai, Kami and Sarki are not of mongoloid origin though they are treated as *matwali* (Liwang 2000) Each group of people retains the social position equivalent to caste (jat). Each caste is composed of a number of clans (tharr) and the clans are composed of smaller number of kindreds. These kindreds are strictly exogamous. With the exception of certain caste, most of them are bilingual. They have their own dialect, religion and custom relating to childbirth, marriage and funeral rites. But in the present study all these castes are treated in general Gorkha on the basis of their language, present day custom and tradition. The castes like Bahun, Bhujel, Chhetri, Damai, Kami, Mangar and Sarki generally follow the Hindu

religion where as Sherpa, Tamang and Yolmu follow the Buddhist religion. The remaining castes are atheist though they have a strong faith and inclination on Hindu religion. Only the castes like Rai, Limbu, Yakha and Sunuwar are animist. They worship nature and their fore fathers as ancestral God. Nepali is the *lingua franca* and the most acceptable mother tongue of all for their co-existence. Most of the people are animist where shamanism is associated with their caste and clan, culture and tradition recognized by the society. It is recognized that the human neglect is usually the basis for supernatural discontentment, which invites attacks by witches and evil spirits. Through human failure and neglect supernatural forces are unleashed and bring chaos, disorder and disaster. These forces are combated, held in check or defeated by individuals who are capable of 'seeing' and 'identifying' them. Such individuals receive their power primarily through successful encounter with supernatural forces in the past (Hitchcock and Jones 1976) These individuals are known as Jhankri (in general), Bijuwa, Mangpa in Rai community, Boongthing (male), Mun (female) in Lepcha community, Phedangma, Yeba (male) Yema (female) in Limbu community, Puimbo (male) and Ngiami (female) in Sunuwar community, Bonbo in Tamang community, Pajyu, Khepre or Ghyapring in Gurung community, Lama (male) Doloma (female) in Sherpa and Yolmu community. Whenever necessary they are able to introduce the spirits voluntarily in their body. But only the Rai and Limbu communities have deep faith in shamanism and worship their departed ancestors, nature, different deities and ghosts. They take services of *Bijuwa* and *Phedangma* who are believed of having the power of taking soul of the dead to heaven by performing *chinta* (séance) at the time of last rites. They go to trance while reciting the religious verses known as *mundhum* during the journey to heaven and back to earth. They wear white gown, headgear with feathers, *rudrakse* (a holy rosary) inter woven with *cowree* (seashell) and tiny bells across the body. They have the socio-cultural rights to perform all the religious rites at specified places according to caste and clans. Wearing this dress is compulsory in all the rites and ceremonies performed by them. The teacher confers this dress to them after proper examination of the capability, before they enter into the profession.

Lepcha- The word Lepcha has no traceable root of origin. The Lepcha people call themselves as *rong* and locate their original home in the neighbourhood of the great mountain Mt. Kanchandzonga. They are of mongoloid descent and the place they live is called *Mayal-lyang*. They are distributed between 500-2000m throughout the district. They are also found in Sikkim and eastern part of Nepal. Traditionally they were animist who believe in the spiritual beings of good and bad called *bon faith* where witchcraft and exorcism were very common. Their spiritual priest is called *boongthing* (male) and *mun* (female). The spread of Buddhism among Lepcha people cannot be dated exactly but it is generally agreed that it started in a significant manner on the consecration of Phutsog Namgyal as the first Chogyal (king) of Sikkim in the year 1641(Gowloog, 1998). Their priest lama conducts the cultural and religious rites where the devotees raise prayer flags. Presently the Lepcha people in Darjeeling district are much under cultural influences of the Gorkhas and other communities and many of them have converted into other religions.

Bhutia- Bhutias are the Tibetan descendents, an original inhabitant of *Bhot* the present day Tibet Autonomous region of China. They are scattered in the towns and border areas and high altitudes of Darjeeling, Sikkim, Nepal and Bhutan. Basically they are the followers of Buddhist religion. Their priest 'lama' conducts all the rites associated to their cultural and religious affairs raising prayer flags. In every Bhutia house there is a separate room meant for God and deities. They offer water every morning and evening and burn the incense made from plants.

Materials And Method

The present paper is one of the outcomes of the study conducted by the authors on the ethnobotany of Darjeeling Himalaya for the past eight years. During the visit to selected areas, the people of different races and castes were contacted. A regular visit to these areas was necessary in order to develop an understanding relation and trust among the informants, so that they feel free to divulge their traditional knowledge. The key informants taken were experienced village folks and all the priests of all the ethnic groups living in the region. A number of places where ceremonies and rituals were being conducted were visited to observe the exact use of the plants. After the interview the plant specimens in question were spotted, recognized with their help. These specimens were collected, noted in the field notebook, processed and mounted in the herbarium sheets (following Jain and Rao, 1977). The plant identification and matching was done at the herbarium of North Bengal University, Botanical Survey of India, Gangtok unit and the Central National Herbarium, Howrah. The specimens are deposited in the herbarium of Taxonomy and Ethnobiology Laboratory, Kalimpong College, Kalimpong.

Enumeration

The enumeration of the collected specimen has been made alphabetically irrespective of their taxonomic position. The presentation provides the botanical name, family, field number, local name and uses. The

abbreviation used are: Fn: field number, Nep: Nepali, Lep: Lepcha, Bhu: Bhutia, Ln: local name. All field number are to be treated as "Rai et Bhujel".

Birth

Laportea terminalis Wight – (Urticaceae) **Fn:** 0725; **Ln:** Ghario sisnu (Nep.)

Uses: String/cord made from the mature fibrous stem is tied around the waist of six months old baby to repel evil spirits.

Rhus hookeri – (Anacardiaceae) **Fn:** 0957; **Ln:** Rani bhalayo (Nep.)

Uses: On *nuwaran* (name giving ceremony of a new born baby) the wood is burnt as a part of the ritual. The smoke so produced immunizes the baby against the poisonous latex of the same and such other plants.

Semecarpus anacardium L.f. (Anacardiaceae) **Fn:**0563; **Ln:** Kag Bhalayo (Nep.); Su-kung (Lep.)

Uses: Same as in *Rhus hookeri* but the seeds can also be used in place of stem, here.

Urtica ardens Link.- (Urticaceae) **Fn:** 0167; **Ln:** Patle sisnu (Nep.)

Uses: Same as in *Laportea terminalis* but since the plant grows in the higher altitude region of Darjeeling Himalaya the Sherpa and Bhutia communities also use the plant for the same purpose.

Urtica dioica L.- (Urticaceae) **Fn:** 0188; **Ln:** Patle sisnu (Nep.)

Uses: Same as in *Laportea terminalis* and the plant grows in the middle hill region of Darjeeling Himalaya. The Lepchas and Gorkhas living in this zone prefer to use this plant for the purpose recorded in case of *Laportea terminalis*.

Marriage

Aegle marmelos - (Rutaceae) **Fn:** 0870; **Ln:** Bel (Nep.)

Uses: Fruits and leaves used as offering while performing the marriage ceremony by the Hindu followers. 'Beli Biwaha' a traditional marriage ceremony is solemnized by the girl child of *Newar*, one of the sub groups of the Gorkha community with the mature fruit of this plant before her puberty.

Betula alnoides D.Don.- (Betulaceae) **Fn:** 0562; **Ln:** Saur (Nep.); Sargli- Kung(Lep.)

Uses: Twigs used in making *mandap* (a platform where the newly married groom and bride is sit for the blessing and also to perform the religious ceremony) at bride's home chanting *slokas* (religious verses) by Bahun, Chettri, Bhujel, Mangar and Newar sub groups of the Gorkha community.

Cynodon dactylon (L.) Pers- (Graminae) **Fn:** 0544; **Ln:** Dubo (Nep.)

Uses: The sub groups of the Gorkha community of Hindu religious faith use whole plant as offering to their deities. This plant is used and treated as sacred plant while performing the cultural and religious ceremonies.

Ficus religiosa L.- (Moraceae) **Fn:** 0865; **Ln:** Pipal (Nep.); Sang preng- Kung (Lep.)

Uses: The sub groups of the Gorkha community of Hindu religious faith use the leaves of this plant as offering to their deities while performing the cultural and religious ceremonies. The plant is also used in making altar or to decorate the platform to perform religious ceremonies.

Mangifera sylvatica Roxb. - (Anacardiaceae) **Fn:** 0350; **Ln:** Jungali Anp (Nep.); Kuthur-Kung (Lep.)

Uses: Leaves used as in *Ficus religiosa* by the sub-groups of the Gorkha community of Hindu religious faith.

Musa balbisiana Colla - (Musaceae) **Fn:** 0894; **Ln:** Ban-kera (Nep.); Ralim/Reling (Lep.)

Uses: Stem used in making *mandap* (a platform where the newly married groom and bride sit for the blessing and also to perform the religious ceremony) by the Gorkha community of Hindu religious faith. The leaves are also used in making meal plates during the cultural and religious ceremonies performed by the same sun groups. The other sub groups of the Gorkha community and the Lepcha community of animist faith use the leaves to make the altar to perform the religious ceremony at the time of blessing the newly married brides.

Oroxylum indicum(L.) Vent. - (Bignoniaceae) **Fn:** 0109; **Ln:** Totola (Nep.)

Uses: Bhutia, Lepcha and the sub groups of the Gorkha community of Buddhist religious faith use the papery winged seeds as sacred offerings while performing the cultural and religious ceremony at the time of marriage.

Prunus cerasoides D.Don.- (Rosaceae) **Fn:** 0248; **Ln:** Paiyun (Nep.); Kongki-Kung (Lep.)

Uses: Same as in *Betula alnoides* but the twig of this plant is being carried by the representatives of the bridegroom to report their arrival at bride's place. This plant finds importance in Bahun, Chettri, Bhujel, Mangar and Newar sub groups of the Gorkha community who are the followers of Hindu religion.

Saccharum officinarum L. - (Graminae) **Fn:** 0668; **Ln:** Gyabare Ukho (Nep.)

Uses: Slender stem with green foliage used in decorating the *mandap* by Bahun, Chettri, Bhujel, Mangar and Newar, the sub groups of the Gorkha community of Hindu religious faith.

Death

Artemisia dubia Wall. ex Besser - (Compositae) **Fn:** 0184; **Ln:** Titepati (Nep.)

Uses: Freshly collected aerial parts burn on the way after the dead person of the Gorkha and Lepcha community is carried away. The leaves are also used in cleaning the houses after carrying out the dead body from the house. The plant is burnt on the road along which the dead body was carried and the carrier of the coffin touches the burning plant with their feet. They also use the leaves to wash their body.

Artemisia verlotiorum Lamotte- (Compositae) **Fn:** 0062; **Ln:** Titepati (Nep.)

Uses: Same as in *Artemisia dubia*. But the plant is also used in making the altar in the house of deceased person and the priest of Lepcha and the Gorkha communities of animist faith perform a religious ceremony as the last death rituals.

Mimosa himalayana Gamble - (Mimosoideae) **Fn:** 0520; **Ln:** Areri kanra (Nep.); Sibriyo-zhu (Lep.)

Uses: Spiny twigs used during the last rites of Bahun, Chettri, Bhujel, Mangar and Newar sub group of the Gorkha community of Hindu religious faith to protect the place of worship near about a stream, out side home.

Dendrocalamus hamiltonii -Nees & Arn. ex Munro- (Graminae) **Fn:** 066 **Ln:** Tama bans (Nep.); Yemyot-Pao (Lep)

Uses: Stem culms used for offer water/beverages to the dead by the animists group of the Gorkha community and Lepcha. Under the sub group of the Gorkha community of Hindu religious faith like Bahun, Chettri, Bhujel, Mangar and Newa, they offer milk to the dead in the culms of this plant at the time of funeral.

Neyraudia aurandinacea (L.) Henrard-(Graminae) **Fn:** 0838; **Ln:** Ghungring (Nep.)

Uses: In the night of last rite, the priest of animist faith in the Gorkha community performs the rituals for the deceased person where the internodes of the stem is used in making altar to worship the deities.

Thysanolaena latifolia (Roxb. ex Hornem) Honda-(Graminae) **Fn:** 0076 **Ln:** Amliso (Nep.) Pushok-tim/Pachyor (Lep.)

Uses: Young shoots are used in making altar to perform the last rites by the priest of Lepcha and the Gorkha community of animist faith. The inflorescence is used by the priest of Bhutia, Lepcha and the Gorkha communities of Buddhist religious faith to perform the death rituals.

Result And Discussion

Darjeeling Himalayan region finds an important place in the floristic map of the nation and the world as well. The floristic components of this Himalayan region also attracted many botanists including the ever-evolving subject of ethno-botany. During the ethno botanical survey in the Himalayan region, twenty angiosperm plants of cultural and religious significance among the various ethnic communities of this region have been recorded. Among the twenty recorded plants five are found to be used in the birth and birth related rituals, nine during the marriage ceremony and six in death related rituals. The prevalence of plant uses are generally found not only in the villages and far flung area but also found in town and urban areas.

Conclusion

The documentation of the ethnic uses of plant resources is very important for a variety of reasons. However, in case of many plants the real reason of uses in such events and rituals are yet to be properly known. Most of the plants used during the birth ceremonies are used for medicinal purposes or to take such preventive measures and plants used during the marriage ceremonies have ornamental significances. The plants used at the time of death and its related matters are also associated with the religious rituals of these ethnic communities. To know the truth on the proper uses of the recorded plants relating to other aspects needs a further investigation. Acknowledgement: The authors are grateful to G.B Pant Institute of Himalayan Environment and Development, Almora for the financial assistance to carryout the research and the Principal of Kalimpong College, Kalimpong for the encouragement.

Literature Cited

1. Bennet, S.S.R.1983. *Ethnobotanical studies in Sikkim*. Indian Forester. 109:477-481.
2. Bennet, S.S.R.1985. *Ethnobotanical studies in west Sikkim*. Journ.Econ. Tax.Bot.7:317-321.
3. Bhujel, R.B, Tamang, K.K and Yonzone, G.S.1984. *Poisonous plants of Darjeeling district*. Journ.Him. Res Dev. pp.31-34. Nainital, India.
4. Bhujel, R.B.1996. *Studies on the dicotyledonous flora of Darjeeling district*. Ph.D. thesis, University of North Bengal, Raja Rammohunpur, Darjeeling.
5. Das, A.P.1995. *Diversity of angiospermic flora of Darjeeling hills*. Taxonomy and Biodiversity (ed.A.K.Pandey) CBS Publishers & Distributors, Delhi. pp. 118-127.
6. Gowloog, R.R.1998. *The Lepchas of Sikkim*. In *Sikkim-Perspectives for Planning and Development* (Eds: S.C Rai, R.C Sundriyal and E. Sharma).pp 69-74. Sikkim Science Society, Gangtok.

7. Hara, Hiroshi.1966. *The flora of eastern Himalaya. First report.* University of Tokyo Press, Japan.
8. Hara, Hiroshi.1971. *The flora of eastern Himalaya. Second report.* University of Tokyo Press, Japan.
9. Hitchcock, John T and Jones Rex L.1976. *Spirit possession in the Nepal Himalayas.* Vikash Publishing House Pvt. Ltd., New Delhi.
10. Jain, S.K .1981 (ed.). *Glimses of Indian ethnobotany.* Oxford & IBH. New Delhi.
11. Jain, S.K and Rao.R.R.1976. *A handbook of field & herbarium methods.* Today & Tomorrow's Publisher, New Delhi.
12. Jain, S.K and Mudgal, V.N.1999. *A hand book of ethnobotany.* Bisen Singh Mahendrapal Singh, Dehra -Dun.
13. Krishna, B and Singh.S.1987. *Ethnobotanical observations in Sikkim.* Jour Econ.Taxn.Bot. 9(1):1-7. Jodhpur. India.
14. Lama, Projjwal C.1989. *A preliminary report on the ethnobotanical importance of the Sukia pokhari region of Darjeeling Himalayas.* Jour.Beng. Nat.Hist.Soc.NS.8 (1):56-62. Darjeeling.
15. Liwang, Min.2000. *The Gorkhas-a glance at their culture and traditions.* Himal (India), Kalimpong Publication, Kalimpong, DGHC.
16. Morris, C.J.1933. *The Gurkhas- an ethnology.* B.R Publishing Corporation. 461 Vivekanand Nagar, Delhi.
17. Ohashi, Hiroyoshi.1975. *The flora of eastern Himalaya. Third report.* University of Tokyo Press, Japan.
18. Rai, P.C, Sarkar, A , Bhujel, R.B and Das, A.P.1998. *Ethnobotanical studies in some fringe areas of Sikkim and Darjeeling Himalayas.* Jour.Hill Res.11(1):12-21. Sikkim.
19. Rai, S.K.2002. *Studies on the ethnobotany of Darjeeling Himalaya.* Ph.D thesis submitted to the University of North Bengal, Raja Rammohunpur, Dist. Darjeeling.
20. Rai, S.K and Bhujel, R.B.1997. *Wild medicinal plants in the eastern Himalaya - conservation and propagation aspects.* The Hill Horticultural News. Vol.2 (3&4):2-5. Kalimpong, DGHC.
21. Rai, S.K and Bhujel, R.B.1999. *Note on some less known ethnomedicinal plants from the Darjeeling Himalayas.* Journ.Hill.Res.12 (2):160-163.Sikkim.
22. Rai, S.K and Bhujel, R.B.2002. *Ethnic uses of some monocotyledonous plants in the Darjeeling Himalayan region.* Perspectives of Plant Biodiversity (ed. Das, A.P.) pp.635-644. Bisen Singh Mahendrapal Singh, Dehra-Dun.
23. Rao, R.R.1990. *Ethnobotany in the study and conservation of fragile ecosystems-some issues from the Himalayan region.* Ethnobotany 2:45-55. Lucknow.Subba, Tanka.B.1992. *Ethnicity, state and development - a case study of Gorkhaland movement in Darjeeling.* Vikash Publishing House Pvt. Ltd. New Delhi.Yonzone, R, Mondal, S and Chanda, S.1981. *A contribution to the ethnobotany of Darjeeling hills.* Trans.Bose Res.Inst.44 (3):75-81.
24. Yonzone, G.S, Yonzone, K.N and Tamang, K.K.1984. *Medicinal plants of Darjeeling district.* Journ.Eco.Tax.Bot.5 (3):605-616.Jodhpur.
25. Yonzone, G.S, Bharati, P, Yonzan, B and Bhujel, R.B.1985. *Ethnomedicinal plants of Darjeeling-Sikkim Himalayas.* Proc. (Spl. issue) Vth ISHS symposium. Journ.International Horticultural Science. pp.193-202. Darjeeling, India.
26. Yonzone, G.S, Yonzone, Aruna and Bhujel, R.B.1996. *Contribution to the ethnobotany of Darjeeling district, India.* Ethnobotany in Human welfare. (ed. Jain, S.K.) pp.388-389. Deep Publications, New Delhi.

Corporate Social Responsibility: A Tool to Ensure Sustainable Development Goals

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Creating a strong business and building a better world are not conflicting goals; they are both essential ingredients for long-term success...

-William Ford¹

Abstract:

Successful companies have a social responsibility to make the world better place and not just take from it; Corporate Social Responsibility (CSR) extend beyond corporate philanthropy, it is collective responsibilities to build a society which supplements government efforts to achieve inclusive growth which includes broad based benefits and ensured equality of opportunity for all. This paper aims to explore the relationship between CSR and Sustainable Development Goals (SDGs). The authors specifically consider the role of systematically measuring and managing corporate impacts on sustainable development as a prerequisite for demonstrating a net contribution to the SDGs.

Introduction

Sustainable development (SD)² and corporate social responsibility (CSR) are distinct but related concepts. Sustainable development refers primarily to issues of environmental impact and economic justice, while corporate social responsibility encompasses broader concerns such as the company's charitable contributions and role in the community. Sustainable development can be a part of a company's social responsibility program. However, with the changing business scenario and global issues like climate change and poverty, companies can't just expect to survive practicing CSR as a philanthropy simply to improve their image. When the future of the world is at stake, with our planet facing considerable economic, social and environmental challenges, companies can't visualize their future without trying to protect the environment in which they wish to survive. Thus, this has given rise to the concept of linking CSR with sustainable development, and now includes sustainability and responsibility as two complementary elements of CSR. Though SDGs have a much longer history of evolution, there are strong evidences supporting the claim that CSR evolved with the sustainable development movement. CSR is a strategy that seeks to systematically integrate the economic, environmental and social impact of business into the management of business, with the vision to create a better future.

