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Mahatma Gandhi National Council of Rural Education

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UNESCO Chair on Experiential Learning, Work Education and Community Engagement



Indian Journal of Rural Education and Engagement (IJREE) is a blind peer-reviewed half-yearly early Scholarly Journal published by Mahatma Gandhi National Council of Rural Education (MGNCRE), formerly National Council of Rural Institutes, Ministry of Education (formerly Ministry of Human Resource Development), Government of India. The journal intends to diffuse scholarly information on Academia Community Engagement, Rural Engagement and related areas such as Rural Education, University Community Engagement, Rural Tourism, Rural Management, Rural Entrepreneurship and Rural Communication. It publishes research and review papers, action research, case studies and notes on Community Engagement and Education. The Journal is intended to benefit academia, policymakers, government departments and others interested in Rural Community Engagement.

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Foreword

Mahatma Gandhi National Council of Rural Education (MGNCRE), Department of Higher Education in the Ministry of Education, Government of India, brings out the Tenth issue of its Journal in the field of Rural Community Engagement and Rural Education. This is part of the Council's objectives to diffuse development research and scholarly information. Development of backward areas and their representative institutions, boosting the flagship social and rural development programs with a focus on education, skill development, employment, livelihoods, sustainability and Swachh Bharat. Developing a committed and competent cadre of rural development professionals is another major objective of the Council. These professionals are expected to streamline several grass-root level rural institutions and deliver effectively and efficiently with an emphasis on inclusion and regional prosperity. The Council seeks to empower the rural institutions and the development personnel manning them.

UNESCO Chair on Experiential Learning, Work Education and Community Engagement was established at MGNCRE which signifies the voluminous work done by MGNCRE in these areas. The Chair will promote an integrated system of research, training, information and documentation on four key elements – Rural engagement, hygienic practices in life, decent work and gender equality. The Chair will also facilitate collaboration between internationally recognized researchers and teaching staff from higher education and research institutions in India as well as the South Asia region and Africa.

The blind peer-reviewed Journal's scope has been identified broadly to cover the areas of Academia-Rural Community Engagement and Higher Education focusing on Rural Concerns. Areas covered include Rural Education, University-Community Engagement, Rural Tourism, Rural Entrepreneurship, Rural Management and Rural Communication among other aspects of rural concerns. The Journal publishes research papers, review papers, action research, case studies, including Notes on current issues of concern to the Rural Community Engagement and Rural Education sectors. Efforts have been made to identify potential authors and scholars who have been working in rural community engagement and rural education through the journal databases and the literature scan in the field. Request letters have been sent to the research institutes and universities in India and to the individual scholars and academics to contribute their research manuscripts for publishing in the journal.

This is the Tenth issue of the Journal based on recommendations by peers. This edition of the Journal includes Action Research Projects by Master Trainers and District Sustainability Mentors (DSM) at MGNCRE. Environmental Sustainability and Green Audit under Swachhta Action Plan for Higher Educational Institutions and their adopted villages has been a key thrust area for the Ministry of Education, Govt of India and MGNCRE is the nodal agency that has been assigned of implementing and monitoring this project across all states and union territories in India. Sustainability practices focus on five important areas which include sanitation and hygiene, water management, waste management, greenery and energy conservation. MGNCRE had earlier organized 5-day faculty development programs in January, February and March 2022 across the country and identified 274 District Sustainability Mentors from those faculty development programs who can promote sustainability practices among the higher educational institutions and villages in their respective districts in the first phase. Those selected 274 District Sustainability Mentors were allotted five colleges each in their respective districts to conduct five institution level offline workshops each on promoting institutional sustainability during the first and second week of March 2022.

MGNCRE is keen on promoting Rural Management and Rural Engagement education in all Universities and Higher Educational Institutions of India. The action research projects right from vision, strategy, execution and final output and outcome are fully monitored. All the manuscripts received have been put for anti-plagiarism verification and those articles which have more than 25% of similarity have been sent back to

the authors concerned to minimize and edit their papers. Further, those articles which were well within the limits of plagiarism have been sent to the identified Reviewers and Peer Reviewers to review and to offer their remarks on the papers about their worthiness and to suggest any corrections needed in the paper before they are accepted for publishing.

MGNCRE has made great strides in Rural Management through curricular and academic interventions. Several collaborative MoUs have been signed for exploring, extending and strengthening mutual relationships for the promotion of professional education in Rural Management by sharing the facilities and expertise.

The Journal is intended primarily for the academia, policymakers, departments in the government and for all others interested in Rural Community Engagement, Rural Education and Rural Management. The Journal takes pride in having eminent scholars, researchers and administrators on its Editorial Board. The majority of India still lives in villages and so the topic of rural education in India is of utmost importance. Further, we firmly believe that the Journal will meet the objective of disseminating the current developments in rural community education and engagement.



Dr. W G Prasanna Kumar
Chairman MGNCRE

An Empirical Study on Awareness Level of MGNREGA Beneficiaries In Virudhunagar District of Tamil Nadu

Dr. S Meena Kumari, Mr. S. Muthimari, Lt.Cdr.Dr. I.Nagarajan

Abstract

MGNREGA is a programme particularly designed as “Wage Employment Programme”. The scheme was introduced in the year 2005 as a landmark for “Right to Employment”. The aim is not only to strengthen social security in rural India, but also to transform rural economy by creating a strong base for agricultural production. It consists of many provisions for inclusive growth with the initiative to transform rural lives. The aim of this paper is to evaluate the awareness level of MGNREGA beneficiaries in Virudhunagar district. The level of awareness studied in this paper will help the stakeholders in updating and belting the program. The paper is based on Judgmental sampling. Based on micro level field investigation, the study reveals the level of awareness among the beneficiaries with respect to the demographic profile, types of work ranked by the respondents and factors identified to enhance the level of awareness in Virudhunagar district. The findings show that the awareness level of implementation of MGNREGA in Virudhunagar district is less than half. The study also throws light into challenges involved in strengthening the poor people below and above the poverty line and it was observed that MGNREGA has been successful in investing its outreach to women, by generating increase in income level.