What is corporate social responsibility?

“Social responsibility is the responsibility of an organisation for the impacts of its decisions and activities on society and the environment through transparent and ethical behaviour that is consistent with sustainable development and the welfare of society; takes into account the expectations of stakeholders; is in compliance with applicable law and consistent with international norms of behaviour; and is integrated throughout the organization.”³ Generally, CSR is understood to be the way firms integrate social, environmental and economic concerns into their values, culture, decision making, strategy and operations in a transparent and accountable manner and thereby establish better practices within the firm, create wealth and improve society. As issues of sustainable development become more important, the question of how the business sector addresses them is also becoming an element of CSR.⁴

EU Definition of CSR: “A concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis.” In October 2011, the EU introduced some new thinking and stated that CSR is ‘the responsibility of enterprises for their impacts on

¹ William Clay Ford Jr. Executive Chairman, Ford Motor Company.

² "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."- World Commission on Environment and Development, 1987

³ Working definition, ISO 26000 Working Group on Social Responsibility, Sydney, February 2007

⁴ Paul Hohn en, Corporate Social Responsibility An Implementation Guide for Business, © 2007, International Institute for Sustainable Development, Available @ https://www.iisd.org/system/files?file=publications/csr_guide.pdf, visited on 20.06.2021

society". The World Business Council for Sustainable Development has described CSR as the business contribution to sustainable economic development. Building on a base of compliance with legislation and regulations, CSR typically includes "beyond law" commitments and activities pertaining to: • corporate governance and ethics; • health and safety; • environmental stewardship; • human rights (including core labour rights); • sustainable development; • conditions of work (including safety and health, hours of work, wages); • industrial relations;⁵ Corporate Social Responsibility is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large.⁶

European Commission (2001) defined CSR as "a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis". According to Broomhill CSR concept is "highly contextual in terms of corporate and national environment". CSR is adopted by the companies on the voluntary basis.⁷

Sustainable Development Goals (SDGs) and Corporate Social Responsibility (CSR)

Sustainable development is a carefully planned strategy to embrace growth while using resources more efficiently, with utmost consideration of immediate AND long-term benefits for our planet and the humans who live on it. There are three primary objectives of sustainable development:

Economic growth – building a strong, competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and identifying then coordinating development requirements.

Environmental protection – contributing to protecting and enhancing our natural and developed environment, while helping to improve biodiversity, use natural resources wisely, minimizing waste and pollution, and adapting to and helping to decrease climate change, including a global shift to low-carbon economy.

Social inclusion – supporting strong, vibrant and healthy communities by providing the supply of housing required to meet the needs of present and future generations; and by creating a high-quality of development, with accessible local services that reflect the community's needs and support its health, social and cultural well-being.⁸

To achieve Sustainable Development, the Sustainable Development Goals were adopted by the United Nations General Assembly in September 2015 as part of the 2030 Agenda for Sustainable Development. Characterized as a "new, universal set of goals to develop a global vision for sustainable development by balancing economic growth, social development, and environmental protection". The SDGs can be seen as a novel approach to global governance through goal-setting and tailored eco-feedback processes. The SDGs were developed through inter-governmental collaboration using public engagement processes to actively mobilize and consult national governments of both 'developing' and 'industrialized' countries in addition to various civil society groups.⁹

SDGs were adopted to end poverty, protect the planet, and ensure prosperity for all as part of a new sustainable development agenda. For the realization of these goals called for collaborative action by government, businesses and the civil society, wherein they can jointly foster solutions for a common theme of sustainable development. A total of 17 SDGs¹⁰ aims at 169 targets are set to be achieved by 2030.¹¹

⁵ *ibid*

⁶ Michael Hopkins, What is corporate social responsibility all about?, Journal of Public Affairs · August 2006, Available @ https://www.researchgate.net/publication/246912286_What_is_corporate_social_responsibility_all_about

⁷ The Relationship Between Corporate Social Responsibility (Csr) And Sustainable Development (SD) Liliana Nicoleta SIMIONESCU Internal Auditing & Risk Management Anul X, Nr.2(38), June 2015 P-182

⁸ What is Sustainable Development, and Why Is It So Important? Available @ <http://emeraldbe.com/sustainable-development-important/> visited on 20.06.2021

⁹ Amr ElAlfy, Nicholas Palaschuk and others, Scoping the Evolution of Corporate Social Responsibility (CSR) Research in the Sustainable Development Goals (SDGs) Era, Available @ <https://www.mdpi.com/2071-1050/12/14/5544/pdf> , visited on 15.06.2021

¹⁰ A snapshot of the SDGs1.no poverty, 2.Zero Hunger, 3.Good Health and Well Being, 4.Quality Education, 5.Gender Equality, 6.Clean Water and Sanitation, 7. Affordable Clean Energy, 8.Decent Work and Economic Growth, 9.Industry, Innovation and Infrastructure, 10.Reduced Inequalities, 11.Sustainable Cities and Communities,

Universally the CSR accepted in 1990s and by 2000s CSR become an essential strategy for many organizations.¹²

India has also signed the declaration for sustainable development along with other countries. While the government initiatives in India are linked to achieving SDGs, local implementation and data validation becomes a challenge. To add on to the slow progress, India ranks 116 of 157 on the SDG index, thus calling for immediate action through collaboration between the corporate sector, civil society organisations and the government. Corporate are now being seen as the key drivers of SDGs as they can apply their creativity and innovation in solving the sustainable development challenges and can play a strong role as facilitators to catalyse implementation of the SDGs.¹³

According to Adam Fisherman, CSR is a bridge that connects the accelerated production and profit with the sustainability of society and environment. It is also a bridge that connects the success of science and technology (Technological Investment) in business with peace and prosperity (values/spiritual capital) in life. Unless and until the supply of natural resources and peace in society prevail, progress of business and profit cannot be attained and sustained. Hence, business sustainability is a function of social peace (social sustainability) and nature's balance (environmental sustainability).¹⁴

Corporate Social Responsibility (CSR) and India

The Sustainable Development Goals provide a powerful framework for businesses to engage in corporate social responsibility. India becomes the first country to legislate the need to undertake CSR activities and mandatorily report CSR initiatives under the new Companies Act, 2013. This is the beginning of a new era for CSR in India. The regulation acts as a mechanism to achieve Sustainable Development Goals. The Section 135 of the Act makes it mandatory for companies of a certain size and profitability to spend 2% of their average net profits of previous 3 years on CSR. The corporate social responsibility provision is applicable to companies with: 1. annual turnover of 1000 Crores or more or, 2. Net worth of 500 Crores or more or, 3. Net profit of 5 Crores or more Schedule VII of the Companies Act 2013 enumerates the ambit of CSR activities which includes: Poverty eradication, Promotion of education, gender equality and women empowerment, Reducing child mortality and improving maternal health, Combating AIDS/HIV, malaria and other diseases, Ensuring environmental sustainability, Employment-enhancing vocational skills and social business projects, Relief and funds for socio-economic development such as for welfare of SC/ST, OBCs, minorities and women.¹⁵

India has set itself ambitious targets for implementation of the SDGs by aligning it with the national development agenda including setting up a monitoring dashboard in its Niti Aayog. India almost considered as a poster child of the SDG community, needs to make large investments and the achievement of these goals may not be possible with government initiatives alone. Rather it needs a high level of collaboration between the government, private sector and the civil society. The accelerating pace of collaboration between the social and private sectors could be positively leveraged by using the SDG targets and indicators as measurement tools for outcomes and impact of the CSR spending. Many activities as well as focus areas of CSR and SDGs are over-lapping each other, however both are directing toward creation of sustainable future. Activities under CSR provides wider framework and guidelines for the corporate to divert portion of profit towards social and environmental causes for sustainable future, on other hand SDGs provides specific area of action with tangible targets to make this world a better place to live in.

Therefore, the policies as well as programs implemented by the Indian Government like Ayushman Bharat, Swachhata Abhiya, Smart Cities projects, and many more such schemes are the steps forward to achieve these

12. Responsible Consumption and Production, 13. Climate Action, 14. Life Below Water, 15. Life on Land, 16. Peace, Justice and Strong Institutions, 17. Partnerships for the Goals.

¹¹ Bridging the gap CSR to SDGs, December, 2018, *KPMG.com.in* on 18.06.2021 at 05.30pm

¹² Thoms Staff, "A Brief History of Corporation Social Responsibility(CSR)," <https://www.thomasnet.com> 18.06.2021.

¹³ Pulari Kurian, Sustainable Development Goals and Corporate Social Responsibility Convergence, Available @ <https://impakter.com/sustainable-development-goals-corporate-social-responsibility-convergence/>, visited on 10.06.2021

¹⁴ Adam fisherman on 'Private sector and SDGs' (SDG Knowledge Hub, 27th Nov. 2018)

¹⁵ Dr. Vikrant Sopan Yadav, "Sustainable Development And Corporate Social Responsibility In India: A Critique", *Int. J. Adv. Res.* 8(11), November 2020 *www.journalijar.com*, On 13.06.2021 at 5.45pm

goals. More importantly bringing the Indian corporate sector under the mandatory CSR legislation plays a pivotal role thereby the sustainable development goals are attained.¹⁶ The government of India along with active civil society participation has tried to create a sense of business ethics and responsibility among the corporate both by legal and ideological means. There are many instances where corporate have played a dominant role in addressing issues of education, health, environment and livelihoods through their corporate social responsibility interventions across the country. Private business enterprises like, TATA, Birla and Reliance are practicing the CSR for decades, long before CSR emerged as a norm to develop a culture of social welfare and environmental sustainability among the leading economic giants of the country.¹⁷ Data analysed by the Ministry of Corporate Affairs for CSR expenditure of all Indian companies in 2014-15 showed that 14 percent (Rs 1,213 crore) of total CSR spending in India was made on activities focusing on conserving the environment. It was the third highest expenditure on a social impact issue after education (32 percent) and health (26 percent) and was greater than the amount spent on rural development (12 percent).¹⁸

CSR in 2020

Implementation of CSR in 2020 is a mixed bag, what with COVID-19 activities taking up the biggest chunk of funding: few examples

1. Infosys Limited: Among the main CSR initiatives in the financial year 2019-20 were a 100-bed quarantine setup in Bengaluru in partnership with Narayana Health City, and another one which had 182 beds for COVID-19 patients for Bowring and Lady Curzon Medical College & Research Institute.
2. Hindustan Unilever Ltd: The Company uses its CSR funds to work on issues which plague India's development. It has achieved huge successes in the areas of water conservation as well as tackling health and hygiene issues at the grassroots level. HUL has pledged INR 100 crores to help the Indian government fight COVID-19.
3. Apollo Tyres Ltd: A unique initiative by the tyre maker is preventive healthcare for truck drivers. Under this CSR programme, Apollo Tyres operates 32 healthcare centers in the transshipment hubs spanning 19 different states across India. Prevention and awareness of HIV/AIDS, vision care, integration of tuberculosis and other non-communicable diseases such as diabetes and hypertension are the main health interventions for the truck driver community.¹⁹

Conclusion

The SDGs and the Indian CSR law were formulated and implemented around the same time. The SDGs have a much longer history of evolution but there is considerable evidence to support the claim that even globally, CSR co-evolved with the sustainable development movement. In the Indian context, the CSR leadership can quite easily correlate the prescribed areas of CSR spending with the 17 SDGs. It's even possible to pool in CSR funds and NGO capacities to leverage scaling up longitudinally and vertically across geographies. All relevant stakeholders will also be able to determine the impact made on SDG.

¹⁶ Lokanath Mishra, "Corporate social responsibility and sustainable development goals: A study of Indian companies," March 2020, wileyonlone.com/journal/pa on 19.06.2021, at 09.30pm

¹⁷ Pankaj Dodh1, Sarbjeet Singh and Ravita, "Corporate Social Responsibility and Sustainable Development in India," Global Journal of Management and Business Studies. Volume 3, Number 6 (2013), <http://www.ripublication.com/gjmbs.htm>.

¹⁸ Goodera, *CSR and sustainable development: Do Indian companies care about the environment?*, Forbes India, Retrieved from, <https://www.forbesindia.com/blog/life/csr-and-sustainable-development-do-indian-companies-care-about-the-environment/>

¹⁹ Kasmin Fernades and Hency Thacker, "Top 100 companies in India for CSR in 2020," CSR JOURNAL, Available @<https://thecsrjournal.in/top-indian-companies-for-csr-in-2020/>

Use of Information and Communication Technologies (ICTs) for sustainable development of library services

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Abstract

For Continuous sustainable development in any sector or organization is to cop up with new technology. ICT is the indivisible part of all human life. In library by using ICTs tools and techniques, library services meet the users' information need. For this study, previous literature study made, and a light throw on tools and techniques of ICT used for library services to sustain in the e-environment.

Keywords: *Information and Communication Technology, Sustainable development, library services.*

Introduction

In twenty first century the dominant factor is the information. Everyone should be alert about the new changes in the market. With the continuous advancement of Information Technology and growing effect and essentiality of World Wide Web (www), electronic library or e-library is now very much getting popular. In the information age World Wide Web opens the millions of web pages and billions of web sites. ICT opens major opportunity for world developments. It opens the door of millions of new information. This abundant information lay down incarnation of the information age. According to Etta and Parvyn-Wamahiu (2003), "by the 1990s the world was said to be firmly in the information age." And this age is popularised by globalisation and information and communication technologies (ICTs). This globalisations captures affect not only the financial market but also its effect seen on the social, political, economic, educational and cultural change. Due to developments in ICT and increasing popularity of internet, new information is produced in large scale daily; its effect is in, information explosion. According to Ajayi (2000) unrivalled capabilities of ICTs to process information, store it properly, refine and disseminate data or communicate in a variety of ways across the globe have drastically changed the ways in which governments, public and private sectors uses the world over. Continuous development in all spheres of ICT change the needs of information of users. LIS professionals have been trying to fulfil all the needs of their users beyond the traditional job. They are gaining the adequate knowledge of computer and technologies, networks and networking, various operating systems, database management systems along with adequate training for handling of technological devices. In this changing environment librarian also change his role from merely custodian to library administrative and information manager. In this ICTs environment role of librarian, objective of the library, role and function of the librarian has to change to cop up with new change. Changes in the functions of library in the environment of ICTs, creation of e-library, digital library or virtual library are the new products. ICT now captured all daily housekeeping operations of the library by using advanced devices and software, such as cataloguing, circulation, acquisition, serial control, library services and electronic or digital library section etc. By this modern technologies library can provide 24/7 services to its users with facing cutting budget problem. ICT enhances the quality of library services and it is beneficial to attract the users towards the library resources and services.

Literature Review:

Ayodele, (2007) says that sustainable development can be defined as the ability of the economy to support the needs of the people of a country over a time, taking into consideration the economic, social and ecological constraints of the country.

Buckett and Jonker, (2002); Mansell, (2002); Baddii and Sharif, (2003) Many researchers and organisations have found the importance of ICTs for the sustainable development with special reference to its capacity for minimizing the time limit and geographical boundaries.

Malone and Yohe, (2002) support above statement, and says that revolutionary developments in communication technologies can enable significant progress among scholarly discipline and among societal institutions for exploring human knowledge horizon.

Oketunji et al. (2002) conducted a study of the current status of the ICT in Nigerian libraries. The result shows that there is significant progress in using computerisation and access the internet in Nigerian libraries, in academic libraries.

Ukodie, (2004) stated ICTs as an engine of the 21st century and it will affect the chart of economic, religious, cultural, legal and social life of nations.

Nkereuwem, E. E. (1996) says the importance of ICTs for sustainable development has been recognised by developing countries. In 21st century application of ICT entered almost all the sectors, and it facilitates for

speedy information transmission, decision making, cost control for resources as well as opens the much more opportunities for sharing information.

Wolters & Boer, (2002) argues that adoption of ICTs can be proved beneficial to sustainability also contribute to the national economic growth.

EITO (2002) stated that for sustainable development ICTs is the solution for traditional trade-off, social cohesion and the environment. Also recommends the integration of sustainability values into the knowledge society at its embryo stage to enhance social and environmental opportunities and minimizes risks.

Agrawal, A. K., & Mittal, G. K. (2018) says in his paper that use of ICT in education sector will change the face of traditional education. ICT can use for unlimited application, online education, exam process. It will help to the remotely situated students, and it will increasing continuously quality of education.

Sarkar, S. (2012). Study also support ICTs importance in the higher education's moving rapidly to the digital media and information. It develops education sector quality and also a ways of social and economic development of the nation.

Benefits of the ICT services:

By above review of literature following benefits of ICTs are extracted for using in a library services

1. It provides efficient and effective services.
2. Saves time, energy saving, cost effective.
3. Provide high quality of services.
4. Provides the ways of resources sharing by co-operation and co-ordination
5. It helps to enhance and improve the quality of library services and improve the image of libraries.

Use of ICTs base Library services:

In the information age use of technology is essential and necessity for acceptance of modification of traditional library services to modern library services. Listed below some important ICTs based library services useful in the e-environment.

Institutional Repository:

Library professionals can create their own institutional repository. In this repository, library explores collection by including their faculty researchers research articles, thesis, research projects of faculties and students, institutional administrative documents, course notes, to mate to retrieve and use of this material as users academic or research needs in the institutional repository in the digital form.

E-Books

E- Books are the most useful source for library users in digital age. Libraries can compile e-books in such a way that all users can find their required books. E-books can store on institutional repository and it will offer advantages such as easy portability, 24/7 access, text search, self – expletory, self-publishing. Many printed books come with its CDs, librarian can uploaded these CDs on website, so users can retrieved these books on their own free time.

E-Journals

Library explores e-journal service by taking consortia facility. E-journals can be accessed via web enabled PC, through which more users can availed the facility of e-journals. E-journals offered full text searching and downloading articles.

E-Database

E-database is online resources, like a collection of abstract, newspaper articles, maps etc. Libraries can subscribe E-database to fulfil the needs of library users and can get the information as and when they required.

CD-DVD and Audio- Video Collection

Library can develop the collection of their guest lectures, seminar proceedings, Annual functions, lectures of eminent persons etc. and upload on library website. Library users can availed any program or lectures whenever they required.

Web OPAC Services

Web OPAC service are able to access the library collection such as books, subscribed journals, thesis, reports etc. can be searched through online web services. Students and faculties can find required books availability, can reserve desired book through online. Web service is developed with advanced services and technologies through which user can save their time and avail the information.

E-mail

E-mail is the most useful application of internet and it is used for official communication with library book suppliers, book vendors, users, faculty members. It will beneficial for renewal of journal subscription membership, library book pending reminder, payment processing etc.

Wi-Fi Services

Wi-Fi is a set of standards that enable to access the internet on user's personal laptop or their personal other wi-fi supportive device, through which they can avail the facility of online journals, databases, institutional repository facility, library web services etc.

New Arrivals

Libraries can display new arrivals information through library web page. It may include new books, competitive exam books, and reference books for all subjects, CD-DVD etc.

Blogs

A Blog is a diary type informal discussion published on the World Wide Web. Library can create individual or institutional blog and provide related information for their users.

E-syllabus / Question Paper

Library can avail the syllabus and question paper by providing university link on their libraries web-site so users can find the required syllabus or question paper.

E- Newspaper

Now a day's many newspaper in Multilanguage are available in e-format freely on net. Librarian can provide its link on the library web page for their remote users.

Indexing And Abstracting Services

Library can provide CAS service by keeping prepared list of keywords for future retrieval of information. Library can prepare index of subscribed journal articles, magazine article, newspaper, reference chapter and make available on webpage for instant use.

Free E-resources

Many libraries are facing the shrinkage of library budget. Within low budget, provide all needs are a hectic job for librarian. To get rid of this problem Librarian can provide freely available journal website link on their webpage to meet users' information need in some extent.

E.g. www.doja.org - For open access journals

www.doabooks.org – For Open access books

Conclusion

ICT is one of the indivisible part of all humans and getting a success in every aspect of life. Library profession also develops in all spheres of its sections and services. In this information age, library professionals have to cop up with global and technological changes. He must ready to use services by using ICT tools and technique. Web abased library services change the face of library so using ICT in all section of library is become todays need.

References:

1. Agrawal, A. K., & Mittal, G. K. (2018). *The role of ICT in higher education for the 21st century: ICT as a change agent for education. Multidisciplinary Higher Education, Research, Dynamics & Concepts: Opportunities & Challenges For Sustainable Development (ISBN 978-93-87662-12-4), 1(1), 76-83.*
 2. Ajayi, G. O. (2000, March). *Challenges to Nigeria of globalization and the information age. In Keynote Address at Workshop on National Information Communication Infrastructure (NICI) Policy, Plans and Strategies for Implementation. National Universities Commission (NUC) Auditorium. Aguiyi Ironsi Street, Maitama, Abuja. March (pp. 28-30).*
 3. Ayodele, B., & Bolaji, K. (2007). *Public service and democracy in developing societies: The Nigerian experience. Journal of Social Sciences, 15(2), 105-110.*
 4. Badii, A., & Sharif, A. (2003). *Information management and knowledge integration for enterprise innovation. Logistics Information Management.*
 5. Beckett, R., & Jonker, J. (2002). *AccountAbility 1000: a new social standard for building sustainability. Managerial Auditing Journal.*
 6. Bagul, R. B. *changing role of library services.*
 7. Etta, F. E., & Parvyn-Wamahiu, S. (2003). *Information and communication technologies for development in Africa (Vol. 3). IDRC.*
 8. Mansell, R. (2002). *Constructing the knowledge base for knowledge-driven development. Journal of knowledge management.*
 9. Malone, T. F., & Yohe, G. W. (2002). *Knowledge partnerships for a sustainable, equitable and stable society. Journal of Knowledge Management.*
- Mehta, S., & Kalra, M. (2006). *Information and Communication Technologies: A bridge for social equity and sustainable development in India. The International Information & Library Review, 38(3), 147-160.*

1. Nkereuwem, E. E. (1996). *The utilization of aid organizations in the development of information technology in developing countries. Library Management.*
2. Sarkar, S. (2012). *The role of information and communication technology (ICT) in higher education for the 21st century. Science, 1(1), 30-41.*
3. Oketunji, I., Daniel, J.O., Okojie, V.O. and Abdulsalam, R. (2002) *40 years of information and communication technology (ICT) of library service to the nation. In: Nigerian Library Association. 40 years of library and information services to the nation. A Compendium of Papers Presented at the 40th National Annual Conference and AGM of Nigerian Library Association, 16–21 June.*
4. Ukodie, A. (2004). *Ekuwem: Nigerian striking force: Icons of ICT in Nigeria: Their passion, vision, thoughts. Lagos: ICT Publications.*
5. Wolters, T., & Boer, B. D. (2002). *Measuring the new information economy and its contribution to sustainable economic growth: Exploring a new research agenda. In NESIS Conference, Olympia, Greece.*

Changing Status of Research Tools And Techniques

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Abstract

Word 'Exploration' is involves two words = Re+Search. It intends to look once more. So research implies a deliberate examination or action to acquire new information on the all around existing realities. Exploration is a scholarly action. It is liable for uncovering new information. It is likewise liable for revising the current slip-ups, eliminating existing confusions and adding new figuring out how to the current asset of information. Explores are considered as a blend of those exercises which are taken out from one day to another life and are sought after by those people who are skilled in insight and true in quest for information. Yet, it's anything but right to say that the examination is confined to such sort of people, nonetheless, it is right to say that significant commitment of exploration comes from exceptionally talented and submitted laborers. Along these lines the exploration isn't at all puzzling and is carried on by countless normal people. Examination is likewise considered as the use of logical technique in taking care of the issues. It's anything but an efficient, formal and serious cycle of carrying on the logical technique for examination. There are numerous methods of acquiring information. They are instinct, disclosure, and authority, sensible control of essential suppositions, educated theories, perception, and thinking by similarity. One of the parts of exploration known as experimental examination is profoundly objective situated method.

Introduction

An analyst requires numerous information – gathering apparatuses or strategies. Tests are the instruments of estimation and it directs the scientist in information assortment and furthermore in assessment. Apparatuses may fluctuate in intricacy, translation, plan and organization. Each apparatus is reasonable for the assortment of particular sort of data. History is the record of the evolving measures. History comprises of changes which social constructions go through. Social researchers considers the past to acquire a superior comprehension of the current situation. History is the significant record of man's accomplishment. It's difficult a rundown of qualities of sequential occasions, however an incorporated record of the connection between people, occasions, settings. To gather the imperative information for any topic of exploration you need to devise proper devices and utilize appropriate estimating strategies . what's more, settle on the applicable properties of the examples drawn. There are a few examination apparatuses, shifting in plan. activity, intricacy of highlights, and understanding. In specific circumstances you may choose from a rundown of accessible apparatuses. In different circumstances you may track down that current examination apparatuses don't exactly measure up for your motivation or objective of exploration and, subsequently, you may get a kick out of the chance to change them or create your own. Each instruments is proper for gathering a specific sort of information or data which fits a specific kind of investigation and understanding for making significant inferences and speculations. For this, you need to acquaint yourself with the nature, benefits and limits of different exploration instruments.

Definitions of Research:

Coming up next are the significant meanings of examination: "Exploration is an undertaking/endeavor to find, create and check information. It's anything but a scholarly interaction that has created more than many years truly changing in reason and structure and continually exploring to truth Exploration is a legit, comprehensive, insightful looking for realities and their implications or suggestions regarding a given issue. The item or discoveries of a given piece of examination ought to be a genuine, irrefutable commitment to information in the field considered." Purpose of Research: The reason for research is to find answers to inquiries through the utilization of logical method. The fundamental point of exploration is to discover reality which is covered up and which has not been found at this point. In spite of the fact that each examination study has its own particular reason, some broad destinations of exploration underneath:

(I) To acquire knowledge of a marvel or to accomplish new experiences into it. (Studies with this article in see are named as exploratory or developmental examination considers).

ii) To depict precisely the qualities of a specific individual, circumstance or a gathering.

(iii) To decide the recurrence with which something happens or with which it is related with something different.

(iv) To test a theory of a causal connection between factors. (Such investigations are known as theory testing research considers).

One needs to choose from the accessible devices those which will give information he looks to testing theory. It might happen that current exploration devices don't exactly measure up for the reason in some circumstance, so scientist ought to alter them or develop his own.

Various devices utilized for information assortment might be;

1. Surveys
2. Meetings
3. Timetables
4. Perception Techniques
5. Rating Scales

Characteristics of Research:

Following are the attributes of examination;

- (I) Research is coordinated toward the arrangement of an issue.
- (ii) Research requires mastery.
- (iii) Research underlines the improvement of speculations, standards, or hypotheses that will be useful in anticipating future events.
- (iv) Research depends on discernible experience or experimental confirmations.
- (v) Research requests exact perception and depiction.
- (vi) Research includes assembling new information from essential or direct sources or utilizing existing information for another reason.
- (vii) Research is portrayed via painstakingly planned strategies that apply thorough examination.
- (viii) Research includes the journey for answers to un-tackled issues.
- (ix) Research endeavors to be evenhanded and intelligent, applying each conceivable test to approve the strategies utilized the information gathered and the ends came to.
- (x) Research is portrayed by persistent and unhurried action.
- (xi) Research is painstakingly recorded and gathered.
- (xii) Research now and then requires fortitude.

Types of Research:

There are assortments of courses through which we may characterize it into various classes.

(A) **based on nature of data:** based on nature of data we can group the investigation into two sorts;

- (I) Qualitative Research: When data is as subjective information.
- (ii) Quantitative Research: When data is as quantitative information.

(B) **based on utility of substance or nature of topic of examination:** based on these measures we can sort the investigation into two classes.

- (I) Basic/Fundamental/unadulterated or Theoretical Research: Its utility is all inclusive.
- (ii) Experimental or Applied Research: Its utility is restricted.

(C) **based on approach of exploration:** We may group examination into two distinct classifications.

- (I) Longitudinal Research: Examples of this class are verifiable, Case study and Genetic examination.
- (ii) Cross-Sectional Research: Examples of this class are Experimental and Survey Research.

(D) **based on strategy for research :** based on research technique we may group an examination into five distinct classifications.

- (I) Philosophical Research: It is absolutely subjective in nature and we are zeroing in on the vision of others on the substance of examination.
- (ii) Historical Research: It is both subjective just as quantitative in nature and manages previous occasions.

Qualitative research techniques and tools

Subjective examination is for the most part used to investigate values, perspectives, assessments, sentiments and practices of people and see what these mean for the people being referred to. Specialists utilizing subjective strategies are worried about people's impression of explicit themes, issues or circumstances and the implications they allot to their lives. This sort of examination is significant for creating hypothesis, creating strategy, improving instructive work on, advocating change for a specific practice, and enlightening social issues. It might likewise be utilized to clarify the aftereffects of a past quantitative investigation or to get ready for the improvement of a quantitative report.

Technique Of Developing Measurement Tools

The method of creating estimation devices includes a four-stage measure, comprising of the accompanying:

- (a) Concept improvement;
- (b) Specification of idea measurements;
- (c) Selection of markers; and
- (d) Formation of record.

Literature Review:

Subjective strategies use information assortment procedures, for example, talking with, perception, conversations and audit of reports. The aftereffects of subjective exploration are enlightening or logical instead of prescient, and are normally tedious to gather and break down. The accompanying table might be useful to you as you choose which subjective instruments and methods are generally proper for your IR project. The Research Problem and Questions An exploration issue, all the more altogether talked about in Chapter 5, is an issue or worry that should be tended to (e.g., the issue of racial segregation). The issue comes from a void in the writing, and struggle in research brings about the writing, points that have been dismissed in the writing; a need to lift up the voice of underestimated members; and "reality" issues found in the work environment, the home, the local area, etc

Conclusion :

In different circumstances you may track down that current examination apparatuses don't exactly measure up for your motivation or objective of exploration and, subsequently, you may get a kick out of the chance to change them or create your own. Based on utility of substance or nature of topic of examination: based on these measures we can sort the investigation into two classes. This sort of examination is significant for creating hypothesis, creating strategy, improving instructive work on, advocating change for a specific practice, and enlightening social issues. On the off chance that your examination group chooses to utilize subjective strategies in your investigation, you should depict how subjective techniques will give the data to help you address your exploration targets and examination question. For instance, subjective exploration might be proper in light of the fact that you expect to investigate the qualities and practices of people in the examination region corresponding to a general wellbeing intercession, and to see what these mean for the marvels being referred to.

References

1. "Pigs recorded using tools for first time"
2. Schmid, Randolph E. "Crows use tools to find food"
3. Crabb, George Universal Technological Dictionary,
4. "Technik Comes to America: Changing Meanings of Technology Before 1930". Technology and Culture
5. "Technology | Definition of Technology by Merriam-Webster

Extraction of Bioethanol from Lignocellulose Waste of Agricultural Biomass using Yeast Strains Isolated from Termite Soil.

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Abstract

In the recent years, soaring cost of gasoline and the depleting petroleum reserves have led to an urge for a sustainable alternative to gasoline such as biofuels. Among several types of biofuels, bioethanol is most widely accepted round the globe. Till date bioethanol is commercially produced from sugary and starchy materials (first generation bioethanol) such as sugarcane juice and corn grains. However, the upcoming shortage of these food materials in future due to their diverging utilization as fuel cannot be overlooked. Lignocelluloses, the most abundant and renewable organic resource available on the earth provide an abundant raw material, which on efficient utilization could be a potent solution to the problem of energy security. In the present study, an attempt has been made to develop a bioethanol production process using agricultural biomass waste. Various pre-treatment strategies i.e., alkali treatment, acid treatment and biological treatments were employed and compared for their amenability to enzymatic hydrolysis. A total of 3 isolated yeast strains were screened for their pentose to ethanol conversion efficiency and among them NR yeast strain resulted in maximum production of ethanol in 7 hour of incubation. The ethanol thus recovered after fermentation of enzymatic hydrolysate was distilled using a soxhlet extraction apparatus.

Keywords: *Bioethanol, Lignocellulose, Yeast, Agricultural biomass waste.*

Introduction

The world's present economy is highly dependent on fossil energy sources such as oil, coal, natural gases etc. for production of fuel, electricity and other goods. But now due to depleting fossil fuel resources renewable energy now capturing a good share of worldwide headlines and it forced mankind to depend on renewable energy, biofuel or bioethanol. Bio fuel is referred as liquid or gaseous fuel for transportation sector that are predominantly produced from biomass. Bio fuels may be classified under two categories – 1st generation and 2nd generation bio fuels (Naik et al., 2010). 1st generation bio fuels are made from carbohydrate, lipid, oils or agro industrial waste while 2nd generation biofuels are derived from lignocellulosic biomass including cellulosic plant biomass like wood, stalk, stem etc. It is possible that wood, straw and even household waste may be economically converted to bio ethanol. In nature the annual production of biomass is estimated to 10 to 50 × 10⁹ tons (Chandel et al., 2007). Ethanol as a biofuel have lots of advantage over conventional fuel that is low toxicity, biodegradability, generate fewer air pollutant than petroleum fuel. Ethanol in vehicle can be either blended with the gasoline as a fuel extender or can be used as a pure fuel to run the vehicles (McCarthy and Tiemann, 1998). Most of the biofuel is produced from sugar and starch product, however with the continuous use of this feedstock may lead to food competition. Lignocellulose mass represent the about source for the production of bioethanol (Ragauskas et al., 2006). It mainly comprises of cellulose, hemicelluloses and lignin (Kuhadet al., 1997). Lignocellulose is a complex structure with and evolve chemical mechanism which can resist assaults on its structural sugar from the microbial and chemical degradation (Himmelet al., 2007). Several technologies have been developed during the last 80 years that allows this conversion process to occur, however, the bioconversion process is mainly consist of 3 major steps i.e., pretreatment, hydrolysis, and fermentation. The purpose of the pretreatment is to remove lignin and hemicellulose fraction, reduce cellulose crystallinity and increase the porosity of the materials. The pretreated material is subjected to the enzymatic hydrolysis and the resultant hydrolysates are fermented to ethanol using fermenting microbes (Kuhadet al., 2011a). Thermochemical hydrolysis has long been recognized as an efficient pretreatment for removing the hemicellulosic and lignin fraction from the lignocellulosic substrate to enhance its biological conversion to sugars and subsequently ethanol. However, the chemical harshness and higher temperature resulted in generation of toxic by products such as furfural, hydroxymethyl furfural (HMF) and phenolics, which significantly affect microbial cell metabolism during fermentation (Palmqvist and Hahn-Hägerdal, 2000; Chandelet al., 2007). Therefore, to make the hydrolysates amenable to fermenting microbes, detoxification of acid hydrolysate is required (Kuhadet al., 2011a, Gupta et al., 2011). Enzymatic hydrolysis has demonstrated better results for the subsequent fermentation because no degradation components of glucose are formed, however, the process is slower and costlier (Sanchez and Cardona, 2008). Various improvements have been investigated in last more than three decades that would lower the effective enzyme cost, including enzyme re usage, higher enzyme production or using genetic engineered systems (Zhang et al., 2006; Kuhadet al., 2011a); but still there is an urge to search for more competent

solutions. Since the structural sugars of lignocellulose contain both hexose and pentose sugar, the efficient fermentation of both the sugars has become a pre-requisite for the cost effective production of bioethanol. A variety of microorganisms are known to ferment hexose sugars, but the microbes for pentose fermentation are in scanty. The most common microbes for pentose fermentation are *Candidashehatae*, *Pichia stipitis* and *Pachyso lentannophilus* (Abbi *et al.*, 1996a, b; Kuhadet *et al.*, 2011a). However, none of these yeasts have been found to be very promising. Intensive efforts have been made towards utilization of all the sugars present in hydrolysates by employing both genetic manipulation as well as process improvement approaches. Over all using biomass to produce bioethanol holds much promise for providing a renewable, indigenously produced liquid energy source that can be a viable alternative to petroleum-based fuels. However, there is a great scope of improvement in each and every step of processing including selection of feedstock, pretreatment, hydrolysis and fermentation. Keeping in view the potential and sustainable usefulness of bioethanol and all the given facts of cellulosic ethanol production, the present investigation was aimed to produce bioethanol from the agricultural waste product (Rice straw).

Bio-ethanol:

Bio-ethanol is used as biofuel as it offers many advantages such as it has lower thermal energy (about 45% less per gallon than diesel), low price and with comparatively less emissions than gasolines or diesel. Ethanol has a high octane number about 99 than petrol (80-100) due to which pre-ignition does not occur in ethanol (Ruchi Muyreja *et al.*, 2011). Bio ethanol is considered as a renewable energy sources because it is primarily the result of conversion of sun's energy into usable energy. Creation of bio ethanol starts with photosynthesis which causes feedstock that are processed into ethanol. Lignocellulosic biomass is most abundant and inexpensive material for bio-ethanol production. Bio-ethanol is a sustainable and renewable transportation fuel that is substitute to gasoline and is an eco-friendly fuel. Ethanol contains 355 oxygen which results in complete combustion of fuel and lowers the emission of harmful gases and thus it reduces greenhouse gases emissions. Ethanol increases octane number, decrease the vapour pressure and produce fuel with clean burning characteristics (Dhillon *et al.* 2007). Most of bio-ethanol is produced from starchy crop, however production of biofuel needs economically feasible and sustainable process utilizing renewable lignocellulosic materials that do not compete with food sources. Lignocellulose composed of cellulose, hemicelluloses and lignin which is not readily broken down into fermentable sugars. The cellulose and hemicelluloses are polysaccharide that can be hydrolysed hexose and pentose sugars whereas phenolic lignin cannot be used for ethanol production. A major bottleneck in the biomass to ethanol conversion is the hydrolysis of biomass to cellulose. Although enzymatic hydrolysis have several advantaged over acid hydrolysis such as lowering the environmental impact and reducing the by-product yields which have a negative effect on fermentation, the cost efficiency of this process still requires improvement. Consolidated biomass processing is taken as cost effective process for bio ethanol production from lignocellulosic biomass including enzyme production, biomass saccharification and fermentation. It has only one problem that enzymatic hydrolysis yield cannot be great than 20% of the maximum glucan conversion even under a high level of enzyme loading and by employing larger reaction time (Kim and Lee, 2007). Bioethanol or ethyl alcohol ($\text{CH}_3\text{CH}_2\text{OH}$) is a liquid produced by distillation of fermented sugar. It can be obtained from various sources like agricultural and forestry residue, municipal waste, woody crops and delicate starchy crops. Bioethanol has attracted world's attention due to concerns on climatic change, energy security and dependency and import burden of petroleum product. They are increasingly considered by many countries as much as feasible to substitute the fossil fuel source in transport sector (Dufey, 2006). Bio-diesel is blended with petroleum based diesel and is derived from oil crops like rape seed, palm oil, Jatropha, sunflower and soy while that of bioethanol is based on starchy crops like rice, sugarcane, sugar beet, corn, wheat, sorghum (Dufey, 2006).

Properties of bio ethanol:

Ethanol is volatile, flammable, clear, colourless liquid, miscible in both water and non-polar solvents and is a monohydric primary alcohol. It melts at -117.3°C and boils at 78.5°C . Ethanol vapour is denser than air and tends to settle in lower areas. Fuel ethanol mix with water, but at high enough concentration of water, the ethanol will separate from gasoline. Pure bioethanol and bioethanol blends are heavier than gasoline. It is less toxic than gasoline. Carcinogenic compounds are not found in pure ethanol.

Environmental impact on bioethanol:

Bioethanol is harmless to environment. The main advantages of bioethanol is that it is a renewable energy source. CO_2 in atmosphere is fixed by photosynthesis and metabolized to building blocks of plants. The energy of sunlight is used to prepare carbohydrate stored in crops and in whole plants. Besides other uses, starchy or oil containing crops can be converted to fuels. Combustion of these fuels produce CO_2 gas which is again assimilated by plants. The almost no net CO_2 is produced by using bio ethanol. A number of

lifecycle have been studied and found that a change from fossil fuel to biofuel reduces CO₂ emissions by a factor of 1/2 or 1/5th depending on how significant the use of renewable fuels is at all stages in the process (Kimming et al., 2006). In ground water and soil mixtures, ethanol degraded both aerobically (100mg/L in 7 days) and anaerobically (100mg /L in 3- 25 Days) (Armstrong, 1999).