Keywords: Households, Beneficiaries, Employment, Implementation and MGNREGA.

Introduction

Economic growth that creates employment opportunities and ensures mitigation of poverty denotes inclusive growth in an economy. It includes providing equality of opportunity, empowering people through education, skill development, encompasses a growth process that is environment friendly, aims at good governance and helps in creation and sustenance of an egalitarian society.

In the recent past there has been a sudden focus on developing economy through inclusive growth rather than increasing the growth rate of the economy. The Rural development strategies particularly in developing countries like India made a remarkable achievement in terms of social and economic welfare of people in rural areas. The programme particularly designed to eradicate rural poverty and unemployment is MGNREGA

(Mahatma Gandhi National Rural Employment Guarantee Scheme) providing employment opportunities, reducing migration, poverty, restricting child labour and so on.

The main aim of this programme is to make villages self-sustainable through creation of productive assets. The World Bank also ranked this scheme as the world’s largest public work programme in 2015.

MGNREGA, a unique programme of “Right Based Guaranteed Employment”, requires sufficient awareness among the beneficiaries about the provisions laid down in the Act, for its successful implementation. The study was carried out in such a way to meet the ultimate objectives of rural development in terms of level of awareness among the beneficiaries.

Objectives of the Study

1. To find out the level of awareness and its relationship with the socio-economic profile of MGNREGA beneficiaries.
2. To know the preference of work as per the rankings of the MGNREGA beneficiaries.
3. To assess the factors that determine the level of awareness among the beneficiaries.

Statement of the Problem

MGNREGA tops among the policy initiatives by the government for the socio-economic upliftment of rural India. It has three distinct goals such as protective, preventive and promotive. It protects the rural poor, especially the vulnerable by creating awareness among them that determine the successful implementation of poverty alleviation schemes. In a developing country like India, most of the Rural population have a low level of literacy. Therefore, the aim of the programme is to create awareness among the rural masses. One of the important challenges for any anti-poverty scheme is to create and sustain awareness among the targeted population. Without proper awareness, the full benefits of the scheme may not reach the beneficiaries. This paper deals with the issues related to awareness level among the beneficiaries about MGNREGA particularly during this pandemic period. As the performance of this program is remarkable it is imperative to find what the stakeholders have

really achieved and what they expect?

Methodology

The study is based on the analysis of field investigation conducted in Virudhunagar district, Tamil Nadu in the year 2021-22, during the pandemic. The district has been chosen for analysis as the district has achieved remarkable progress in the MGNREGA implementation at Micro level.

Sample size-

There are 11 blocks in Virudhunagar district of which Virudhunagar block is one from where 106 samples were selected as the awareness level is comparatively low there.

Sampling Technique-

Judgmental (purposive) Sampling techniques were used. As the study area was predominantly sheltered by the weaker and vulnerable section of the society which includes SC, ST & others.

Review of the Literature

Sarabjeet D. Natesan, Rahul R. Marathe (2021)¹ Studied the implementation of MGNREGA in two districts of Tamil Nadu—Panchetti and Salem. It specifies the functioning of the Act based on a field study and documents the views of implementers and beneficiaries. This study concluded that the application should drive policy and that the evaluation lessons need to refine the sketch of the policy. This suggests that MGNREGA requirements can be improved on two counts: (A). wage determination and wage rates; and (B). evolving better techniques to measure labour productivity.

Mr. Navneet Ballabh Gautam Sasmita Mohanty (2020)² highlights the Importance of MGNREGA in Enriching Rural Life before and after Covid-19. MGNREGA is a policy of the government to make people empowered by offering them work for income generation. With the adoption of new enterprises, migrant workers, landless and marginal farmers may get job opportunities during the COVID-19 pandemic and job crisis. Job opportunities ensure income generation to the landless and marginal farmers during the lockdown. They concluded that most of the workers are landless and marginal farmers and they need a job to meet the financial crisis so that they can fulfil the basic needs of the families.

Gayathri Vasudevan, Shanu Singh, Gaurav Gupta, C. K. Jalajakshmi (2020)³ explored the hard times during the pandemic in MGNREGA scheme. They quantify the scale of reverse migration India is witnessing in the current times and the action needed to make MGNREGA more effective. They also analysed the character of these migrants and the areas people are migrating back to and concluded that scale of reverse migration

¹Sarabjeet D. Natesan, Rahul, R. Marathe, MGNREGA Implementation in Tamil Nadu :voices from the fields, SAGE Journals, Vol 15, Issue 1, April 2021.

² Navneet Ballabh Gautam, Sasmita Mohanty, Importance of MGNREGA in Enriching the Rural Life before and after Covid-19 : A Review, Psychology and Education (2020) 57(9): 879-883 ISN:0033077

³ Gayathri Vasudevan, Shanu Singh, Gaurav Gupta, C. K. Jalajakshmi, MGNREGA in the Times of Covid-19 and beyond. Can India do more with less? Indian Journal of Labour Economics 63,799-814(2020)

and the lack of opportunities in rural India despite increase in fund allocation to MGNREGA show a grim situation.

Darshana Das (2020)⁴ assessed the awareness of empowerment of rural women under MGNREGA and its implications in Barpeta District of Assam. Though women have been contributing to economic productivity from times immemorial, their role has been visualised as a passive one. Moreover, it is observed that women often experience extreme poverty further aggravated by household and social discrimination. She concluded that MGNREGA positively and negatively changed the lives of women in the rural area of Barpeta in Assam.

Girish Kumar Agrawal(2019)⁵ examined the design and implementation of the MGNREGA scheme. And from that the programme was designed with a host of objectives starting from social security to providing livelihood to wage employment on demand to arresting migration to deep rooting democracy. Contrasting the programme data with census raises further information about reliability. He concluded that the design was structured properly and implemented in the right way.

Arumugam Ranjithumar (2018)⁶ analysed the social justice in the rural employment programme MGNREGA. A Village is one of the most powerful instruments for promoting economic and allied activities. Rural population lives in primitive conditions. The key function of a village is agriculture and allied activities and cultivation is the only source of their income. He concluded that Rural development is traditionally focused on the exploitation of natural resources such as agricultural, forest and mining. Rural planning is the process of improving the quality of life and economic wellbeing of community living in relatively unpopulated areas rich in natural resources.

The Study of Rhonda Breitzkreuz, Carley-Jane Stanton, Nurmaiya Brady, John Pattison-Williams, E.D. King, Chudhury Mishra, Brent Swallow(2017)⁷ on The Mahatma Gandhi National Rural Employment Guarantee Scheme. Found it as a Policy Solution to Rural Poverty in India. MGNREGA has the potential to effect change in social norms through legal channels. Although progress may be slow, there is reason for optimism. They concluded that invoking a legal solution may, over time change norms, behaviours and approaches, thereby opening a space for enhanced social inclusion. Changing these norms may, in turn, provide additional opportunities for MGNREGA to be successful in local sites.

Shivam Sakshi and Karoly Peto (University of Debrecen)(2017)⁸, explained and found that the rural employment scheme MGNREGA in various aspects of providing work. the non-provision of employment within stipulated time frame (80%) and non-payment of unemployment allowances, utilization of small portions of households for more than 35 days of work and existence of distress migration” and so on. They concluded that the MGNREGA has shown some positive effect in providing employment to the rural people.

Rajalakshmi V, Selvam V (2017)⁹ Studied the impact of the MGNREGA scheme and its challenges. They

⁴ Darshana Das. EMPOWERMENT OF RURAL WOMEN THROUGH MGNREGA-A STUDY OF MGNREGA IMPLEMENTATION IN BARPETA DEVELOPMENT BLOCK OF BARPETA DISTRICT OF ASSAM. JCR. 2020; 7(7): 334-339. doi:10.31838/jcr.07.07.54

⁵ Girish Kumar Agrawal, Mahatma Gandhi National Rural Employment Guarantee Act :Design Failure, Implementation Failure (or) both? SAGE Journals, Vol 44, Issue 4, Oct 2019.

⁶ Arumugam Ranjithumar, Social Justice Through Rural Development Programmes : A Case of MGNREGA in Tamil Nadu, Open Urban Studies and Demography Journal, ISBN:2352-6319-Volume 4, 2018.

⁷ Rhonda Breitzkreuz, Carley-Jane Stanton, Nurmaiya Brady, John Pattison-Williams, E.D. King, Chudhury Mishra, Brent Swallow, The Mahatma Gandhi National Rural Employment Guarantee Scheme, A Policy Solution to Rural Poverty in India? Development Policy Review, Vol 35, Issue 3, Pp:397-417, May 2017.

⁸ Shivam Sakshi & Karoly Peto, 2017. "Rural Employment Scheme in India – A Review Of The Scheme Mahatma Gandhi National Rural Employment Guarantee Act (Mgnrega)," Annals of Faculty of Economics, University of Oradea, Faculty of Economics, vol. 1(2), pages 118-126, December.

⁹ Rajalakshmi V, Selvam V, Impact of MGNREGA on Women Empowerment and their Issues and Challenges : A Review of Literature from 2005 to 2015, Journal of Internet Banking and Commerce.

observe that women participation is very high with 80% of the total beneficiaries under the scheme. The concept of women's empowerment has got wider popularity and acceptance in Tamil Nadu with the launching of decentralized planning in the state. They concluded that economically empowering women on MGNREGA scheme lays the basis for greater independence and for self-esteem. It has become a beacon in the empowerment of the rural women and contributed substantially for improving their lifestyle and economic conditions.

Mihir Shah (Samaj Pragati Sahayog Shiv Nadar University) (2016)¹⁰ observe that Should India do away with the MGNREGA scheme. In the very nature the critique lies a vision for the programme going ahead which can be sustained only based on that vision. The paper provides reasons behind the rejection of the fundamental criticism of MGNREGA. He concluded that the MGNREGA has significantly improved the possible outcomes in growth.

Limitation of the Study

The study covers only Virudhunagar block of Virudhunagar district which restricts generalisation of the work . This study is only an attempt to measure the awareness level of the beneficiaries and to identify the gaps in the implementation.