Composition of bio-mass:

Rice straw is an attractive lignocellulosic materials for bioethanol production since it is one of the most abundant renewable resources and 3rd most important grain crop in world behind wheat. As per FAO statistics, world's annual rice production in 2007 was about 650 million tons and every kilogram harvested is accompanied by production of 1-1.5 kg of straw (Maiorella, 1985) and produced 650-975 million tons of rice straw per year globally. But there is a problem in deposition of rice straw are low bulk density, slow degradation in soil, harbouring of rice stem disease and high mineral content. Field burning is major practice for removing rice straw but it also increases air pollution and consequently affect public health. As climate change is a threat to development there is growing interest in alternative use of agro-industrial residues for energy applications. It has high cellulose and hemicelluloses content that can be readily hydrolysed into fermentable sugars (**Figure 1**). The chemical properties of the components of lignocellulosics make them a substrate for enormous biotechnological products (Kuhad and Singh, 1993; Kuhad et al., 1997, Kuhad et al., 2007). Cellulose is a glucan polymer of D-glucopyranose units, which are linked together by β -1, 4-glucosidic bonds. The wood cellulose has an average degree of polymerization (DP) of at least 9,000–10,000 and possibly as high as 15,000. An average DP of 10,000 would correspond to a linear chain length of approximately 5 μ m in wood. An approximate molecular weight for cellulose ranges from about 10,000 to 150,000 Dalton (Goring and Timell, 1962). Unlike cellulose, hemicelluloses are not chemically homogenous (Kuhad et al., 1997). The hemicelluloses are comprised of both linear and branched hetero-polymers of D-xylose, L-arabinose, D-mannose, D-glucose, D-galactose and D-glucuronic acid. In general, the hemicellulose fraction of woods consists of a collection of polysaccharide polymers with a lower DP than cellulose (100–200) and containing mainly the sugars D-xylopyranose, D-glucopyranose, Dgalactopyranose, L-arabinofuranose, D-mannopyranose, glucopyranosyluronic acid, and D-galactopyranosyl-uronic acid with lower amounts of other sugars. They usually contain a backbone consisting of one repeating sugar unit. The hemicelluloses also contain acetyl- and methyl-substituted groups (Rowell et al., 2005). The hemicellulose from hardwood and agricultural residues are typically rich in xylan, while, on the other hand, softwood contains more mannan and less xylan (Kuhad et al., 1997). Lignin is amorphous and highly complex polymer of phenylpropanoid units and is considered to be an encrusting substance in the plant biomass (Kuhad et al., 1997). The precursors of lignin biosynthesis are p-coumaryl alcohol, coniferyl alcohol, and sinapyl alcohol. Moreover ecological factors such as age of the wood, climate, plant sustenance and amount of sunlight also affect the chemical structure of lignin (Kuhad and Singh, 1993; Kuhad et al., 1997). The presence of high ash and silica content in rice straw makes it inferior feedstock for ethanol production. Cellulose is one of most abundant chemical on earth and is found in cell wall of all plants. It consist of linear β -1,4 linked D- Glucopyranose residues hydrogen bond between cellulose molecules enable the neighbouring parallel or anti-parallel linear chain to become condense to form thin cellulose chain give rise to its considerable strength. Therefore it is fairly resistant to biological attack which is a major limitation to cell wall hydrolysis (Perez et al., 2002). Again hemicelluloses is a heterogeneous polymer of pentose (xylose, arabinose hexoses, mannose, glucose and galactose) and sugar acids. Xylan consist of homopolymeric backbone chains of 1,4-linked β D xylopyranose units and arabinose, glucuronic acid or its 4-O-nethyl ether, acetic, ferulic and p-coumaric acids. Rice bran also neutral xylan contain 46% xylose, 44% arabinose, 6.1% galactose, 1.9% glucose and 1.1% anhydronic acid. Lignin constituents about 10-25% of plant materials. Three different alcohols are precursor for lignin synthesis viz. ρ -Hydroxyphenyl alcohol, guaiacyl alcohol and syringyl alcohol and they link with each other to form huge network I final phenolic compounds. The most important effect is enhancement of the strength of hydrogen bond between polysaccharides which increases the stability and rigidity of cellulose, hemicelluloses structure. This type of protection serves as effective barrier to pests and disease to protect the plant body. However this protection is not preferred in bio-processing to the internal polysaccharide (Perez et al. 2002).

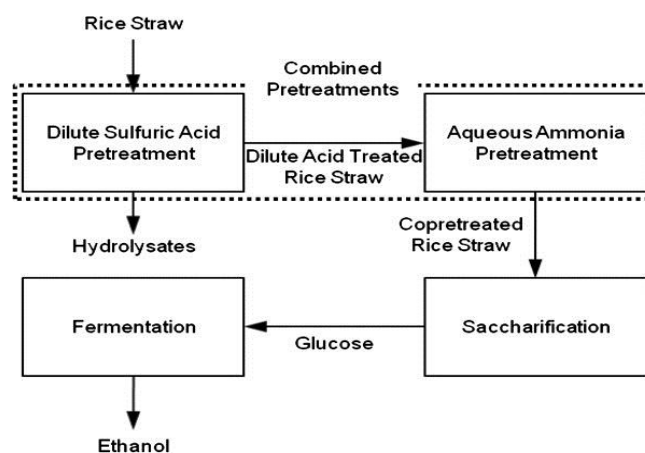


Figure 1: Bioconversion of lignocellulosic biomass (Rice straw) to fermented sugar Pre-treatment of Biomass

For bioconversion to ethanol from rice straw pre-treatment is necessary. Several approaches including physical, chemical, biological, thermal or combination of these are being applied to get polymeric component of lignocellulosic materials in maximum yield and purity. The resulting hydrolysate contain pentose and hexose and substances as reaction by-product from sugar and lignin degradation which may have inhibitory effect on the microorganism in subsequent fermentation steps. The pre-treatment remove hemicelluloses, reduce cellulose crystallinity and increase the porosity of the materials (Saha, 2003, Mosier et al., 2005). An appropriate pre-treatment can also prevent the formation of inhibitors to the hydrolysis and fermentation (Sun and Cheng, 2002). The pre-treatment may be physical, chemical, biological etc.

Physical pre-treatment

Physical pre-treatment includes mechanical comminution, steam explosion and microwave radiation etc. Mechanical pre-treatment can be cutting and grinding which reduce the particle size to attain a larger surface area for enzyme access. Physical pre-treatment results in smaller size as well as a lesser degree of both crystallite and polymerization.

Auto-hydrolysis (Steam explosion) - Steam explosion is commonly reported process for lignocellulosic materials. The process causes hemicellulose degradation and lignin alteration due to high temperature, thus increasing the potential of cellulose hydrolysis (Lee J.M. *et al.*, 2009, Boluda-Aguilar *et al.*, 2010). Steam explosion pretreatment typically subjects lignocellulose to temperatures between 160 and 260°C. with saturated steam for a period of ten seconds to several minutes, followed by a flashing process to explosively release the steam. This treatment results in an explosive disruption of the lignocellulose material, thus “opening up” the substrate to increase digestibility (Mosier *et al.*, 2005). Steam explosion provides thermal expansion which opens up the structure of target biomass. It is considered as suitable pre-treatment for agricultural residues. The factors affecting the results of steam explosion are residence time, temperature, particle size as well as moisture content (Duff and Murry, 1996).

Acid hydrolysis:

Among all pre-treatment acidic hydrolysis is widely used because it is highly active, inexpensive and easy to perform. It solubilize hemicelluloses into monomeric sugars (arabinose, galactose, glucose mannose and xylose) and soluble oligomers thus improving cellulose conversion. Acid pre-treatment hydrolyse plant cell walls especially their hemicelluloses component. Sulfuric acid, nitric acid, hydrochloric acid are generally used for acid pre-treatment. The solubilize hemicellulose can be converted to xylose in acidic media xylose can over degraded in strong acidic environment. Mineral acids such as H_2SO_4 and HCl have been used to pretreat the lignocellulosic materials. Although concentrated mineral acids (hydrochloric acid, HCl ; sulphuric acid, H_2SO_4 and nitric acid, HNO_3) are powerful agents for cellulose hydrolysis but they are toxic, corrosive and hazardous and require reactors that are resistant to corrosion. Moreover, the recovery of concentrated acid is problematic enough to make the process economically feasible (Sivers and Zacchi, 1995; Torget et al., 2000). Whereas, dilute acid hydrolysis has been successfully developed for pretreatment of lignocellulosic materials. The dilute sulfuric acid pretreatment can achieve high reaction rates and significantly improves cellulose hydrolysis (Esteghlalian et al., 1997; Gupta et al., 2011a).

Alkali hydrolysis:

Alkali pre-treatment are extensively studied for modifying cell walls. During such pre-treatment solution and saponification reaction takes place. As a result, the biomass swells and access to its inner space by saccharification enzyme is enhanced. Also alkali pre-treatment remove lignin portion. Alkali pre-treatment

is much more time consuming and depends on operation temperature selected (Mosier et.al. 2005). Bases such as sodium hydroxide, potassium hydroxide and ammonia are used for alkali pre-treatment. Among these sodium hydroxide has highest potential for use in commercial purposes. Since it can be recycled and recovered due to its high volatility. Thus it reduce chemical cost and waste treatment cost (Mosier et.al. 2005). Alkaline hydrolysis is one of the critical method used to pretreat the plant biomass, however the effect of alkaline pretreatment method depends on the lignin content of the materials (Kumar et al., 2009; Gupta et al., 2011a). The mechanism of alkaline hydrolysis is believed to be saponification of intermolecular ester bonds cross-linking xylan hemicelluloses and other components, for example, lignin and other hemicellulose. Dilute NaOH treatment of lignocellulosic materials caused swelling of lignocellulosic materials, leading to an increase in internal surface area, a decrease in the degree of polymerization, and crystallinity, separation of structural linkages between lignin and carbohydrates, and disruption of the lignin structure is commonly reported (Sun and Cheng, 2002; Carrillo et al., 2005).

Biological pre-treatment

The pre-treatment has become a necessity to maximize the hydrolysis of cellulosic and eventually the production of ethanol. The advantages of biological delignification of plant material over chemical and mechanical pre-treatment methods include (i) mild reaction conditions, (ii) avoids the use of toxic and corrosive chemicals, (iii) higher product yield, (iv) fewer side reactions, less energy demand and (v) less reactor resistance to pressure and corrosion. (Lee, 1997; Sanchez, 2009).

Fermentation

Ethanol fermentation is a biological process in which sugars are fermented by microorganisms to produce ethanol and CO₂. As compared to starch and molasses, the fermentation of plant biomass (lignocellulosic) hydrolysates is a complex process. There are two major streams of sugars i.e., pentose-rich sugar syrup and hexose rich sugars coming from hemicellulose and cellulose separately. The general requirements of an organism for efficient ethanol production from lignocellulosic hydrolysate is that it should give a high ethanol yield, a high productivity, high tolerance against inhibitors, able to ferment at low pH and be able to withstand high ethanol concentrations. During the last three decades, a number of laboratories have demonstrated the utilization of pentose sugars by various yeasts, fungi, and bacteria for the production of alcohols and other fermentation products. The yeast species identified so far for the pentose fermentation are, *Candida shehatae*, *Pichia stipitis* and *Pachysolentannophilus* (Abbi et al., 1996a, b; Kuhad et al., 2011). A variety of microorganisms ranging from bacteria, fungi and yeasts are known to ferment hexose sugars, however, the most common and efficient microbes used for hexose fermentation are *Saccharomyces cerevisiae* and *Zymomonasmobilis* (Hahn-Hagerdal et al., 2007). Several yeast species are able to produce ethanol by fermenting monosaccharide and oligosaccharide. Again facultative bacterium *Zymomonasmobilis* also used for alcohol production. However ethanol is produced mainly by yeast because it ferment glucose to ethanol as a sole product and it is highly able to tolerate bio ethanol, rapid fermentation rates and insensitivity to temperature and substrate concentration (Linden and Hahn-Hagerdal, 1989). There are also some inhibitors like furfural (2-furaldehyde), 5-Hydroxymethyl-2-furaldehyde (5-hydroxymethylfurfural HMF) which damage cell walls and membranes, inhibit cell growth, reduce enzymatic activities, break down DNA, inhibit protein and RNA synthesis and thus reduce ethanol production (Liu and Blaschek, 2009, Modig et al., 2002). Most of these are produced during pre-treatment of biomass especially by dilute acid hydrolysis (Liu and Blaschek, 2009). Traditional yeast *Saccharomyces cerevisiae* used for industrial ethanol production is susceptible to aforementioned inhibitors and other stress conditions related to lignocellulosic biomass conversion but recently developed yeast Y-50049 was able to withstand the inhibitor stress and *in-situ* detoxify the inhibitors while producing ethanol through the reprogrammed transcription responses and altered metabolic pathway (Liu et al., 2009). *Zymomonasmobilis* possess advantages over *S. cerevisiae* with respect to bio ethanol productivity and high bioethanol tolerance.

Ethanol Recovery: Distillation and Dehydration

Under ideal conditions, an ethanol and water mixture can be separated based on their difference in volatility. Because ethanol is more volatile than water (ethanol vaporizes at 78°C whereas water vaporizes at 100°C), upon heating the ratio of ethanol-to water in the vapor phase will become higher than that in the liquid phase. Therefore, in an ideal distillation column separation, the overhead product will mainly be ethanol, and water will be the main bottom product. An azeotropic mixture of ethanol (95.6%) and water (4.4%) will be reached upon completion of distillation operation, which is determined by the difference in the boiling points between water and ethanol (Wang, 2010). Because the ethanol water mixture from fermentation is far from being ideal, the actual ethanol recovery process is a multistage and highly integrated process (Green & Perry, 1997). Therefore in the present study an attempt has done for enzyme

production from environmental yeast strain and its application in the bioconversion of rice straw residues into glucose for production of 2nd generation bioethanol.

Materials And Method

Sample collection site:

Soil samples were collected from Dr. H. K. Baruah memorial Department of Botany. The experiment was conducted in laboratory of Microbiology, Botany department of Gauhati University, Guwahati, Assam. The straw samples were collected from nearby paddy field.

Sample preparation:

The agro waste sample such as rice straw as substrate were collected paddy straw and cut into small pieces. They were then allowed to dry in oven at 65°C for 48 hours. Pieces of raw materials was used as carbon source.

Isolation of Yeasts:

Yeast was isolated from soil samples by serial dilution methods using different media such as – yeast extract peptone dextrose agar (YEPDA), Rose Bengal agar base media, Peptone yeast extract agar, Sobouraud dextrose agar (SDA), Malt yeast extract agar (MYA). Each of the media was supplemented with chloramphenicol (200mg/l) for control the bacterial growth. Plates were placed in incubator at 27°C for 3-4 days. Although different media are used for isolation of yeast, YEPDA media (peptone 20g, yeast extract 10g, agar 20 g and dextrose 20g in 1 liter of water) was able to show maximum growth of yeast. The plates were incubated for 3 days. The single colony formed were picked and observed at microscope.

Maintenance of culture

The culture of yeast was maintained by subculturing on slants using YEPDA media, incubating for 48 hrs. at 30°C and thereafter storing in a refrigerator at 4°C for future use.

Pretreatment of substrate:

The physically treated substrates were further subjected to pretreatment by steam explosion, alkali pretreatment and acid pretreatment.

Steam Explosion: 20g of raw materials was taken in 250 ml of conical flask and then powdered substrates was subjected to sudden steam depressurization in an autoclave at 15 psi for 15 min and at 121°C by fully opening the steam exhaust valve with the objective of obtaining the maximum quantity of fermentable sugars using least pre-treatment time.

Alkali Pre-treatment: 20 g of each substrate in 100 ml of 0.5 M NaOH solution was autoclaved at 115°C for 10 min and kept overnight. The alkali treated substrates were filtered through anylon cloth and is neutralized. Excess water was removed by squeezing the substrate in nylon cloth after which the treated substrate was allowed to dry in oven.

Acid Pre-treatment: 20 g of pre-treated substrate was taken in 100 ml of 1% sulfuric acid and autoclaved at 115°C for 15 minutes for 24 hours. The acid treated substrate were also filtered through nylon cloth and neutralized. Excess water is removed and solid residues were dried for overnight.

Fermentation: 400 ml of yeast extract broth was prepared in 2 conical flasks by adding yeast extract (10g/l), peptone (20g/l) to distilled water, plugged with cotton and sterilized at 15 lb. pressure for 15 minutes. In each flask pretreatment straw were added as source of carbohydrate. The media was then inoculated with yeast strain and allowed for fermentation for 5 days in shaker incubator at 150 rpm at 30°C. after fermentation it was centrifuged at 10000 rpm for 10 minutes and distilled for further process.

Distillation of fermented product: It is a separation of mixtures based on volatilities i.e. boiling point of the individual components of a mixture. It is often used only if one product is required. After centrifuge at 10000 rpm for 10 minutes the supernatant fluid is distilled using a distillation bath at 78°C. As ethanol has lower boiling point than water, it will be converted into vapour state first and then condensed and separated from water.

Estimation of ethanol:

Determination of ethanol was done by spectrophotometric method (Caputiet al., 1968). For estimation of ethanol, 2g potassium dichromate was dissolved in 20 ml of 5M sulfuric acid. Then 2ml of distillate was mixed with 6ml of distilled water and 2ml of potassium dichromate solution was added. The mixture was shaken gently for 1 min and allowed to stand for 15 min. then mixture was heated to boil for 20 minutes. The absorbance was read on spectrophotometer at 600nm. Alcohol content in fermenting sugar medium was estimated by using spectrophotometer at 600 nm as per the procedure given by Natuet al. (1986). Alcohol in the presence of strong acid like concentrated sulfuric acid (H₂SO₄) reacts with potassium dichromate (K₂Cr₂O₇) to give a green coloured substance which was measured in a spectrophotometer at 600 nm.

Screening of yeast for extracellular enzyme production yeast: The yeast isolates were tested for production of hydrolytic enzymes such as cellulase and amylase by using the following protocol.

Cellulase Production:

For cellulase activity, yeasts are grown on potato dextrose agar (PDA) plates supplemented with 1% carboxymethylcellulose. The culture plates were incubated at 30°C for 3 days and finally flooded with 0.1% Congo red for 30 minutes followed by 1M NaCl treatment for additional 10 minutes. The reaction zones were observed from background and solubilizing index (SI) was calculated by subtracting the colony diameter from total diameter of reaction zone.

Amylase Production:

For Amylase activities yeast are cultivated in PDA medium (39 g/l) supplemented with 2 g/l starch at their optimal temperature of growth. The culture plates were incubated for 7 days and finally flooded with 1% IKI solution.

Determination of total carbohydrate content of substrates:

The carbohydrate content of untreated and pretreated raw materials in the culture broth was measured by phenol sulfuric acid method (Thimmaiah, 1999). 100 mg of sample are taken in boiling tube and hydrolyzed in water bath for 3 hours with 5 ml of 2.5 N HCl and cool it to room temperature. Then it is neutralized with solid sodium carbonate until the effervescence ceases. The volume is made up to 20 ml and centrifuged at 10000 for 5 minutes. 1 and 2 of sample were pipette out in two separate test tubes and volume is made up to 1 ml in each test tube with water. 0.2, 0.4, 0.6, 0.8 and 1 ml of the working standard were pipette out into a series of test tubes. A blank is set with 1 ml of water. Then 1 ml of phenol is taken in each test tube and 5 ml of 96% sulfuric acid is added to each tube and after 10 minutes of shaking the test tubes are placed in water bath at 25°C for 20 minutes. The color was read at 490 nm. The amount of total carbohydrate present in sample solution was calculated using standard graph.

Concentration	Glucose(μl)	Distilled water(μl)	Phenol (μl)	Sulfuric acid (μl)	Water(μl)
10μl	10	90	100	500	300
25μl	25	75	100	500	300
50μl	50	50	100	500	300
75μl	75	25	100	500	300
100μl	100	0	100	500	300

Determination of reducing sugar:

Reducing sugar like glucose was determined by using 3, 5 – dinitrosalicylic acid (DNS) reagent (Miller,

0.1	0.18	99.82	100	800
0.2	0.36	99.64	100	800
0.3	0.54	99.46	100	800
0.4	0.72	99.28	100	800
0.5	0.9	99.1	100	800
0.6	1.08	98.92	100	800
0.7	1.26	98.74	100	800
0.8	1.44	98.56	100	800
0.9	1.62	98.38	100	800
1	1.8	98.2	100	800

1959). A sample 0.05 ml was taken from filtrate, 0.35 ml citrate buffer (pH 6.5) and 0.6 ml of DNS was added, and then the sample was boiled for 5 minutes immediately to stop the reaction. The absorbance was measured for reducing sugar at 540 nm using spectrophotometer (Bennet, 1974).