Results and Discussion

Demographic profile –Objective:1

The Demographic Profile of the beneficiaries are depicted below:

Table 1
Demographic Profile

Demographic Variable	Respondents	Percentage
AGE /18-30 years	14	13.2
31-45	36	34
46-61	51	48.1
Above 61 years	5	4.7
Gender		
Male	22	20.8
Female	84	79.2
CASTE		
SC	32	30.2
GENERAL	20	18.9
ST	27	25.5
OBC	27	25.5
RELIGION		
Hindu	67	63.2
Muslim	15	14.2
Christian	24	22.6
EDUCATION		
No Schooling	28	26.4
SSLC	50	47.2

¹⁰ Mihir Shah, 2016. "Should India do away with the MGNREGA?," The Indian Journal of Labour Economics, Springer;The Indian Society of Labour Economics (ISLE), vol. 59(1), pages 125-153, March.

HSC	24	22.6
Graduate	4	3.8
CARD HOLDING		
Below poverty line	51	48.1
Non- poverty line	55	51.9
LAND HOLDING		
Irrigated	34	32.1
Non-irrigated	33	31.1
No land	39	36.8
HOUSE TYPE		
Kaccha house	28	26.4
Pakka house	78	73.6
MONTHLY INCOME		
Upto Rs. 1000	53	50
Rs. 1001- 2000	25	23.6
Rs. 2001- 5000	27	25.5
Above 5000	1	.9
SOURCE OF GETTING INFORMATION		
Panchayat office	99	93.4
Media	5	4.7
Neighbours	2	1.9
TOTAL	106	100

Source: Primary data

From the above Table it is inferred based on Age, that nearly half of the respondents are in the age group of 46-61 years, those above 61 years are negligibly few. Gender based classification makes it crystal clear that women outnumber men in this study area. Nearly three fourths of the respondents are women. It is observed that among 106 respondents, 30.2 percent belong to SC category, 18.9 % is General category percent, and there is an identical percentage of 25.5 in each ST and OBC.

It is evidenced that three fourths of the respondents have studied upto SSLC (47.2percent), HSC (22.6 percent) and Graduates (3.8percent). 48.1percent of the respondents come under Below

Poverty Line and 51.9 percent to Non-Poverty Line . It is found that 32.1percent of the respondents hold irrigated land, 31.1 percent hold non-irrigated land, and the rest of the respondents do not own any land. Whereas nearly three fourth of respondents reside in Pakka house, a little more than one fourth reside in Kaccha house.

The classification based on monthly income of respondents shows that 50 percent of respondents earn up to Rs. 1000 per month, 23.6 percent earn within Rs.1001-2000 and 25.6 percent have monthly income ranging from Rs.2001-5000. Nearly 93.4 percent of respondents obtain information through the Panchayat Office.

The type of work preferred and ranked by the beneficiaries are given below: - Objective: 2

Table 2
Ranking of type of work by the Respondents using GARRET RANKING

Type of work	No. of Respondents														Total	Garret Score	Mean Score	Rank
	1	2	3	4	5	6	7	8	9	10	11	12	13	14				
Road work	35	40	10	3	2	1	5	3	1	1	1	2	1	1	106	3.57	71.77	1
Rural infrastructure	40	15	25	10	3	2	1	3	1	1	1	1	1	2	106	10.71	55.91	VII
Drought Proofing	5	5	5	5	5	5	5	5	10	10	10	20	1	15	106	17.86	43.69	X
Fisheries	10	5	5	1	3	2	1	5	3	1	1	20	25	27	106	25	38.75	XIV
Food grains	10	20	15	10	10	1	3	7	4	6	7	3	4	6	106	32.14	57.43	VI
Land development	15	20	35	5	6	7	10	4	1	1	2	2	1	1	106	39.29	67.59	III
Micro irrigation work	17	10	9	8	12	11	10	7	7	8	2	3	2	1	106	46.43	59.84	IV
Play ground	10	5	5	10	14	2	5	5	20	3	7	10	3	7	106	53.57	50.86	VIII
Renovation of traditional water bodies	18	9	10	7	11	11	9	8	7	8	3	2	2	1	106	60.71	59.44	V
Rural connectivity	54	4	4	4	4	4	4	4	4	4	4	4	4	4	106	67.86	68.43	II
Rural Drinking water	7	3	10	3	7	5	5	20	13	3	10	2	8	10	106	75	44.89	IX
Rural sanitation	1	2	3	2	8	7	7	10	11	12	8	9	10	17	106	82.14	40.94	XIII
Water conservation and water bodies	1	2	2	3	8	7	8	1	9	11	10	7	18	9	106	89.29	41.54	XI
Works on individual land	6	4	3	7	6	4	7	3	1	10	10	15	20	10	106	96.43	42.52	XII

Source: Primary Data

With the help of Garrett Ranking, it is inferred that majority of the respondents prefer to do Road work, Rural connectivity work, followed by Land Development work, Micro irrigation work, Renovation of traditional water bodies and so on

Awareness level of the respondents through Rotated FACTOR ANALYSIS: Objective: 3

Table 3

Awareness level of the respondents were studied through Rotated Factor Analysis

AWARENESS LEVEL	I	II	III	IV
1.Aim to stop the trend of rural urban migration.	-.677	.236	-.203	.191
2.Provides 100 days work of guaranteed employment to rural unskilled labour	.606	.350	-.060	-.116
3.There exist transparency on the delivery system	.574	-.108	-.329	.404
4.Ensure safety provision	-.482	-.358	.116	-.130
5.Helps in strengthening the natural resources	-.347	-.135	.116	.139
6.Strengthening the livelihood security of the poor people	.074	.637	.317	.040
7.Creates a positive impact on children's education, savings, and investment in assets. Spending for family	-.056	-.635	.053	-.047
8.Enable the worker to work in their own locality	.049	.586	-.099	.085
9.Enable poor household to cross the poverty line	-.010	-.151	-.731	.012
10. Provide awareness of basic guidelines of the Act	-.110	-.072	.720	.048
11. Helps in strengthening women labourer	.471	-.243	.473	-.104
12.Information about increase in wages from the time it was put into effort	.363	.098	-.007	-.675
13.Direct intervention for poverty eradication	.105	-.164	-.063	-.595
14.Highly instrumental elimination of poverty	.178	.166	-.115	.568
15.Government efforts of spreading awareness especially among rural labourers and vulnerable groups	-.132	-.007	.382	.468

Source: Primary data, Computed value

Table 4

Factors affecting the awareness level	Attributes	Eigen value	Percent of variance	Cumulative percent of variance
Transparency	5	2.000	13.33	13.33
Reliability	3	1.752	11.68	25.01
Motivation	3	1.732	11.55	36.56
Efficiency	4	1.406	9.39	45.95

Source: Computed Value

The four extracted factors above explain the factors influencing the awareness level to the extent of 45.95 percent. The factors derived after the exploratory factor analysis are Transparency, Reliability, Motivation and Efficiency.

The **Transparency** has five variables namely Aim to stop the trend of rural urban migration, provides 100 days work of guaranteed employment to rural unskilled labour, there exist transparency on the delivery system, ensure safety provision, and helps in strengthening the natural resources. The

Eigenvalue of this factor is 2.000. The percent of variance explained by this factor is to extend of 13.33 percent.

Reliability has three variables namely Strengthening the livelihood security of the poor people, creates a positive impact on children's education, savings, and investment in assets and spending for family, enable the worker to work in their own locality. The Eigenvalue of this factor is 1.752. The percent of variance explained by this factor is to extend of 11.68percent.

Motivation has three variables namely, Enable poor household to cross the poverty line, ensure safety provision and provide awareness of basic guidelines of the Act. The Eigenvalue of this factor is 1.732. The percent of variance explained by this factor is to extend of 11.55percent.

The **Efficiency** has four variables namely. Information about increase in wages from the time it was put into effort ,direct intervention for poverty eradication, highly instrumental elimination of poverty, and Government efforts of spreading awareness especially among rural labourers and vulnerable groups The Eigenvalue of this factor is 1.406. The percent of variance explained by this factor is to extend of 9.39 percent.

Findings

- It was observed from the demographic profile of the respondents that nearly half of the respondents are in the age group of 46 to 61 years and those above 61 are negligibly few. Gender based classification makes it crystal clear that women outnumber men in the study area. Nearly three fourths of the respondents are women. It is observed that among 106 respondents, 30.2 percent belong to SC category, 18.9 percent to general category, and there is an identical percentage of 25.5 in each category ST and OBC.
- It was evidenced that three fourths of the respondents studied upto SSLC, upto HSC (22.6 percent) and Graduates (3.8percent). 48.1 percent of the respondents come under Below Poverty Line balance 51.9 percent of the respondents hold Non-Poverty Line cards. It is inferred that 32.1 percent of the respondents hold irrigated land, 31.1 percent hold non-irrigated land, the rest of the respondents do not own any land. Nearly three fourths of respondents reside in Pakka house.
- The classification based on monthly income of respondents shows that 50 percent of respondents earn upto Rs. 1000 per month,

23.6 percent earn within Rs.1001-2000 and 25.6 percent have monthly income ranging from Rs.2001-5000. Nearly 93.4 percent of respondents obtain information through the Panchayat Office.

- With the help of Garrett Ranking, it is inferred that a large number of respondents prefer to do Road work, Rural connectivity work, followed by Land Development work, Micro irrigation work, Renovation of traditional water bodies and so on.
- It was observed from the factor analysis that the factor *Transparency* has five variables. The Eigenvalue of this factor is 2.000. The percent of variance explained by this factor is to extend of 13.33 percent.
- Reliability has three variables. The Eigenvalue of this factor is 1.752. The percent of variance explained by this factor is to extend of 11.68 percent.
- The *Motivation* has three variables. The Eigenvalue of this factor is 1.732. The percent of variance explained by this factor is to extend of 11.55percent.
- The *Efficiency* has four variables. The Eigenvalue of this factor is 1.406. The percent of variance explained by this factor is to extend of 9.39percent.

Suggestions

- People working under the MGNREGA scheme are more than 40 years in age. Therefore, people from the age group 18 to 39 years may be motivated to participate in the work in order to enhance the livelihood security of households in rural areas.
- The four factors inferring the awareness level of 45.95 percent must be increased about MGNREGA scheme thereby rejuvenating natural resources in rural areas, durable and productive rural asset base can be created and poverty level can be reduced.
- It is seen in the study area that female workers are more in number than males' percentage. A proper motivation should be given to both the cadres. There is a

possibility that the number male workers will increase in the future.

- The people working under MGNREGA are not guided properly. So, workers should be given complete support, proper work instructions for the development of the Programme by facilitating helpline numbers and providing effective

instructions in the job cards itself. Proper information regarding all these facilities should be communicated to the public who are covered under this Act.

- Convening periodical interaction programmes with the rural public would be of much help in this regard.

Conclusion

“The future of India lies in its villages”- said by *Mahatma Gandhi*. MGNREGA in the current scenario has a great potential to transform rural India, especially fulfilling the objectives of the launched program. The study also throws light on the challenges involved in strengthening the poor people below and above the poverty line and it has been successful in investing its outreach to women, by generating an increase in income level, upgrading their livelihood and so on. The need for rural communities to gain development, has been created with more focus on a broad range of development goals by MGNREGA. To conclude, awareness of such programmes among the beneficiaries of Virudhunagar block would ensure the successful implementation of the MGNREGA and in rejuvenating natural resources in rural areas. Thereby the programme has created a durable and productive rural asset base and reduced the poverty level by providing a minimum of 100 days guaranteed un-skilled manual employment to economically weaker sections of society.