Lignin measurement:

The lignin content in treated and untreated samples was hydrolyzed by using 1.25 % sulfuric acid for 2 hours. The residues were filtered and washed with distilled water for 10 minutes to neutralize sulfuric acid and then oven dried at 105 °C for 10 hours for constant weight. The amount of lignin was expressed by following formula –

$$\text{Lignin} = \text{Lignin weight} / \text{biomass} \times 100$$

Results

A total of 3 yeast strains were selected for production of bioethanol by fermenting rice straw based on their morphology and enzyme production activity.

Morphological characterization

The morphology of the vegetative cells of yeast was observed grown on solid media.

Growth on solid medium

Yeast isolates formed butyrous and smooth white raised colonies on YEPDA medium. The budding stage of the yeast isolates was observed under (40X) microscope and confirmed them to be yeast.

Microscopic observation:

The cell morphology of yeast strain observed under compound microscope showed an ovoidal to elongate having single, pairs, or budding cells. The strain reproduces vegetatively by budding.

Cellulase production:

Table 1: Cellulase production test for different yeast strains:

Yeast strain	Cellulose production
B7	+ve
B20	+ve
ARI	+ve

Amylase production:

Table 2: Amylase production test for different strain of yeast:

Yeast strain	Amylase production
B7	+ve
B20	+ve
ARI	+ve

Three isolates B7, B20 and ARI shown positive results for amylase production in terms of clear zone formation in PDA media supplemented with potassium iodide and iodine.

The yield of bio ethanol production

The results of ethanol yield from pre-treated and untreated substrate by different strain were illustrated in

Yeast strain	Ethanol yield (treated) at 595nm	Ethanol yield (treated) at 600nm	Ethanol yield (untreated) at 595nm	Ethanol yield (untreated) at 600 nm
B ₇	0.336	0.339	0.117	0.105
B ₂₀	0.168	0.163	0.025	0.023
ARI	0.027	0.026	0.012	0.001

figure. The highest ethanol was produced by yeast strain B7 0.336 at 595 nm and 339 at 600 nm.

Table 5: optical density of pre-treated and untreated substrate

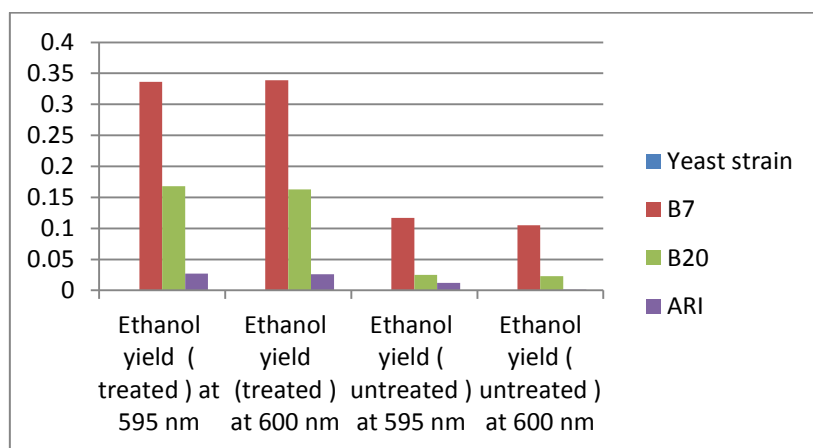


Figure 2: Estimation of ethanol from pre-treated and untreated rice straw at 595 nm and 600nm.

The current studies revealed that maximum yield of ethanol was produced by B₇. The lowest ethanol was produced from fermentation of rice straw by ARI strain. During the acid pre-treatment, the substrate become less complex and it becomes more accessible to the enzyme and hence more reducing sugars are released. Then they are converted to bioethanol by yeast strain.

The lignin content of pre-treated rice straw measured

$$\text{Lignin content} = 14.5 / 20 \times 100 = 72.5\%$$

It was found that as the initial concentration of substrate increases, the lignin content was also increased. The substrate with high lignin content produce less ethanol due to resistant of lignin in substrate to the pre-treatment. The lignin degradation is important for better performance of production of ethanol. The decrease in lignin content after pre-treatment indicate that acid pre-treatment not only reduce to lignin

content but also converted the non-carbohydrate polymers into lower molecular weight compound (Lee et. al., 2015).

The estimation of reducing sugar: Reducing sugars in pre-treated raw materials in culture broth were determined by Dinitrosalicylic acid (DNS) method with glucose as standard.

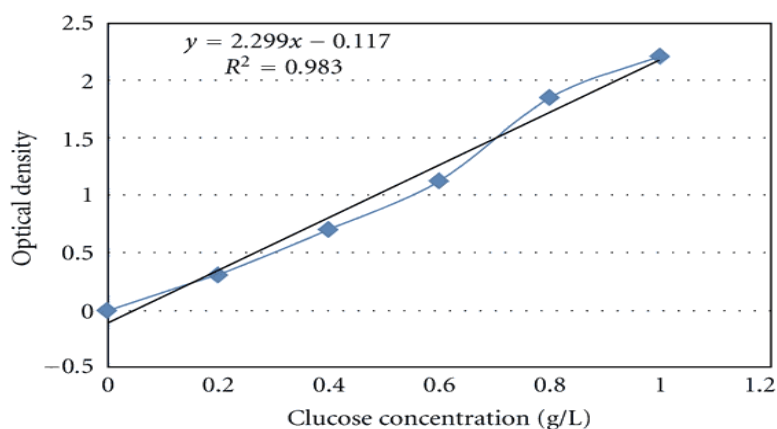


Figure 2: glucose standard curve at 535 nm

Table 5: The reducing sugar yield from rice straw after pre-treatment were shown as follow.

Sample	535 nm	540 nm	545nm	575nm	580 nm
Rice straw	1.924	1.669	1.466	0.686	0.616

Therefore the yield of reducing sugar after pre-treatment of rice straw is 0.604.

The pre-treatment has the benefit of not only solubilizing hemicellulose but also able to convert solubilized hemicelluloses to fermentable sugars.

Carbohydrate estimation:

The carbohydrate content of pre-treated raw materials in the culture broth was measured by phenol sulfuric acid method with glucose as standard.

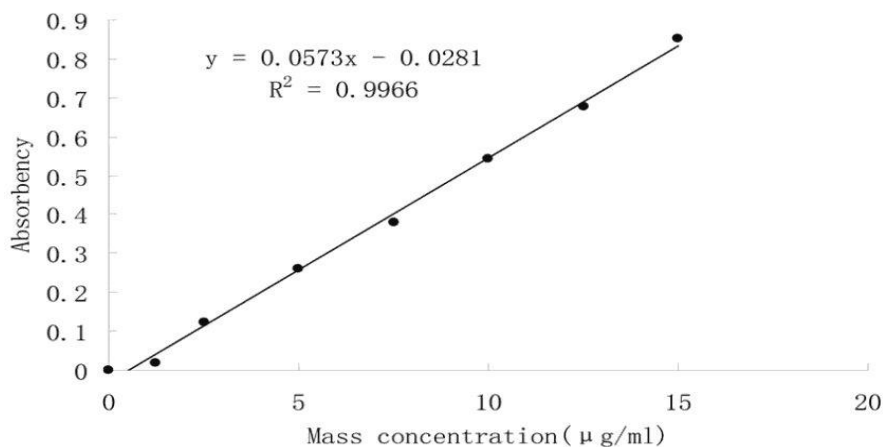


Figure 4: standard curve of glucose at 490nm

Table 5: Optical density of pre-treated rice straw for carbohydrate estimation.

sample	475nm	480nm	485nm	488nm	490nm
Rice straw	0.461	0.477	0.429	0.390	0.357

Therefore the estimation of carbohydrate from pre-treated rice straw is 7.86µg/µl.

Discussion

A huge amount of ethanol was produced in world. 1000 g of paddy straw comprises 390g of cellulose and it is tentatively enough for production of 200g of ethanol. Bioethanol is a renewable fuel which can be mixed with gasoline or used as sole fuel. The main objective of current study was to determine the yield of ethanol from paddy straw by effective fermentation by yeast. Bioethanol technology is a modern and eco-friendly technology based on fermentation of organic materials in anaerobic condition at suitable temperature and pH by yeast. The key steps in lignocellulosic bio ethanol production is to convert lignocellulosic biomass into fermentable sugar. In the present investigation, B₇ strain was among the 3 identified strain who shows higher reducing sugar and cellulosic productivity from paddy straw than the

other two strains. Clearly indicating B₇ strain as high potential to degrade rice straw than the other. Therefore this strain was considered as efficient for production of extracellular and reducing sugar and was selected for further studies. Pre-treatment of rice straw is essential steps in order to open up the structure of biomass. Acid pre-treatment results removal of hemicelluloses from the biomass while the alkali cause delignification of biomass to provide bio ethanol. This studies show the positive effect of 1% acid, 1% alkali and steam explosion on B₇ during pre-treatment of rice straw on polysaccharide conversion into sugars. Sugar content was increased as a result of sterilization done by the method of autoclaving. To make the process economically viable the production of cellulose is a key factor in the hydrolysis of cellulosic materials. B₇ strain show positive test for the production of cellulose and efficiently perform enzymatic conversion of acid, alkali and steam explosion pre-treated cellulose from rice straw into sugar followed by fermentation into ethanol. Cellulose have a lot of industrial applications including manufacturing of medicines, food and help to break the waste plant supplies to clean up the environment.

Conclusion

One of the most important chemical intermediate which is produce in the steam cracking of natural gases and petroleum liquid, is ethylene. Catalytic dehydrogenation of bioethanol is another way for production of ethanol which decreases the emissions of greenhouse gas and reliance on limited fossil fuels. Pre-treatment of rice straw can effectively increase the cellulose production and improve the fermentation for bioethanol production. By this study it is proven that the agricultural wastes which have substantial dumping problem, can be overcome by producing bioethanol through the process of fermentation and saccharification. Thus the present investigation has unlocks a new opportunities of exploiting commercial ethanol production for industrial use.

Reference

1. Bennett, L.G. and Tornabene, T.G. (1974). *Characterization of the Antigenic Subunits of the Envelope Protein of Yersinia pestis. Journal of Bacteriology.* 117 (1) 48-55
2. Caputi, A., Ueda, M., Brown, T. (1968). *Spectrophotometric Determination of Ethanol in Wine. The American Journal of Enology and Viticulture.* 19:160-165
3. Chandel, A.K., Kapoor, R.K., Singh, A. et al (2007). *Detoxification of sugarcane bagasse hydrolysate improves ethanol production by Candida shehatae NCIM 3501. Bioresource Technology* 98: 1947–195.
4. Dhillon, G.S., Bansal, S., Oberoi, H.S. (2007). *Cauliflower waste incorporation into cane molasses improves ethanol production using Saccharomyces cerevisiae MTCC 178. Indian Journal of Microbiology.* 47:353–357.
5. Dufey, A. (2006). *Biofuels Production. Trade and Sustainable Development: Emerging Issues. International Institute for Environment and Development, London.*
6. E. & J. Gallo Winery, P. O. Box II 30, Modesto, California 95353. *Presented at the Annual Meeting of the American Society of Enologists, Clel Coronado, California, June 20-22, 1968.*
7. Ganguly, A., Chatterjee, P.K., and Dey, A. (2012). *Studies on ethanol production from water hyacinth—A review, Renewable and Sustainable Energy Reviews.* 16(1):966-972.
8. Kim, T.H., Lee Y.Y. (2007). *Pretreatment of Corn Stover by Soaking in Aqueous Ammonia at Moderate Temperatures. In: Mielenz, J.R., Klasson, K.T., Adney, W.S., McMillan, J.D. (eds) Applied Biochemistry and Biotechnology. ABAB Symposium. Humana Press.*
9. Kimming, M., Sundberg, C., Nordberg, A. et al (2015). *Replacing fossil energy for organic milk production – potential biomass sources and greenhouse gas emission reductions. Journal of Cleaner Production.* 106: 400-407.
10. Lee, J.W., Kim, J.Y., Jang, H.M. et al (2015). *Sequential dilute acid and alkali pretreatment of corn stover: Sugar recovery efficiency and structural characterization. Bioresource Technology.* 182:296-301.
11. Lewis Liu, Z., Ma, M., Song, M. (2009). *Evolutionarily engineered ethanologenic yeast detoxifies lignocellulosic biomass conversion inhibitors by reprogrammed pathways. Molecular Genetics and Genomics.* 282: 233–244.
12. Lindén, T., Hahn-Hägerdal, B. (1989). *Fermentation of lignocellulose hydrolysates with yeasts and xylose isomerase. Enzyme and Microbial Technology.* 11:583-589
13. Liu, Z.L., Blaschek, H.P. (2009). *Lignocellulosic biomass conversion to ethanol by Saccharomyces. In: Vertes, A., Qureshi, N., Yukawa, H., Blaschek, H. (eds) Biomass to biofuels. Wiley, West Sussex. 17–36*
14. Maiorella, B.L. (1985). *Ethanol. In: Moo-Young, M. (Ed.), Comprehensive Biotechnology. Pergamon Press, Oxford, pp. 861–914.*

15. Miller, G.L.(1959). Gail Lorenz. Use of Dinitrosalicylic acid reagent for determination of reducing sugar. *Analytical Chemistry*, 31(3): 426-428.
16. Modig, T., Liden, G., Taherzadeh, M. J. (2002). Inhibition effects of furfural on alcohol dehydrogenase, aldehyde dehydrogenase and pyruvate dehydrogenase. *Biochemical Journal*, 363(3), 769.
17. Mosier, N., Wyman, C., Dale, B. (2005). Features of promising technologies for pretreatment of Lignocellulosic Biomass. *Bioresource Technology* 96(6):673-686.
18. Mutreja, R., Das, D., Goyal, D., and Goyal, A. (2011). Bioconversion of Agricultural Waste to Ethanol by SSF Using Recombinant Cellulase from *Clostridium thermocellum*. *Enzyme Research*. 1–6.
19. Naik, S.N., Goud, V.V., Rout, P. K. et al (2010). Production of first and second generation biofuels: A comprehensive review, *Renewable and Sustainable Energy Reviews*. 14(2):578-597.
20. Natu, R.B., Sawant, A.D., and Jadhav, S.J. (1986). Spectrophotometric assay of ethanol in fermented molasses and sugarcane juice. *Bharatiya Sugar* 11: 41-43.
21. Perez, J., Dorado, J.M., Rubia, T.D. et al., (2002). Biodegradation and biological treatment of cellulose, hemicellulose and lignin: an overview. *International Microbiology* 5: 53–63.
22. Saha, B.C. (2003). Hemicellulose bioconversion. *Journal of Industrial Microbiology and Biotechnology*. 30: 279–291.
23. Thimmaiah, S.K. (1999). Standard method of biochemical analysis. Kalyani publishers, New Delhi.
24. McCarthy JE, Tiemann M. MTBE in gasoline: clean air and drinking water issues. Washington, DC, USA; 1998.
25. Ragauskas, A. J. et al., (2006). The path forward for biofuels and biomaterials. *Science*, v. 311, Jan.
26. Kuhad RC, Singh A, Ericksson KE (1997). Microorganisms and enzymes involved in the degradation of plant fiber cell walls. *Advances in Biochemical Engineering / Biotechnology*. 57:45–125
27. Himmel M.E., Ding S.Y., Johnson D.K., et al. (2007). Biomass recalcitrance: engineering plants and enzymes for biofuels production. *Science*, 315, 804–807.
29. Kuhad RC, Gupta R, Khasa YP. et al. (2011) Bioethanol production from pentose sugars: current status and future prospects. *Renewable & Sustainable Energy Reviews*. 15:4950–4962.
30. Kuhad R, C., Gupta R, Singh A. (2011). *Microbial Cellulases and Their Industrial Applications*. Enzyme Research. PP 10.
31. Palmqvist, E. & Hahn-Hagerdal, B. (2000a) Fermentation of lignocellulosic hydrolysates. I: inhibition and detoxification: review. *Bioresource Technology*. Vol. 74, pp. 17–24.
32. Palmqvist, E. & Hahn-Hagerdal, B. (2000b) Fermentation of lignocellulosic hydrolysates. II: inhibitors and mechanism of inhibition: review. *Bioresource Technology*., Vol. 74, pp. 25–33.
33. Chandel, A.K., Kapoor, R.K., Narasu, M.L. et al (2007c). Economic evaluation and environmental benefits of biofuel: an Indian perspective. *International Journal of Global Energy Issues*. Vol. 28, pp. 357-381.
34. Gupta R, Mehta G, Khasa YP, Kuhad RC (2011). Fungal delignification of lignocellulosic biomass improves the saccharification of celluloses. *Biodegradation*. 22:797–804.
35. Sánchez OJ, Cardona CA (2008). Trends in biotechnological production of fuel ethanol from different feedstocks. *Bioresource Technology*. 99:5270–5295.
36. Zhang et al (2006). Efficient production of laccases by *Trametes* sp. AH28-2 in cocultivation with a *Trichoderma* strain. *Applied Microbiology and Biotechnology*. 73, pp. 89-94
37. Abbi M (1996a): Bioconversion of rice straw into ethanol by *Candida shehatae* NCL 3501. M.Sc Thesis. University of Delhi, New Delhi, India.
38. Kuhad RC, Singh A (1993). Lignocellulose biotechnology: current and future prospects. *Current Reviews in Biotechnology*. 13:151–172.

Apprehending the striking elements of Psychological Realism in Shashi Tharoor's short story 'The Boutique.'

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Abstract

Literature and psychology have originated from the same womb: the human psyche. Psychological realism is a literary genre that gained its tempo in the second half of the 19th century. It is a character-driven methodology that dives into the characters' psyche, focusing on what motivates them to make certain decisions and uses character's thoughts to express commentary on social or political issues rather than the plot. 'The Boutique' is a reflection of class discrimination embedded in Indian society. It is a story about the mother-son duo who feels insulted and succumbs to alienation in a posh boutique in Calcutta city. This paper attempts to critically examine the elements of psychological realism in 'The Boutique.' Through a close reading of the short story, relevant sentences and passages have been cited for providing textual evidence.

Keywords- Psychological Realism, Indian English Literature, Shashi Tharoor, The Boutique, Short Story

Introduction

Literature is a mirror to society that reflects its virtues and, in its corrective function, also reflects society's ills to make people realise their mistakes and form suitable amendments. In the words of Walter Allen, "... contemporary novels are mirrors of the age, a very special kind of mirror, a mirror that reflects not merely the external features of the age but also its inner face, its nervous system, the coursing of its blood and the unconscious promptings and conflicts which sway it." (Allen 16) Each generation has its own set of aspirations, logic, fears, and tensions that inspire the writers to respond to those societal changes. Indian English Literature, right from its beginning, has been responsive to the changes in society. Indian English writers have written about the social realities like the reflection of India's tradition, culture, and ethos, partition effects and their impact on people, Indian middle-class life, nation-building, etc. Their solid fascination towards the changing scenes of the country and country life motivated them to depict the Indian people and the rustic background. Therefore, it can be said that the emergence of the Indian English Novel was not purely a literary phenomenon; instead, it began as a novel of realism.

Realism

Henry James describes realism as "... the drama of a broken teacup" that strives to present life as it is, omitting nothing ugly or painful and without idealisation or romantic subjectivity. As Ngugi wa Thiong'o writes, "... literature cannot escape from the class power structures that shape our everyday life. Here a writer has no choice whether or not he is aware of it, his works reflect one or more aspects of the ideological struggles in society" (Thiong'o 6). Realism is a slice of the Realist Art Movement that emerged in 19th century France as a reaction to 18th century Romanticism. Works of romanticism were considered way too exotic- that had lost touch with the actuality. Honoré de Balzac is one of the earliest realist writers, who infused his works with complex characters and detailed observations about the world at large. The realist writers applied journalistic techniques such as objectivity and fidelity to the facts of the matter and published their works either in serial form in periodicals or novels. The novel is fiction. Fiction and realism are strikingly opposite concepts that cease to exist together, and if they do, it is not easy to separate them. However, there are specific characteristics to identify Literary Realism- First, it tells the stories of ordinary folks and not heroes or villains, kings or queens. Second, it reflects the everyday lives of ordinary people generally belonging to the lower or middle class. Third, the character is more important than the action or story. Difficult ethical choices made by the character is often the subject of the plot. Fourth, it focuses on the sharp contrasts in society, for instance, the upper class v/s the lower class. Fifth, language is simple or vernacular, not heightened or poetic. The tone could be a matter of fact, satiric, or comic. And lastly, interior or psychological realism is present in a variant form. Psychological realism is an offshoot of literary realism that dives into the characters' psyche, focusing on what motivates them to make certain decisions and why. Rather than the plot, it uses the character's thoughts to express commentary on social or political issues. Psychological realism strives to explain that an individual is rather a composition of a network of motivations, interests, desires, and fears. These forces interact and battle with each other and build an individual personality. Thus, the novelists create complex and layered characters and lay their internal struggles bare for the readers through soliloquies or internal monologues. The actions in a psychological realist novel are internalised, and the changes in mood, perception, opinions, and ideas constitute the climax.