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Predictors of Social Innovation Among Students in Higher Educational Institutions of Tamil Nadu and the Role of MGNCRE in Creating Network and Social Vision

An Action Research Project

Dr. G. Rajini

Abstract

In today's scenario social innovation is found to be relevant in every sector where existing models are frail and stagnant. There is a wide gap between the problems of society and the solutions for the same. A huge amount of investment is spent on Innovation by business houses, Universities, R& D centres, etc., to develop innovative solutions for common needs. It has become imperative to have knowledge of what leads to social innovation. Objective of this research is to understand various components leading to social innovation and to identify the predictors of social innovation amongst students completing Graduation. Students who are members in the Social /Rural Entrepreneurship Development (ED) Cell constituted by Mahatma Gandhi National Council of Rural Education, Government of India, pursuing tertiary education in different parts of the country are selected randomly when they are actively involved in the activities of the ED Cell. Google forms of the questionnaire were used to collect data and analysis was carried out using SPSS 26.0. Cronbach alpha, Multiple regression were the test used to determine the predictors of social innovation. The second part was to handhold HEIs by conducting on line workshops and field visits to ascertain Sustainability Index of HEIs in predominant social issues like land, water, green, waste and Energy Management. The atmosphere created by the HEIs becomes an experiential learning process which enables the students to implement in the work place and community in later days. The paper contributes significantly to the existing literature that networking, traits and social vision are foremost predictors of social innovation among students and the Implications for academicians, Higher Education Institutions, funding agencies, and social incubators like MGNCRE foster the predictors.

Keywords: Sustainability Index, Social Innovation; Network; Social Vision, Social Entrepreneurial Intention, Higher Educational Institutions

Introduction

In today's scenario social innovation is found to be relevant in every sector where existing models are failure and stagnant. An innovative solution to solve a social problem to progress social issues and demands is said to be social innovation (Phills et al.,2008). In a general sense social innovation is as old as civilization itself (Paul Tracey & Neil Stott, 2017)

There are several perennial issues like hunger, poverty, employment etc., to be solved and it is clear that no longer old ways of addressing these issues would be fruitful. In many sectors, government aid is inadequate, and government cannot look after all the welfare in the state. The prime duty of a welfare state is to provide education through institution like schools, colleges etc., to its children/citizens which was not possible for the government and distance learning is an innovative concept evolved to provide education

for all members of the society.

Understanding the relevance of social innovation in bringing sustainable economic growth, many countries like USA, UK, Europe, South Korea has launched several initiatives to support best social Innovation. Social innovation helps us to interpret how universal problem could be firmly solved based on limited localised elements. A contemporary research topic in academia and in public policy domain in Brazil is "Social Innovation" (Bignetti, 2011) which gives a platform for research opportunities which makes it possible to gain knowledge from social innovative practices and enables the understanding of global issues resolved through local elements.

Social Innovation is an important dimension in social and economic growth. The uphill Side of electronics, plastics, aviation industries after World War II and during industrial revolution the downhill side is its impact on planet. Many social challenges require radical innovation that cuts across the

boundaries of many sectors.

Purpose of the Action Research

A process which enables developing and deploying effective solutions for social and environmental problems in support of social change is termed as social innovation - Standard Graduate School of Business. Social innovations are contemporary solutions (products, services, models, markets, processes etc.) that simultaneously can meet a social need (more effectively than existing solutions) and lead to new or improved capabilities and relationships and better use of assets and resources. In other words, social innovations are both good for society and enhance society's capacity to act. As defined by Young Foundation, 2012 and it is a universal way of dealing. Like any other type of innovation social innovation involve several players such as politicians, social enterprises, organisations, users, regulator, social enterprises (Lead beater, 2007) Fair trade, Zero-carbon Housing, Distance Learning, Mobile money transfer were the examples of social innovation which solved most pressing social issues with new ways and methods.

Organisation of Economic Cooperation and Development declares that seeking new answers for societal challenges by establishing new services, creating new competencies, new jobs, new forms of participation with inclusion, unique process in integrating labour market is the ultimate deliverables of Social Innovation thereby improving the life of communities and individuals. Failure of conventional solutions are the reasons for social challenges like inequality, poverty, environmental degradation which draws special attention to social innovators and across all three sectors viz. public, private and social sector of the society. Social innovators operate in across all the three sectors as well as position themselves in the intersection of all the three sectors (Nicholls and Murdoch, 2012). In every case of social Innovation, they lead to emergence of new processes, brings about changes in funding strategy of the organisation, new methods in collaboration between stakeholders and citizens in designing and implementation of innovative solutions.

Scope of the Action Research

The aim of this research is to identify the predictors that influence social Innovation in the context of students pursuing tertiary education in Indian Higher education students. How does the workshops, field visits and participation in Community development activities of MGNCRE creates social vision, Social Entrepreneurial Intention, Network, personality traits foster social innovation among students of Tamil Nadu Higher Education Institutions.