Psychological Realism in Shashi Tharoor's 'The Boutique'

The portrayal of different shades of modern Indian life appears to be one of the principal sources of appeal in Shashi Tharoor's writing, both fiction and non-fiction. His writings predominantly deal with India's social, historical, or political aspects, and character is the central focus of most of his narratives. Tharoor's 'The Boutique' was first published in *Junior Statesman* in 1971 and later included in 'The Five-Dollar Smile' a collection of his early short stories in 1990. The story is about an Indian boy and his mother's visit to an inaugural ceremony of a posh boutique at the Plaza Lounge in Calcutta city. The aura of this magnificent five-star building is meant only for the rich, the famous, and the glamorous. As a result, the mother-son duo feels like alienated outsiders. At the very outset, they were humiliated while entering the Plaza Lounge when the liftman looked at them disrespectfully, "The liftman swung open the door of the elevator and looked at Amma and me with an appraisingly critical eye." (Tharoor 27) because their dressing displayed their middle-class status compared to the other guests, who wore branded clothes and made a fashion statement. Even after they get into the lift, the liftman refuses to acknowledge their presence. "The liftman didn't move; he waited for further passengers-there was no one in sight-while we fidgeted uneasily... but he waited, and so did we. I suddenly felt like rushing out of the lift, the hotel, the area." (Tharoor 28). This is the first instance that makes the narrator realise that "This wasn't our place. We didn't belong here." (Tharoor 28) When a rich fat lady enters the lift, it makes Amma step back "uncomfortably into the darkest recesses of the elevator" (Tharoor 28), shows how she thinks that she is diminutive in the presence of that rich woman. Seeing his mother uncomfortably resigning to the corner of the lift, the narrator instinctively puts his hand on his mother's arm, "Don't worry Amma, I thought, I'll protect you. 'Protect you?' the words mocked me in my mind. 'From what? I hastily dropped my hand from her arm" (Tharoor 28-29) as he later realises that their presence didn't even matter to the people around. There is yet another instance of insult when a waiter who serves coffee passes them without a look. At first, the narrator thinks that coffee had to be paid for but "then saw him offering steaming hot cups of it to all the visitors. Anyone who chose to could take a cup of coffee... We had been insulted." (Tharoor 29). Even when Amma begins to fondle a jacket she likes, the salesgirl curtly reminds her of the 'Please don't touch' sign- "she pointed to a PLEASE DON'T TOUCH card... Amma flushed a deep red. 'I'm sorry,' she mumbled in confusion, hastily trying to put it back." (Tharoor 30) However, when a celebrity guest arrives, he casually flips through the ties without disapprobation from the salesgirl. These repeated instances of insult soon subside into their resignation, "... a whirling, twisting question-mark, asking me 'What are you doing here?' And suddenly I realised I didn't know what I was doing there, and the question-mark straightened itself out in my mind to an arrow, a line, and I knew where the line led-outside." (Tharoor 31) So both the mother and the son decided to walk out. The narrator comments- "Quietly we walked to the door. No one noticed our exit; it was as if an insect had been removed from the cup of tea, something which ought not to have been there in the first place... We used the stairs." (Tharoor 32) These lines truly reflect how unwanted they felt in that boutique. On their way back, Amma suggests taking a taxi. But her son gently refuses; instead, he tells her of walking to the nearby bus stand and take a bus home, for there was no need to pretend anymore. They were going back to the world they belonged to, their home.

Conclusion

'The Boutique' is based on class discrimination embedded in Indian society and is a perfect example of social and psychological literary realism. This story is about the alienation and isolation faced by middle-class people like Amma and her son amidst the glittering yet smothering aura created by the rich men and women who form the cream of society. It presents before us an accurate picture of the attitude and behaviour of snobbish people in Indian society. And even though the liftman, the waiter, and the salesgirl belong to the lower stratum of Indian society, they do not hesitate to discriminate between the middle and the upper-class people.

References

1. Tharoor, Shashi. *The Five-Dollar Smile: Fourteen Early Stories and a Farce in Two Acts*. Penguin Books, 2015.
2. Allen, Walter. *Reading a Novel*. London: J.M. Dent & Sons, 1969, pp.16.
3. Thiong'o, Ngugi wa. *Writers in Politics: A Re-Engagement with Issues of Literature & Society*. Currey U.A., 1997, pp.6.
4. Rai, Manjeet Kumar. "Indian Culture Through an Adolescent's Eye: Reading Shashi Tharoor's *The Five-Dollar Smile*." *Research scholar- An International Refereed Journal of Literary Explorations*, vol. 4, no. 1, Feb. 2016, pp.369-381.

Safety Issues in Library

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Introduction:-

Now a day, security in your library is every staff member's responsibility. Even in libraries with a security force, officers can only be in one place at a time—it is everyone's responsibility to ensure a safe environment for the public, the staff and the collections. Many libraries do not have a security force or a director of security and cannot hire either. But in adopting the spirit of the rules, these libraries can designate one person to be liable for these duties. Successful library security programs are based on clearly defined and well-communicated behavior policies for public/students and staff. Although these guidelines/issues/problems do not explicitly refer to "rules of conduct" the assumption is that the library has a set of rules governing public/students and staff conducts. Please note that these policies should be reviewed/discussed by the library's legal counsel and approved by the library's governing body/committee.

Key words :- Library Security, guidelines, Protection, Collection, Loss.

Scope of Area :- All types of libraries, i.e. University library to personal library.

Definitions:-

Alarm monitoring facility: central station where security, fire or other emergency alarms are monitored and persons are dispatched to investigate the alarm.

Assets: Refers to what the library has or owns and considers valuable, including human life, collections, structures, properties, even the good name and operations of the library.

Collection and objects: materials collected by libraries and archives to include but not limited to books, periodicals, manuscripts, maps and recordings. Academic libraries, on the other hand, convey an image of being secure havens of peace for those dedicated to serious study. Surely no one imagines there are crimes of opportunity waiting to happen. This is the precise mentality that works to the advantage of criminals who exploit student naiveté and staff unpreparedness.

Some of the important steps/measures for Library Security Issues is as follows :-

Establish the Security Plan

Few academic libraries would operate without collection plans or disaster plans, yet most of them think nothing of operating without a security plan. The first step to developing a more secure library is a well-thought out security plan. Here are some of the factors to consider in developing that plan:

The scope of this duty shall not be limited by the sort, size of library, governance, or collection.

It is suggested that the Library Director or designee in safety and security matters, should be responsible for: ensuring the physical protection of both library staff and library patrons. He/she is also liable for protecting the building, its contents, and its immediate surroundings. The responsibility includes, but isn't limited to, the event and integration of protection programs for emergencies, also as fire, floods, earthquakes, and other natural disasters. ensuring that library staff are informed of and instructed in their obligations in safety and security matters, for instance, the requirement to guard lives and collections, to supply aid to disaster victims, etc.

taking all reasonable steps to minimize loss and damage to collections, furniture, and equipment.

Security Audit.

Invite campus security officers or safety consultants to review the library's current state of security preparedness in order to eliminate potential problems, to assess the staff's level of awareness and training and to identify crime prevention strategies that can serve as the foundation of the plan. Identify the frequency with which audits will occur.

Staff Development.

Identify the specifics about what type of staff training is needed and how often it is provided. Indicate which staff needs to develop skills in managing crime situations, and who will handle ongoing crime reporting and prevention. Identify resources for equipping staff with the skills they need.

Communication.

Establish an internal process for gathering and sharing information about safety and security matters, anything from regular crime reporting to safety tips. Identify staff members who will be responsible for sharing this information with co-workers. This can include the establishment of communication channels with campus security and other administrative offices.

Reporting.

Develop an instrument that staff members will use to gather all the important facts about a crime or security incident in the facility. Establish a procedure for completing the report and identify a staff member, usually in the administrative office, who will collect and store the reports.

Build Community.

Discover ideas and strategies for creating a more secure facility from other campus units or academic libraries. The library is only one among multiple facilities on campus with security issues (e.g., computer labs, recreation, cafeterias). Administrators should connect with others on campus with similar responsibilities in order to establish a dialogue about security for exchanging ideas and practices for more secure buildings.

Fire and Emergency Protection.

Integrating a fire and emergency protection program into a library protection policy to avoid and mitigate losses to the library. Fire risk is the major threat to libraries and archives and library protection should be managed accordingly, the guidelines/standards of - FIRE PROTECTION AND PREVENTION ACT, 1997*.

Security Alarms and Electronics

There are spreads of security and intrusion alarm systems available that ought to be explored and potentially integrated into the Library. They range from hardware systems with protection against power cuts and tampering to battery powered systems. There is also a good variation within the quality level of these systems. Because they are electronics they are constantly changing in their capabilities, cost and ability to integrate into other systems in the building. The Library Director/Librarian/authorized personal should consult with a security system consultant to gain a full understanding of the benefits of various systems as they would relate to the unique configuration and size of the specific Library Building. A reliable security system requires professional selection and application for overall good alarm coverage. Also important are secured communication lines and backup power supply. Once installed and operational, local alarms must be audible. It is essential that staff respond consistently and rapidly. If possible, alarms should be audible in all locations, not just at the point of contact or trouble. This will assure that others not in the area are able to monitor and respond if necessary. Proper adjustments, inspection, testing and maintenance of all alarms are essential.

Technological(Related to Library System) Security System(RFID)

This is based on UHF RFID tags for identification of Library books & Users (Patrons/Borrowers) with international SIP-2 Protocol Library standards. The range of UHF tags is in meters instead of few centimeters in current out-going HF technology. There are some major advantages as follows: High Multi Read, Read Range, High Accuracy, Security, Easy Searching and Reasonable Cost.

Comment / Conclusion: -

The purpose of creating a safety plan is not to intimidate or alarm employees unnecessarily or to create a climate of fear in the campus community. Instead, make sure that the library staff is fully equipped to manage the security of the building and library materials. And is confidently ready for whatever happens. Employees have an idea / idea of when such incidents may occur; In a way, he seems to be ready for such inappropriate events. For this, they should also get training from time to time. At present there are a lot of new types of such devices. Libraries should take it according to their financial capacity.

Bibliography/References:-

1. Dougherty, A. P. (2012). *Library Issues: Briefings for Faculty and Administrators*. - (pp. --). Ann Arbor (MI): Mountainside Publishing House.
2. IITMS. (2014, August 20). <http://www.iitms.co.in/RF-libman1.html>. Retrieved August 20, 2014, from <http://www.iitms.co.in>: <http://www.iitms.co.in/RF-libman1.html>
3. Kothari, C. (2004). *Research Methodology (Methods and Techniques) 2nd Revised Edition*. New Delhi: New Age International (P) Ltd.
4. (27 June 2010). *LIBRARY SECURITY GUIDELINES DOCUMENT*. Chicago: --.
5. Shuman, B. A. (1999). *Library Safety and Security Handbook: Prevention, Policies and Procedures*. USA: D&G Ltd.

Reflection of Postmodernism in Mahesh Elkunchwar's Sonata

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Abstract

Survival is considerably changed with the global human race. The impact of postmodernism is quite obvious with the change of traditional beliefs. It has not only nourished a rational environment but also nurtured a highly advanced society where the traditional issues of existence cease to exist. Indian playwrights have been played a crucial role in bringing the postmodernity in Indian scene. The themes of Indian plays shocked the audience by giving a jolt of real existence in fragmentation. The trend of translation gave playwrights a wider publicity and audience, and bridged the gap of the local and the global, the domestic and the foreign. In Sonata, Mahesh Elkunchwar has depicted the lives of the unmarried women who are free and outrageous being lonely. The present paper attempts to analyse the non-conformist and unconventional lives of the Indian working women in the postmodern condition.

Keywords: Existence, lonely, postmodernism, fragmentation, non-conformist.

Reflection of Postmodernism in Mahesh Elkunchwar's Sonata

Mahesh Elkunchwar is a key playwright in changing the Marathi theatre altogether and the well-known Sahitya Akademi literary award winner. He was born on October 9, 1939 into a fairly well-to-do feudal family. His childhood loneliness was one of the major impulses to land him in presenting plays with unmatched characters on the stage of Marathi theatre. His new stance, acknowledging the impact of western playwrights was beyond the reach of any Indian playwright. The tradition of presenting the commercial plays was not in his mind and therefore, his themes were rather postmodern. His characters were not uncommon but can be found next door. The way, Elkunchwar has portrayed his characters was hardly found by any of the playwrights in Marathi theatre and Indian theatre at large. The crisis of identity and meaninglessness of life are a few of his major themes in the plays which put him in the series of postmodern playwrights.

The western impact of postmodern theory is quite visible which created havoc in the changing scene of Indian society. Since independence, India has experienced multiple developments and advancements in various fields these advancements were a result of colonial influence and blind imitation of the Western writers but this progress has been in a very fragmented and disjointed manner. The society has undergone through all these developments by creating an impact of postmodernism and the literature too found this impact. Postmodern theatre in India serves as a reaction to the supposed stylistic and ideological limitations of traditional commercial plays. They often depicted the world as fragmented, troubled and on the edge of disaster, which is best displayed in the plays of Mahesh Elkunchwar. The postmodern world has already undergone countless disasters and beyond any liberation. Postmodern authors tend to depict the life of human beings with the themes of alienation, the outsider sensibility, fragmentation and the despair. These themes are quite universal in the plays of Mahesh Elkunchwar. The mental traumas, fragmented world, search for meaning and suppressed soliloquies of self find clear manifestations. His plays talk about the culture of the past that once held us closely but with the advent of modernization and commercialization, the humane feelings are being commodified.

Elkunchwar has carved out his play, Sonata with a different impertinence by posing the intricate condition of three Mumbaite women who hide their mental turmoil and loss of identity behind the smile. They keep themselves busy on Sunday in the useless chores. This play deserves a very unique place amongst all the creations of Elkunchwar in terms of its themes and dialogues. The play is laid with multiple thoughts and ideas and can be analysed from various perspectives. The entire play majorly consists of three working women characters: Dolon, Aruna and Subhadra and with a couple of minor male characters in the background. All of them are in their forties still unmarried. They live their life in the skyscrapers of Mumbai staying for their livelihood with a little care of their future. Though, Elkunchwar's focus is on the life of the women, this play does not place him to be a feminist. His prime concern is on the mental condition of these women with different characteristics though staying close from their college days. They stay together and care for each other even though there is a wide gap of communication among them. Elkunchwar opens the play at the flat where the two characters, Aruna and Dolon stay together from last seventeen years. Dolon, a proud Bengali always flaunt her Maharashtrian friend Aruna and vice versa. They are a complete contrast in their character, attitude and behaviour, Aruna is a scholarly teacher in Sanskrit, self-centred and follows conventionalism, whereas Dolon is loving, happy go-lucky fat Bengali who is a typical postmodern. Aruna found evaluating the papers got disturbed by the journalist Dolon. The continuous talk of Dolon has about the empty bottles perfume, clothes, dieting, food, television news,

music and many more of the things, made Aruna stop checking the papers. On the other hand, Aruna talks about the answers in the paper. The replies and interactions were not at all relevant which show a huge communications among them. It is felt in their continuous conversation without any link of their sharing of thoughts. These non linear, fragmented, often purposeless, repetitive versions of conversation define the reality of postmodern human existence. The post modern condition communicates which has no meaning or the absence meaning lacks the gap. The entire play takes place within the four walls of the house in which Dolon and Aruna lives and they are completely trapped inside it. Elkunchwar has depicted the metropolitan culture of Mumbai which "is threatened from within again and again and where the meaning is lost and women do not have any escape of such purposeless life. Their dreams, hopes, aspirations, happiness and sorrows all survive within these four walls. They often keep peeping out of the window to search for their escape from such monotonous and rotten existence. The interest in the life of the window girl, 'the Typo' as they refer, is an empathy they feel and experience. It is a kind of pleasure seeking by finding other's life as theirs is. They also want to be friend her but with no response they lose their hope. They search the opportunities for their freedom through the window in the sky but that has also been removed from their sight by the huge sky scrapers symbolizing the post-independent urbanization. This artificial glamour of urbanization has entangled their life totally which is obviously seen through the drinking and smoking habits of Dolon, which also further leaves Aruna to drink. There is a huge communication gap in the form of flaunts and debates. They always remain connected with each other in such fragmented world. Aruna's conventional beliefs and Dolon's ultra-modern beliefs do not separate them. On the other hand, they want to get connected with each other by visiting the native places. Aruna has tried to °keep herself safe from the metropolitan culture but finally she sacrificed her traditional beliefs and embraced to the established norms and practices of postmodern culture of Dolon and Subhadra. Elkunchwar has presented the revolutionary lifestyles of Dolon and Subhadra to show the violence in the postmodern world where the emotions do not have any stand." They seek pleasures in breaking and violating the rules and regulations. Elkunchwar develops the drama with the entry of Subhadra on the scene which brings a state of disorder. Dolon and Aruna were very excited to find their only hope for freedom with Subhadra's entry into their flat. There is a same feeling on the part of Subhadra who has come to this haven of two which "Dolon mockingly calls as 'transit lounge' hoping for a respite to which she cannot ultimately submit anyway."² Their conversations boosted their confidence and found a room for their views to be accepted. Subhadra was a typical postmodern character who is an exceptionally extroverted free woman. Her thirst for men is unstinting without any satisfaction. She rejects all the values of the society by using the cussing words. She accepted her violent relation with Sangram, a garage mechanic and their love flowers in the process of fighting with each other. She stayed with him without marriage and gives back his hitting, breaking all the conventions. Subhadra displays her anger even on the caller on her mobile by using the abusive words as she lost the job for moral turpitude. She, along with Dolon is a revolutionary figure who continues to fight against the established definitions of socio-cultural ethics and moralities. On the other hand, Aruna hesitates to do anything outside her own established norms of living whereas Dolon and Subhadra break away from all forms of social and cultural establishments and create their own. All the three of them share their innermost thoughts and often hurt each other. But still they are not at peace with themselves. Though their struggle hardly yields any concrete, positive result and they continue to suffer within the garb of existential realities. Their characters are unmatched with each other. They are constantly in search of their purpose. Subhadra comes to the flat for the comfort and a real existence but leaves unanswered. Dolon and Subhadra are somewhat like-minded in following the norms of the society, whereas Aruna is different altogether with a little want of being Dolo. It is seemed that Subhadra is an alter-ego of Dolon who is in turn an alter-ego of Aruna. The characters Aruna, Dolon and Subhadra can also be analysed on Freudian terms as a representation of id, ego and superego respectively. Amongst all, Subhadra holds a better position because she has at least been successful to break the limits and the entanglements of the four walls and reach the outside world, create a voice of her own. Though at the end of the play, she returns to Sangram responding to his waiting and emotional attachment to him but never as a submission. As the play progresses, we find their survival in the bad faith of existentialism and still they live with their lost privilege. In the process of tormenting, drinking, smoking, and collecting the empty perfume bottles, they search for their happiness and satisfaction. With Subhadra's exit, Aruna and Dolon lose their moment of freedom and cling to their loss. With the feeling of insecurity and absence of love and freedom, Dolon attacks on Aruna for presenting Dolon's caricature in her story, which is the spectre of sexuality, denied and repressed, out of fear.³ They fight and restore till it ends in an almost similar way as it begins, only that the characters appear to be a bit closer to each other. This reveals the ultimate inescapable existential reality of the human civilization.

The existential angst and feeling of alienation and fragmentation assume pivot importance in postmodernist psycho-social study. In the mad pursuit of achieving temporary pleasures, human being is lost in the darkness of meaningless life. The existence of human beings is at stake. All the three characters of Sonata are the middle class women who try to find the peace in life. They often hurt each other and are very unlike each other. The postmodern condition drives them to accept the ways of the world. Aruna has saved herself from the impact but finally she also submits herself to the world of disorder. Elkunchwar has depicted the grief in the lives of free, independent thinking women who, despite their advancements, are not at peace. Their fight for existence in such alienated world becomes a key concern of Elkunchwar.

References

1. Bandyopadhyay, Samik. "Introduction", *Collected Plays of Mahesh Elkunchwar*. Trans. Ashish Rajadhyaksha, Irawati Karnik, Shanta Gokhale, Supantha Bhattacharya. New Delhi: Oxford University Press, 2009. p. xxvii
2. Bandyopadhyay, Samik. "Introduction". *Collected Plays of Mahesh Elkunchwar*. Trans. Ashish Rajadhyaksha, Irawati Karnik, Shanta Gokhale, Supantha Bhattacharya. New Delhi: Oxford University Press, 2009. p. xxviii
3. Bandyopadhyay, Samik. "Introduction", *Collected Plays of Mahesh Elkunchwar*. Trans. Ashish Rajadhyaksha, Irawati Karnik, Shanta Gokhale, Supantha Bhattacharya. New Delhi: Oxford University Press, 2009. p. xxix

The Role of Literature in Social Development

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Abstract

*Most instructive frameworks present normal highlights which have a solid accentuation on intellectual realizing, where results can be estimated impartially, the emphasis being on information, abilities and capabilities. Likewise, contest and accomplishment don't deliver sufficient distraction for the inward existence of kids. Writing holds a conspicuous job in kids' self-improvement since the peruser turns out to be genuinely appended with the story and this has beneficial outcomes on the self-awareness as well as in general learning measure. Starting here of view, the Romanian educational plan for the elementary school cycle incorporates proper writings which can be utilized to these reasons. Giving kids admittance to all assortments of writing is critical for their prosperity. Teachers, guardians, and local area individuals should assist understudies with fostering an adoration and enthusiasm for perusing. Not exclusively is perusing writing significant in creating psychological abilities to have the option to prevail in a school or work setting, yet it is important for different reasons too. Despite the fact that there are incalculable qualities in presenting kids to writing, Donna Norton (2010) distinguishes the worth of writing for youngsters in her book *Through the Eyes of a Child*. Youngsters' writing is significant in light of the fact that it furnishes understudies with freedoms to react to writing; it gives understudies appreciation about their own social legacy just as those of others; it assists understudies with creating passionate insight and innovativeness; it sustains development and advancement of the understudy's character and social abilities; and it communicates significant writing and topics starting with one age then onto the next.*

Keywords: literature; children ; growth; creativity; skills , Social Development

Introduction

Instructors and students in all instructive frameworks are "exposed to the philosophy of the foundation, which itself reacts to public and worldwide goals". (Kramsch, 2010, 67). Most instructive frameworks present normal highlights which are identified with a few viewpoints: quick advancement of media, youngsters' capacities in correspondence and innovations, new showing systems and assets. Overall, the logical, positivistic perspective produced arrangements and practices in the instructive frameworks which have a solid accentuation on intellectual realizing, where learning results can be estimated unbiasedly, the attention being on the collection on information, abilities and capabilities. These practices proceed to right now and it tends to be handily seen that understudies in the essential or auxiliary level don't encounter learning in the spaces that advance inventiveness and creative mind, an issue which gets from the design of a jam-packed educational plan. Appropriately, contest, status and accomplishment don't deliver sufficient distraction for the inward existence of youngsters. They will in general advance the external side of the individual, with little distraction for the internal identity. This is exceptionally clear with the last ages of youngsters who have been instructed in a media climate which impacts them generally. Frequently, kids are left before the PC, for schoolwork or essentially for recreation, while at school instructors may utilize an incredible assortment of showing methodologies and assets, some of them additionally associated with the advancements in innovation

Children's Literature and Social Development

As educators, we search for approaches to meet our understudy's scholarly necessities, yet in addition to assist them with creating. Youngsters' writing can help. For instance, writing can be utilized to assist understudies with understanding and make companions. What is compassion and what difference does it make? Sympathy is the capacity to feel empathy for someone else. Sympathy is a troublesome idea for kids, who are egocentric essentially. In any case, presenting youngsters to books that assist them with feeling things according to someone else's viewpoint can help them to respond with thoughtfulness towards others. One piece of youngsters' writing that epitomizes compassion and companionship is *Charlotte's Web* by E.B. White. This book recounts the narrative of an improbable companionship between Charlotte, a ruthless creepy crawly, and Wilbur, a pig who is unnerved by being butchered. Wilbur discovers that Charlotte is a decent soul, despite the fact that she kills creepy crawlies, as Charlotte invests her energy and imagination discovering approaches to save her companion's life. Through this story, understudies discover that regardless of whether others think, feel, or act in manners that are unique in relation to us, they can in any case be acceptable.

Children's Literature and Social Issues

Social issues are cultural issues that we as a whole face and are liable for evolving. Every one of us will in general feel more OK with individuals who resemble us, while feeling dread for individuals who are

unique. Kids' education can be utilized to show understudies that variety ought to be praised, instead of dreaded. How might we hold bigotry back from crawling into the future? Kadir Nelson composed a few books about racial strain including *I Have a Dream*, which can acquaint understudies with the historical backdrop of racial separation in America and support discussions about fairness. Another book that can show kids social issues is *Wonder* by R.J. Palacio. This is the tale of ten-year-old August, who was brought into the world with a deformation that makes him appear to be unique from different kids his age. As he starts government funded school interestingly as a fifth grader, he battles with acknowledgment issues. Through this story, understudies can figure out how to be caring towards others with birth deformities, wounds, or impairing conditions that are conceivably separating. Kids' writing can likewise open understudies to an assortment of societies. For instance, *What Can You Do with a Rebozo?* via Carmen Tafolla is a presentation into Mexican culture. A rebozo is a customary Mexican cloak that is utilized as a child sling, a sweeping fortress, and a fastener, in addition to other things. This story even consolidates English with Spanish content. Openness to different societies through books, for example, this one can assist with combatting dread, which can prompt contempt of the obscure.

The Importance of Literature in Modern Society

it's anything but a significant piece of our schooling, yet Sophie Austin needs to realize how can it fit in to our regular daily existence? Since the time I was little, stories have been a piece of my life. Perusing books like *The Tales of Peter Rabbit* and *The Very Hungry Caterpillar* before bed turned into a piece of my normal request where I could escape into a different universe. No doubt, very little has changed and on most evenings, I love to peruse - to find that escape away from the real world. In any case, writing is more than that. It has risen above time is still with us, shaping basic pieces of the present educational plans. All in all, what significance does writing have in present day culture?

The impact of literature

The effect of writing in current culture is verifiable. Writing goes about as a type of articulation for every individual writer. A few books reflect society and permit us to more readily comprehend the world we live in. Creators like F.Scott Fitzgerald are perfect representations of this as his novel *The Great Gatsby* was an impression of his encounters and assessments of America during the 1920s. We are effectively associated with the mind of creators through their accounts. Be that as it may, writing additionally repeats the need to comprehend cutting edge issues like human struggle. A Gulf News article says, "In a period of present day media, like TV and motion pictures, individuals are deluded into believing that each question or issue has its speedy redresses or arrangements. In any case, writing affirms the genuine intricacy of human struggle". Writing is an impression of humankind and a way for us to see one another. By paying attention to the voice of someone else we can start to sort out how that individual thinks. I accept that writing is significant due to its motivation and in a general public, which is getting expanding confined from human connection, books make a discussion

Literature and its Role in Modern Society

The Literature has been a better impression of the society.it portrays the upsets and products of the general public and makes the way for amendment. In writing, we find the depicts of human existence through certain characters of what they say, act and respond as a piece of the general public. Writing serves numerous different jobs in the public eye today. It develops sympathy and hypothesis of brain, defamiliarize reality, consider human instinct, and institutes social change. The general public has been created and advanced by keeping the perspective on satisfying humn needs in various viewpoints to guarantee a legitimate equilibrium in every one of the occasions nonetheless, in writing, the writer attempts to introduce the inventive picture or genuine occurrence multiplely. In this paper, it has been addressed that both writing and society are reciprocal to one another and they can't be perused in partition. Writing in the grade school cycle

In place of correspondence, writing creates basic and insightful abilities since students figure out how to function freely and present their contentions upheld by the considered artistic writings. Conversations of writing bring out thinking identified with arrangement, circumstances and logical results, character inspiration, forecasts, perception of activities, characters, and settings, basic investigation of the story and inventive reactions. Beginning in the preschool years and proceeding in the essential cycle, picture books used to help stories foster visual proficiency. The imaginative delineations in picture books foster kids' attention to line, shading, space, shape, and plan. A few representations supplement or support the story, though others improve or expand the content. Pictures pass on importance and open new freedoms for understanding fostering kids' basic abilities.

The Role of Literature in Cultural and Society Development

The Role of Literature in Cultural and Society Development Jibran Khalil Jibran once said, "Every one of our words are nevertheless scraps that tumble down from the blowout of the psyche." It is in everybody, it's bolted away, covered up and for the talented, it comes out to give us the very dialects we are utilizing today. Writing, similar to music and film and theater, is a workmanship. Indeed the most perfect type of workmanship. Life, for some if not all, in scales that fluctuate is essentially a similar excursion estimated by encounters, fortune, karma and love. We can't all communicate them in a graceful or imaginative way yet we as a whole encounter them in any case. The majority of us go through this fiendish and unmerciful thing called existence while never having the option to communicate those lucky minutes and difficulties to other people and all the more significantly to ourselves. We have arrived at an age where ages at this point don't pay brain to writing in a direct and hands on manner. The new age, including myself, doesn't investigate the writer inside, as platitude as this may sound.

Developing Social-Emotional Skills Through Literature

Social improvement is characterized as a cycle through which youngsters figure out how to communicate with others. It's anything but a wide scope of abilities like language, thinking and the capacity to fathom. That is the reason begin presenting the idea of perusing at an early age. Perusing has been known to work on a kid's scholarly ability, nonetheless, what the vast majority will in general neglect are its different advantages. Perusing gives the way to opening a youngster's enthusiastic advancement also. It assists youngsters with creating in a manner that is more all encompassing. The early on article to this exceptional version of School Psychology International, "Utilizing Children's Literature to Strengthen Social and Emotional Learning," depicts the requirement for a more extensive base of help for youngsters' psychological wellness needs. Both broadly and universally, the set number of psychological well-being experts requests elective alternatives for the conveyance of emotional well-being administrations. Schools are suggested as one proposed setting for offering these types of assistance to kids and youth. All things considered, instructors need simple to-utilize essential data about emotional wellness assets that are suitable, yet depend on negligible expert help and management. One choice is bibliotherapy, utilizing books and stories to help social feelings. From the psychological well-being viewpoint of both counteraction and intercession, bibliotherapy is proposed as an expert's remedial instrument, yet additionally as a layman's asset to address understudies' fundamental social feelings.

CONCLUSION:

Teachers, guardians, and local area individuals should assist understudies with fostering an adoration and enthusiasm for perusing. Not exclusively is perusing writing significant in creating psychological abilities to have the option to prevail in a school or work setting, yet it is important for different reasons too. Despite the fact that there are incalculable qualities in presenting kids to writing, Donna Norton distinguishes the worth of writing for youngsters in her book *Through the Eyes of a Child*. Youngsters' writing is significant in light of the fact that it furnishes understudies with freedoms to react to writing; it gives understudies appreciation about their own social legacy just as those of others; it assists understudies with creating passionate insight and innovativeness; it sustains development and advancement of the understudy's character and social abilities; and it communicates significant writing and topics starting with one age then onto the next. Through this story, understudies can figure out how to be caring towards others with birth deformities, wounds, or impairing conditions that are conceivably separating. Kids' writing can likewise open understudies to an assortment of societies. It assists youngsters with creating in a manner that is more all encompassing. The early on article to this exceptional version of School Psychology International, "Utilizing Children's Literature to Strengthen Social and Emotional Learning," depicts the requirement for a more extensive base of help for youngsters' psychological wellness needs.

References

1. *"The Division of Labor in Society"*
2. *Sachs, Wolfgang (1992). The Development Dictionary:*
3. *Jacobs, Garry and Asokan N., "Towards a Comprehensive Theory of Social Development"*.
4. *Jacobs, Garry and Asokan, N., "Towards a Comprehensive Theory of Social Development"*
5. *Cleveland, Harlan and Jacobs, Garry, The Genetic Code for Social Development". I*
6. *Macfarlane, Robert and Van Harten, Robert. "Engines of Development.*

Role of Library in College with Special Reference to Sports Development

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Abstract:

College libraries play a crucial role in supporting the teaching, learning and research missions of their parent institution and also demonstrated their ability to lead and to adapt their roles in response to college sports development. This paper highlights the objectives of the library in the light of college sports development. The paper also discusses the facilities provided by library for development of college sport and further role of library in college sports development.

Key words: *College library, library services, college sports development, library and sports, library and physical education etc*

Introduction:

According to changing circumstances academic libraries have demonstrated their ability to lead and to adapt their roles. Academic library has been described as the heart of the academic institute that circulates the lifeblood through the arteries of the whole the institution body by this semi nation of knowledge. A library performs a crucial role in the educational process. The role of the library can be defined within the framework of the college mission and a library development programme can be undertaken accordingly. The fundamental role of the college library is educational. College library should not be a mere storehouse of books and other collection, but as a dynamic instrument of education. A college library is established with the intention of aiding in successful accomplishment of teaching, learning, research, publication programmes, etc. In 1957, Library Committee report of University Grants Commission headed by Dr. S. R. Ranganathan that dealt with in detail the role of the university library in academic development especially in the field of higher education. The Kothari Commission report (1964-66) on education to role of libraries in higher education is reflected that, no new university, college or department should be setup without taking into account its library needs in terms of staff, books, journals, space etc The college library provides reading material to help the college to engage itself earnestly and vigorously in its intellectual attainments which is to assemble, preserve, transmit and illuminate knowledge of the wisdom and past. College library are playing significant role not only in college development, but for development of college sport also. No doubt, the college libraries are indispensable tools in the development process and enrichment of sport. Library can provide necessary information for those who able to participate in the sport development. College library is most important component of a college to meet the requirements of the academic and research activities.

Objectives of Library in College Sports Development:

The aims and objectives of a library in development of college sport are as below:

College library serve as a centre of excellence and innovation in Physical Education and Sports.

1. To provide the promote facilities for advanced study and research in sport education.
2. To assist in teaching and learning of physical education.
3. To encourage and produce scientific literature in the field of Physical Education and Sports to improve knowledge and ability of sport professionals.
4. To conduct research in several branches of sport, publish the result of such research and act as a sports educational information dissemination centre.
5. To assist in preparation of highly qualified teachers and leaders in the field of Physical Education and Sports.
6. To promote programmes of Physical Education and Sports in the college.
7. To create a dynamic and high-quality academic environment of teaching, research and human services for prospective teachers and leaders in the field of sport education.

Facilities provided by library for college sport development:

1. A college library should have a collection of books and journals related to physical education and sports. There is Interlibrary withdrawal and reprography facilities available in the Library.
2. The Library is famous for rare collection of physical education books for use by the students and others visiting the library.
3. In order to make use of study material available on internet, the library should provide computers with internet facility
4. In addition, college should have provision of Wi-Fi which helps the scholars to down-load the research materials related to their research in physical education.

Role of Library in College Sport Development

The quality of teaching and learning depends on the resources and services provided by library. Library is an integral part of college education and college library has a supporting, coordinating and encouraging role. A good college library not only serves the academic needs of the user but also meets the needs of those who are interested in sports and physical fitness. Thus, the college library serves the academic purpose, in addition to it they coordinate several functions related to sports and physical education. A library which forming an integral part of college endowed with responsibility of meeting the educational needs of sports persons. A library's role is always shaped on the mission of the college and the development of sport is one of the objectives of college. The Library is considered as the backbone of teaching and research activities carried out by the college. The college Library occupies an indispensable place in the development of Physical Education and sports. Library plays a very critical role in supporting the sport activities with academic programmes of the college. It identifies, evaluates, procures, processes and then makes these learning resources available to the faculty and students for their teaching, learning and research assignments to enhance the sport development. College library should provide needed information to its users not only for their academic/examination purpose but also for development of college sport. College library is dedicated to preserving, promoting and sharing the literature on all aspects of sports and physical education. Library is considered as the backbone of teaching and serves as a nucleus centre for sports information to sports and physical education professionals in pursuit of their higher studies & research in sports. A wide range of processes and policies designed to monitor and improve the quality of Library collections and services is being developed. The college library have specialized collection of books on sport & games which include: Archery, Athletics, Badminton, Basketball, Boxing, Chess, Cycling, Cricket, football, Gymnastics, Golf, Hockey, Handball, Horse Riding, Judo, Kho-Kho, Kabaddi, Lawn Tennis, Mountaineering, Rowing, Swimming, shooting, Snooker, Table tennis, Volleyball, Weightlifting, Wrestling, Yoga and Yatching. In addition to the major disciplines the Library also maintains the Allied subjects such as: Bio-chemistry, Sports Biomechanics, Sports Biology, Sports Medicine, exercise of Physiology, Anthropometry, sports Encyclopaedia, Food Nutrition, Kinesiology, Sports Sociology, Physical Fitness & Physical Education etc. The Library has a rich periodicals section which provides current issues as well as back volumes of technical journals received from regional to international level. Library has all the relevant literature related to important sports events. In addition to the print collection the college Library has a wide and increasing range of online collections, including e-books, e-journals and other major databases. College library is user focused, to facilitate ease of use of the collections.

Conclusion:

The reviewed literature shows that scanty literature was available on role of library in college sports development. In this context Libraries have the opportunity to extend new types of services to users interested in sports and physical education. Library professionals will need to think creatively about developing services for development of college sports. Librarians of the college, are in the position to change their role to meet the challenges of college sports development. So, they must enrich their knowledge with sports development to provide quality digital information service to the users.

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References:

1. *ACRL Research Planning and Review Committee (2012), Top ten trends in academic libraries: A review of the trends and issues affecting academic libraries in higher education, College & Research Libraries News vol. 73 no. 6, 311-320. Available at: <http://crln.acrl.org/content/73/6/311.full.pdf+html>.*
2. *Igun, Stella E., 2006, Human capital for nigerian libraries in the 21st century. Library Philosophy and Practice. 8 (2), 1-4. Available on <http://www.Web pages.uidaho.edu/mbo lin/igun.htm>*
3. *A Kalliammal and G Thamarai Selvi (2004) The Virtual Library: Changing Roles and Ethical Challenges for Librarians, 2nd International CALIBER, New Delhi, Available at: http://eprints.rclis.org/15232/1/04cali_24.pdf*
4. *K. Nageswara Rao and KH Babu (2001), Role of Librarian in Internet and World Wide Web Environment, Informing Science, Volume 4 No 1, Available at: <http://www.inform.nu/Articles/Vol4/v4n1p025-034.pdf>*

5. *Manish Kumar (2009), Academic Libraries in Electronic Environment: Paradigm Shift ICAL 2009 – Vision and Roles of the Future Academic Libraries, Available at: http://www.crl.du.ac.in/ical09/papers/index_files/ical-16_182_384_3_RV.pdf*
6. *https://www.researchgate.net/publication/286711197_Changing_Role_of_Library_Professional_in_Digital_Environment_A_Study*

Sustainable Development Goals: Initiatives, Execution & Challenges – Quality Education

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In this paper, the role of quality education for sustainable development goals (SDGs) is explored. Quality education is called SDG-4 because it is a 4th goal of the SDGs. The introduction and background of the quality education and sustainable development goals is defined in first section. In section it is defined that how we can achieve equitable and good quality of education and some priority targets will be set to achieve the goal. The challenges for higher education and the steps involved in translating global commitments are given in subsequent section. At the end, the conclusion of the study is given

Keywords: Sustainable Development Goals, Quality Education, Higher Education

Introduction:

17 goals related to the sustainable development were set when General Assembly of United Nations selected the 2030 Agenda for Sustainable Development. These 17 goals were implemented from January 2016 and for next fifteen years these goals will drive international development work. Quality Education was the goal 4 of this agenda. This goal emphasizes on quality education and ensures equitable and inclusive education and promoting life time learning opportunities. This agenda focuses on the shifting of fundamental thoughts and recognizing the dynamic inter linkage between three aspects i.e. economic, social and environmental, driving integrated and universal development in all the nations of the world. Through education, we can achieve many other Sustainable Development Goals (SDGs). The people can break the vicious cycle of poverty when they are able to obtain quality education. Through education, the inequalities can be reduced and it also empowers the people to live more sustainable and healthy life.