Objectives of the Action Research

Objective of this research is to understand various components leading to social innovation and to identify the predictors of social innovation amongst students completing Graduation and to arrive at the sustainability development Index of the campus which provides an ambience which forms a seed for their social vision

Review of the Literature

Social Innovation helps to address social challenges in many ways such as a. addressing societal problems being inside well-established organisations, b. inter-organisational initiatives that brings in various combinations of people, resources, ideas to bring social changes, c. establishing and developing a venture be it non-profit or for profit to address social problems (Paul Tracey & Neil Stott, 2017). We could go with series of instances where social innovation changes lives of many people. The following are the cases a. Ayzh, is a social enterprise founded by Zubaida Baito for rural women in India in order to provide affordable health care wherein the technology to provide rural health care is produced by women for women in need. b. Arup, a non-profit venture and a multinational engineering firm set up Arup International development provides support towards disaster management in a way of constructing sustainable buildings and infrastructure to vulnerable communities. c. WraP & Ellen Macarthur Foundation are reputed environmental organisations working in collaboration with social sector organisations, for-profit organisations and with government to promote the ideology of circular economy through

bringing attitudinal change towards use and reuse of resources which in turn foster sustainable practices. E. SONO filter that is a Social Innovation contributing towards improving social challenges like arsenic-affected regions in Bangladesh. SONO filter is a boon to people in Bangladesh to protect themselves from water borne-diseases and enable people to drink clean and safe drinking water founded by Abul Hussam.

Different forms of social innovations are micro finance institutions, neighbourhood nurseries & Wardens, time banks and local currencies, Fair Trade, neighbourhood developments (De Pelsmacker et al., 2005, Moulaert et al, 2005, Robert 2008, Schreiner, 2002, Seyfang, 2004). It is believed that Social Innovation could create sustainable economic growth and problem-free societies Kevin Chiika Urama and Ernst Nti acheampong, 2013).

Social Innovation and Network

Networks are crucial not only in accessing knowledge during in-house innovations, or diffusing technological innovation, but important in terms of learning and establishing innovative practices at work place which is followed and developed by other organisation in the market (Biemans 1991: Erickson and Jacoby, 2003). Historical details about the aircraft industry shows the contribution of national and international networks towards the development of Aviation Industry (Frenken's, 2000). The networking effects was examined by Gemunden et al in 1996 among six high technological industries with specific reference to innovation, demonstrates that firms when use a particular form of network experience 20% improvement in their product than the firms which did not networked.

Lot of benefits attained due to networking was identified through literature review were risk sharing, access to external knowledge, speed reach of products to respective markets, collection of complementary skill, property right protection, sharing of resources (Almeida and kogut, 1999; Cook, 1996; Eisenhardt and Schoonhoven, 1996; Grandori, 1997; Hagedoorn and Duysters, 2002; Liebeskind et al, 1996; Powell et al.1996)

Social Innovation and social enterprises

Development and deployment of novel solutions in innovative ways to solve social challenges is the blood stream of social entrepreneurship. Innovation sets a clear differentiating element for social enterprises from its counterpart who were traditionally operating in non-profit model. Innovation helps social enterprise to do a sustainable business in the long run (Peredo and McLean, 2006; Santos, 2012). Taimoor Perwez, Alex Maritz & Gerrit Anton De waal (2013). Studied the cases where innovation was introduced at the base of the pyramid. The researchers came out with a predictive conceptual model for innovators at social enterprises to be successful.

Leadbeater, C. 2007 put forth an argument about the importance for governments to have a framework specifically to social innovation in which social enterprise is preferred to play a lead role. A detailed strategy and policy for social innovation with respect to social enterprise to deliver social value in order to address unmet social challenges.

Social Entrepreneurial Intention and network

Successful social entrepreneurs create an effective value network among other companies which are having common social vision. (Mair, J., and O. Schoen. 2007). As Social entrepreneurship is context embedded (Urban, et al.2017). Therefore, it is relevant that several countries have several institutional frame work such as B-corps in USA, Community Interest companies in UK, Cooperatives in Australia etc. Thus, there arises a need to study the institutional environment of the social enterprises in Indian Context. So, the perceived institutional support is framed as one of the determinants of social entrepreneurship Intention in this study.

A country's institutional environment that developed over a period of time determines the perception about feasibility, desirability of venture creation which ultimately influence the intention to involve in entrepreneurial activities (Bowen and De Clercq, 2008; Griffiths et al., 2013). Institutional set up has direct as well as indirect effects in pursuing entrepreneurial activities and the type of social challenges in front of the individual further enhances the propensity towards social enterprise

creation (Bernardino et al., 2015). The principal components of institutional environments are cognitive, normative and regulative components (Scott, 2001) and the understanding about these components is important as they might influence social entrepreneurship and social entrepreneurship will positively influence the environment (Urban, 2013; Welter and Smallbone, 2011). The influence created by environment upon a person, upon an organisation and its processes has received little attention so far (Bacque and Janssen, 2011). A positive perception about the regulatory institutional environment and self-efficacy has a great impact on social entrepreneurship in African context. A conducive environment along with a supportive framework will make SE to flourish (Bernardino et al.2015)

Social Innovation and Social Vision

A vision is the starting point of any enterprise - social or otherwise. Social vision is a principal differentiator of social entrepreneurship with other forms of entrepreneurship (Guler, 2010). There always exists an alignment and association between social enterprise start up intention and social cause otherwise called as social mission. (Wee-Liang tan &

so-Jin yoo, 2015). Social entrepreneurs are consistently described as 'visionary.'(Grenier, P.2010). Social entrepreneurs are termed as pragmatic visionaries who has the ability to stick with the dream, starting very small and has the tendency to grow big or complex, either with resource or lack of resource, ability to shift the dream to an organisational level with political savvy to bring about a change in the world. They are one who have had long term vision for social change with small incremental and pragmatic steps that could lead to change in the long run. Social entrepreneurship when supplemented with pragmatic vision making difference in the system is possible. social entrepreneurs were difference makers and pragmatic visionaries. These difference makers have start with a small initiative with a long-term goal where they would bring systematic change in the world. (Waddock, S., 2009).