Quality education is understood as one of the most powerful and proven drivers for ensuring sustainable development, which can be applied in various educational contexts, formal and non-formal, and which can generate multiple benefits for the general public.

Education is a basic right and elementary to human dignity. SDG 4 also has reciprocal linkages across the 2030 Agenda. Access to quality education is an avenue for social mobility and reducing inequalities. Education is essential for building the knowledge base we need to tackle critical challenges like climate change. Education will help youth prepare for employment in the high-skill jobs of the fourth industrial revolution. And education is a foundation for peaceful societies and effective institutions

INDIA and Sustainable development goals

India has achieved significant progress towards the goal of Education for All. Constitutionally several key programmes and policies have been initiated to provide free and compulsory education to all children in the age group of six to fourteen years as a Fundamental Right. Initiatives such as Sarva Siksha Abhiyan (SSA) and Right to Education (RTE) have given much required impetus to education system in India. Though it has significantly improved the enrolment rates across the country in primary education, but the challenge of quality in terms of learning outcomes remains to be addressed. (GOI, Economic Survey 2016-17). One of the goals of the SSA has been to achieve universalisation of elementary education that addresses both out of school children during the primary school going age and the children who were forced to drop out before completion of primary grade classes due to social and economic compulsions. Accordingly, Twelfth Five Year Plan (2012-17) laid focus on expansion, improving quality and equal educational opportunities for all segments of society. As compared to the greying population worldwide, India has an added advantage with its young population, with an average age of 29 years, the demographic dividend can be harnessed with an improvement in health, education and skill development. In view of the above facts, the broad focus of the paper is on the current approaches adopted by India to contextualise SDG Goal 4 on education in the Indian context by integrating them into the formulation of New Education Policy and its positive impact on achieving quality education, as SDG 4 emphasises. The next section examines the trends in education attainments at primary, secondary and tertiary levels in India.

Goal 4 of the SDGs on Education affirms that: Ensure Inclusive and Equitable Quality Education and Promote Lifelong Learning Opportunities for all, states that:

- By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes

By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education

- By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university
- By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship
- By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations
- By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy
- By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development
- Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, nonviolent, inclusive and effective learning environments for all
- By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries
- By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing state

UNESCO's Sustainable Development Goal 4 aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all by 2030." Sub goal 4.C

emphasizes on the need of quality teachers so that they can lead the transformation that the world aspires to witness. Even though, the main responsibility of the Global Education 2030 success lies with governments of countries, UNESCO and partners, the final catalyst of good quality education is a teacher. Therefore, their role cannot be overlooked when setting up modern learning environments and organizations, in fact, UNESCO (2011) report established that in a digitalized society with renewed curricula, a meaningful integration of new tools and technology depends on teachers' ability to

- a) structure the learning environment in new ways,
- b) merge new technology with a new pedagogy and
- c) develop socially active classrooms encouraging cooperative interaction, collaborative learning and group work.

Since 2000, there has been enormous progress in achieving the target of universal primary education. The total enrolment rate in developing regions reached 91 percent in 2015, and the worldwide number of children out of school has dropped by almost half.

There has also been a dramatic increase in literacy rates, and many more girls are in school than ever before. These are all remarkable successes.

Progress has also faced tough challenges in developing regions due to high levels of poverty, armed conflicts and other emergencies. In Western Asia and North Africa, ongoing armed conflict has seen an increase in the proportion of children out of school. This is a worrying trend.

SCOPE OF STUDY

The world today has more knowledge than ever before, but not everyone can benefit from it. Globally, countries have made major strides in increasing access to education at all levels and increasing enrolment rates in schools, and basic literacy skills have improved tremendously. Among youth aged 15-24, the literacy rate improved globally between 1990 and 2016, increasing from 83.2% to 91.4%. Completion rates in primary school were 89.6% by 2016, and has witnessed a decline in recent years dipping from 90.7% in 2012. Few countries have achieved gender equality at all levels of education. In addition, one in

five children, adolescents, and youth are out of school, including 64 million children of primary school age, 61 million of lower secondary school age and 138 million of upper secondary age.

Why is this important?

A quality education is the foundation of sustainable development, and therefore of the Sustainable Development Goals. As a policy intervention, education is a force multiplier which enables self-reliance, boosts economic growth by enhancing skills, and improves people's lives by opening up opportunities for better livelihoods.

The Sustainable Development targets for 2030 call for ensuring the completion of primary and secondary education by all boys and girls, and guaranteeing equal access to opportunities for access to quality technical and vocational education for everyone. Policy interventions will require improving access and improving quality, as well addressing relevant obstacles which include gender inequalities, food insecurity, and armed conflict

Challenges

Impact of COVID-19 pandemic

Just as all SDGs, achieving SDG 4 for inclusive and equitable access to education is likely to be missed due to the COVID-19 pandemic, there is a projection that more than 200 million children will still be out of education by 2030.

After the pandemic hit, school closure (including universities) starting in April 2020 affected up to 91 percent of enrolled learners. Most of the world's children were deprived of formal education during the COVID-19 outbreak—a legacy that could threaten the SDGs' underlying ambition to leave no one behind. Many educational institutions are attempting to maintain programs through online education. However, equity remains a major constraint on access to distance learning, as many students in the developing countries do not either have access to the internet or a safe and supportive learning environment appropriate for e-learning.

In an effort to foster international collaboration and ensure that education never stops, UNESCO in March 2020 launched the COVID-19 Global Education Coalition, a multi-sector partnership between the UN family, civil society organizations, media and IT partners to design and deploy innovative solutions

Findings

Progress is difficult to track as 75 per cent of countries have no or insufficient data to track progress towards SDG Goal 4 targets for learning outcomes (target 1), early childhood education (target 2), and effective learning environments. Data on learning outcomes and pre-primary school are particularly scarce; about 70% of countries partially or fully lack adequate data to evaluate progress made so far, this include countries with high income that are expected to have achieved the target or to be on track to achieve it. 40 per cent of nations around the world have insufficient accessible data with respect to organized learning at least a year before their primary education. This makes it hard to analyse and identify the children at greatest risk of being left behind. A 2019 study used computer modelling to estimate educational attainment for men and women from 2000 to 2017, mapping the results for each country to help identify areas lagging behind.

Massive open online courses (MOOCs) are free open education offered through online platforms. The initial philosophy of MOOCs was to open up quality Higher Education to a wider audience. As such, MOOCs are an important tool to achieve SDG 4. At the same time, MOOCs also contribute to Goal 5, in that they are gender neutral and can give women and girls improved access to education.

The findings indicate that with quality education, there may be implications for job creation, competitiveness as well as more social cohesion. Family-friendly measures including better access to childcare, more flexible working schemes and employer incentives can help individuals to return to work. In conclusion, this contribution implies that the pursuit towards continuous improvements in quality education and social inclusion could create a virtuous cycle of productivity outcomes, economic growth and prosperity.

References:

1. United Nations (2017) Resolution adopted by the General Assembly on 6 July 2017, Work of the Statistical Commission pertaining to the 2030 Agenda for Sustainable Development (A/RES/71/313)

2. Jump up to:^{a b} Lane, Andy (2017). "Open Education and the Sustainable Development Goals: Making Change Happen". ERIC.
3. "African Cultures and the Challenges of Quality Education for Sustainable Development". ERIC. Commission for International Adult Education.
4. "Education : Number of out-of-school children of primary school age". data.uis.unesco.org. Retrieved 2019-03-10.
5. World Bank (June 2010). "Improving Education Management in African Countries".
6. Jump up to:^{a b c d} "Progress for Every Child in the SDG Era" (PDF). UNICEF. Retrieved 2 April 2018.
7. Jump up to:^{a b c d e} United Nations Economic and Social Council (2020) Progress towards the Sustainable Development Goals Report of the Secretary-General, High-level political forum on sustainable development, convened under the auspices of the Economic and Social Council (E/2020/57), 28 April 2020.
8. Unicef (2020-08-26). "COVID-19: At least a third of the world's schoolchildren unable to access remote learning during school closures, new report says". unicef.org. Retrieved 2020-09-25.
9. "the sustainable development goals report 2020" (PDF).
10. Jump up to:^{a b} Education, Global Campaign for (2020). "SDG4's 10 targets".
11. Jump up to:^{a b c} UNESCO (2020). "Global Education Monitoring Report 2020". unesdoc.unesco.org. Retrieved 2020-09-19.
12. BMGF (2020) Covid-19 A Global Perspective - 2020 Goalkeepers Report, Bill & Melinda Gates Foundation, Seattle, USA
13. Amponsah, Samuel (2018). "African Cultures and the Challenges of Quality Education for Sustainable Development". ERIC.
14. "IAEG-SDGs 2020 Comprehensive Review Proposals Submitted to the 51st session of the United Nations Statistical Commission for its consideration". United Nations, Department of Economic and Social Affairs, Statistics Division. Retrieved 1 September 2020.
15. Jump up to:^{a b} "United Nations (2018) Economic and Social Council, Conference of European Statisticians, Geneva," (PDF). United Nations, Geneva" (PDF)" (PDF). UNECE. Retrieved September 23, 2020.
16. *The Lancet Public Health* (September 2020). "Will the COVID-19 pandemic threaten the SDGs?". *The Lancet Public Health*. **5** (9): e460. doi:10.1016/S2468-2667(20)30189-4. PMC 7462553. PMID 32888438.
17. Leal Filho, Walter; Brandli, Luciana Londero; Lange Salvia, Amanda; Rayman-Bacchus, Lez; Platje, Johannes (2020-07-01). "COVID-19 and the UN Sustainable Development Goals: Threat to Solidarity or an Opportunity?". *Sustainability*. **12** (13): 5343. doi:10.3390/su12135343. ISSN 2071-1050. S2CID 225547434.
18. Local Burden of Disease Educational Attainment Collaborators (January 2020). "Mapping disparities in education across low- and middle-income countries". *Nature*. **577** (7789): 235–238. doi:10.1038/s41586-019-1872-1. ISSN 0028-0836. PMC 7015853. PMID 31875853.

Suffering, Enfranchisement and Self Realization of Anita Nairs “Ladies Coupe”

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Abstract:

Article focuses on the study of condition of women’s problems and issues are always remain uncovered in India. In a patriarchal society women is supposed as a second sex. Thinking about her rights, health education are seen vary rarely in our society, then issue of the equality is out of the scenario. Anita Nair in her novel Ladies Coupe” tries to raise her voice against this patriarchal society. Suffering of women is presented through six female character and self discovery of them. It is the story of a women’s search for freedom and women’s condition in a male dominated society.

“Feminism is the recognition of the domination of men over women and attempts by women to end male privilege.... It is a theory, a method and a practice which seeks to transform human relations”.

– Cynthia Orozco.

Feminist study of Indian women stated to portray in the mid 20th century. Women writers like Kamala Markandaya, Anita Desai, Shashi Desphande, Shobha De, Bharathi Mukherjee, Manju Kapoor and some others started to give the voice through their works. Some male writers also supported this feminist movement.

Key words: *Enfranchisement, suffering, Feminism, self realization*

Introduction:

Anita Nair, Indian woman novelist, feminist writer, voice of the women who has written six best novels. she is the bestselling and critically acclaimed author of the novels “*The Better Man, Ladies Coupé, Mistress, Lessons in Forgetting, Idris: Keeper of the Light and Alphabet Soup for Lovers*”. She has also authored a crime series featuring “*Inspector Gowda*”. Anita Nair has also written two plays and the screenplay for the movie adaptation of her novel *Lessons in Forgetting* which was part of the Indian Panorama at IFFI 2012 and won the National Film Award in 2013. Among other awards, she was also given the Central Sahitya Akademi award and the Crossword Prize. Her books have been translated into over thirty one languages around the world. She is also the founder of the creative writing and mentor ship program Anita’s Attic.

Anita Nair’s novels are passionately woven on the thread of human nature and values, with a **feminist** outlook. Her characters are inspired by people she sees in her daily life, their candour, their subversiveness and their subtle strength.

Her novel *Ladies Coupé* have been translated into 21 languages. **Ladies Coupé** is a novel by Anita Nair published in 2001. *Ladies Coupé* is about women's conditions in a male dominated society. Nair through this novel presents the condition of women in male dominated Indian society thought being a housewife or working woman. *Ladies Coupe* questions the status of women in a traditional bound social order that sees women exclusively in the role of an obedient daughter, a docile wife and a breeder of children. Women in post-colonial India boldly defy such delimiting roles and assert self-dignity and personal freedom. The novel follows the journey of a middle-aged Indian woman named Akhila as she travels to Kanyakumari in her search for independence. In her journey by train she meets ladies in coupe. They reciprocate their stories with each other who inspire her to live her own life. She shares her ladies compartment (coupé) with Janaki, Margaret Shanti, Prabha Devi, Sheela and Marikolanthu.

Akhilandeswari or Akhila a protagonist of the novel, is a 45-year-old single Indian woman from a Tamil Brahmin family who works as an income tax clerk. She feels that she has never got the chance to live her own life, always fulfilling the roles of the daughter, sister, aunt and the provider. She is the eldest of her family so she has to bear the responsibility of family after her father’s death. No one concerned about her marriage even her brothers were married. She acts as a provider of family. One day she thinks about herself and seeks some questions in her mind so she decided to travel. Until the day that she resolves to break free from her conservative Brahmin life and buys a one way train ticket to the sea side town of Kanyakumari to start a new life alone. Akhila’s life going to fulfill others need but she doesn’t think about herself. She was coming from conservative family. So, she bound by tradition of society and after her father’s death she made breadwinner of family. The journey becomes life experience of Akhila which solutions of her all troubled questions. Akhila conversations with them and tell a story of her. She remembered her past. She had love affair with Hari. On the occasion of Hari’s birthday he wants his birthday gift from her to nude her on his birthday night. She realizes her comfort after this incident. she always fears about society. During the process of her journey, she tries to find out an answer to the basic question which has been in pursuit throughout her life –

‘Can a woman stay single and be happy, or does a woman need a man to feel complete?’.

Janaki, a pampered wife and confused mother. Margaret Shanti, a chemistry teacher married to the poetry of elements and an insensitive tyrant too self-absorbed to recognize her needs. Prabha Devi, the perfect daughter and wife, transformed for life by a glimpse of a swimming pool, Fourteen-year-old Sheela, with her ability to perceive what others cannot and Marikolanthu, whose innocence was destroyed by one night of lust.

Janaki is an elder woman within these six ladies in ladies coupe. She is a traditional typical Indian woman, portrayed as a happy woman, been taken care of by her father and brother in her parents' house and in her marital life. She is a pampered wife who prefers to live only for husband. She bears everything. Before her marriage she tries to keep happy to her parents and now her husband and son. She bears many ups and downs in her life. She is significant character in this novel by being a confused mother treating her children selfish; comparing them to her husband. She has developed a 'friendly' love with her husband. She used to stuck with the conventional role of women and she calls the home as the kingdom of women. She talks about a time when she felt a sudden disinterest about the same home and later she realises that, a woman is always a subordinate to man and she needs a man to complete her.

The Youngest of the six is **Sheela**, a sensitive, fourteen-years-old who talks about the female child abuse by men. Sheela felt ashamed and hurt at the unwanted touching of Hasina's father Nazar as,

"one Sunday afternoon when Sheela went to their house, rushing in from the heat with a line of sweat beading her upper lip. Nazar had reached forward and wiped it with his forefinger. The touch of his finger tingled on her skin for a long time."

*When once Nazar knotted the bows in her sleeves,
"She saw the hurt in Hasina and her mother's eyes."*

Unwanted touch of her friends father makes her embarrassed and humiliated but she was unable to stop her torture. After that Sheela took the right decision that "She would never go to Hasina's house again" as a means of her self-protection. Through this character, Nair has brought out the ill-treatment of women by men and suffering of women in Indian society. If any woman raised her voice she is supposed responsible for that and restricted. Due to fear women didn't disclose her suffering. So this tendency gives men to abuse women physically.

Margaret Shanti, another woman in the Ladies Coupe, is a successful chemistry teacher, embroiled in an unhappy marriage with Ebenezer Paulraj, the principal of the school she works in. He is intensive, self-absorbed and indifferent towards his wife. Simone de Beauvoir rightly said,

"One is not born, but rather becomes, a woman."

Her mother advice's her a day before marriage,

"How a good wife never says 'No', even she is not in mood."

Margaret would like to divorce him, but does not to do so because she is afraid of society. According to Beauvoir,

"Her wings are cut and then she is blamed for not knowing how to fly."

Though having educated and independent she bears her husband. In modern age women are capable for take their decision but after marriage men have rights to take decision of their in Indian Patriarchal society. After eighteen months she was pregnant and she was happy and excited to tell her parents this good news. But her husband withdraws it and tells her:

"Margaratham, I am not so sure if we should have a baby now." He insisted to her for abortion. After the abortion she feels alone and sad. Ebenezer has crueler attitude.

She says to herself:

"I Mouthed the Words: I Hate Him.I Hate My Husband.I Hate Ebenezer Paulraj.I Hate Him.I Hate Him." She was always become disillusioned. Margaret sees her husband actually egoist, bully and cruel. Her way of taking revenge is to feed him oily food and make him a fall and dull person.

Prabha Devi is an accomplished woman whose embroidery was done with stitches so fine that you could barely see them, whose 'Ideas were light and soft', and who 'walked with small mincing steps, her head forever bowed, suppliant; womanly. Her husbands jugdeesh's friend Pramod tries to seduce her. When she opposes him, He said,

"Oh come now, cerling her wrists with his fingers, pulling her toward him. Quit playing the good wife will you."

Women are not safe at home or out side. If she takes even step then society blames on her. Prabha Devi's husband Jagdeesh wants to her wife be submissive and restricted to her.

After her marriage, her life swished past in the blur of insignificant days till one day a week after her fortieth birthday. When she realized that somewhere in the process of being a good wife, a good daughter-in-law and a good mother' she forgets how it is to be herself and that's when she learns to strike a balance

between being what she wants to be and being what she is expected to be. After forty she remembers something forgets in her life.. It is her desire swimming in her life which helps her realize the need for the balancing act. After she comes outside bondage of marriage and she comes out cages. At last she learned swimming and she feels empowered because she has done it for herself in life.

Marikolunthu, thirty-one years old and an unwanted mother who is a victim of a man's lust: her poverty forcing her to do things that violate traditional social, moral injunctions. She is the witness how world can be cruel to her? When she was nine years old her father had died. Her widowed mother works as a maid in chettiyar's house. Marikonthulu goes with her mother for help. . Once chettiyar's eldest brother's brother-in-law raped to her. Now, she is a mother to an illegitimate child. She has experienced poverty, rape, lesbianism and physical torture.

"I was a restless spirit warped and bitter. Sometimes I would think of the past and I would feel a quickening in the vacuum that existed within me now" .

There interaction with the five women in ladies coupe , helped Akhila to realize that she had given the society an unnecessary power of ruling her life. These women and their stories helped Akhila find the answer to her biggest question-

'Can a woman stay single and be happy, or does a woman need a man to feel complete?'

Hence, she came on the conclusion that she gets back in touch with the gay who she felt in love with, someone who she did not accept for the fear of the society.

Conclusion:

Anita Nair's "Ladies Coupe" has turned out to be a great success. It is the story of a women's search for freedom and women's conditions in a male dominated society. The novel raises the questions whether the role of an Indian woman as a representative of other women, living under oppressive patriarchal systems in relation to cultural resistance should be restricted only to their roles as wives and mothers. In such a world, woman's role is limited to reproduction regardless of her own desires and needs. Anita Nair projects Indian feminism and attitude through women characters in her novels. Anita Nair's "Ladies Coupe" brings into focus the issue of self-realization. Her stories portray the sensibilities of a woman, how a woman looks at herself and her problems.

References:

1. Nair, Anita. Ladies Coupe, New Delhi: Penguin Books India, 2001.
2. Myles, Anita. Feminism and the postmodern Indian women Novelists in English, New Delhi: Prabhat Publishers, 2006.
3. Writing in the anthology Chicano voices: Intersections of class, race & gender, 1993
4. K. Bhuvanewari," Feministic Perspective in Anita Nair's Ladies Coupe" Ashvamegh , Vol.II, Issue.XIX – August 2016
5. Simone de Beauvoir, Second Sex, New York,1949.
6. https://en.wikipedia.org/wiki/Anita_Nair
7. https://en.wikipedia.org/wiki/Ladies_Coup%C3%A9

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