Having a clear vision which is easily communicable is one of the requisites for pioneering entrepreneurs. Crafting a vision, learning to bootstrapping and polishing social skills were identified as the pioneering strategies for entrepreneurial success. (Brush, C. G. 2008)

Hypothesis

Hypothesis framed to study the combined effect is follows: Social Innovation does not depend on social vision, Social Entrepreneurial Intention, Network and personality traits.

Need of the Action Research

Beyond one's personality, family' entrepreneurship history and other qualities of a person, educational practice might encourage innovation was the suggestion given by Mathew, J.M., 2016

Based on their research among US and German students. 993 Universities under which 39931 colleges functioning apart from that there are 10725 institutions were there in India as according the report All India Survey on Higher Education web portal. The report says that the population of students in Indian higher educational institutes raised by eight lakhs by 2018-2019 whereas it was 33.74 lakhs in the previous year (live mint). Very less reforms were done in Indian education system, students were trapped in the rat race of studying professional courses like Medicine, Engineering,

Lawyers without their interest. The demand and the capability of the students were often not mapped to suit the growing issues in the society. Now, we are in a place to free the students from the traditional rat race education system to inculcate creating thinking and to practice innovative approach among students. National Education Policy was designed in such a way with a holistic approach in terms of education said the Prime minister of India (Tribuneindia). As per this say if at all the policy is ready, it is very essential to see the student preparedness in innovation.

The first section details on theoretical foundations of social innovation. The second section discusses the relationship of social innovation with other related concepts. The third section elaborates on

the research design for present study. The fourth section discusses results of the analysis. At the end,

Challenges

Recognising the need for social innovation many incubators like UNLTD India, Villgro, and Action for India, Dasra, and Deshpande Foundation has launched its India operation to encourage and fund social innovators to start up business. IIT Madras has an Initiative called Rural Technology and Business Incubator (RTBI), IIM Ahmadabad has an initiative called Centre for Innovation, Incubation and Entrepreneurship (CIIE) was the renowned Higher Educational Institutions guide, mentor, advise entrepreneurs. MGNCRE is much better that

Actions Planned to Address the Challenges

Mahatma Gandhi National Council of Rural Education (MGNCRE), formerly National Council of Rural Institutes (NCRI), was established in 1995 as a registered autonomous society in Hyderabad with the objective of promoting rural higher education in a comprehensive manner by providing support to various rural institutes across the country. MGNCRE is formed to study rural economy and society through HEI: Higher Educational Institutions in way to address needs and challenges involving technology, local people and resources. The higher educational institutions who have formed Rural Entrepreneurship Development Cell (REDC) and "Social Entrepreneurship, Swachhta & Rural Engagement Cell (SESREC) under the aegis of Mahatma Gandhi national council of Rural development under Ministry of Education.

Research Methodology

A mixed method of research involving quantitative as well as qualitative aspects also known as cross-section descriptive research design was employed in this study. Students pursuing tertiary education in Indian higher educational institutions was targeted as respondents. The researchers used a survey instrument to collect data. A survey instrument was developed to test relationship among social vision, social entrepreneurial intention, Network, personality trait of students and social innovation. Data was collected from

the last section brings the Implications to several factors involved in social innovation to lime light.

all the above as it penetrates in to rural India through the students at HEIs by making them identify the best practices at campus and taking them to the society at large. The present action research contributes by identifying the best practices and bench marks from the pioneers who had been bestowed as District Green Champions but still realized that there is scope for improvement in certain areas which leads to UN Sustainable Development Goals.

Questionnaires were sent to higher educational institutions which were recognised as Social Entrepreneurship, Swachhta & Rural Engagement Cell (SESREC) Institution and Rural Entrepreneurship Development Cell (REDC). First cluster level workshops were conducted to the administrators and faculty of Tamil Nadu. Then institutional level workshop was conducted to the stakeholders on Sustainability Index and field visit was done to five select HEIs of Chengalpattu district. Voluntary participation was insisted and the students responded. The number is concluded to be readily useful for analysis after 4 days of waiting time with no response were loaded in google form that is where we cut off time and started using the available data for analysis. The best practices are reported.

higher educational Institutions in Tamil Nadu from the students who completed studies in 2021. we followed Krueger's (1993) & Preeti Tiwari Anil K. Bhat Jyoti Tikoria (2017) foot prints in measuring entrepreneurial intentions. They emphasize that the sample for entrepreneurial intention should drawn from the student population who are in their final year/ semester going to handle their career decisions. Many researchers though studied entrepreneurial intention in many countries by using graduate students, but this study involves final year undergraduate students across the nation. Prior study by Preeti Tiwari et al, 2017 used

only under graduate student from only one single technical This study is the first of its kind. Analysis was done using SPSS 26.0 to answer the question

about several relationships between different variables included in the model.

Ethical Considerations:

Approval from Institution Ethical Committee

The research methodology for the study is descriptive in nature. The research proposal was presented in the forum of the VISTAS Institutional Ethics Committee with the research Instrument and get approved before the study. Informed consent was also sought from the respondents before data collection. Ethical clearance obtained and the letter numbered VISTAS-SPS/IEC/VII/2020/03. VISTAS IEC Registration number as given by Government of India under the aegis of Ministry of Health and Family Welfare is ECR/288/Indt/TN/2018 from the file no is ECR/1644/VELS/Indt/TN.

To abide by the rules and regulation of research ethics, we sought to students who are willing to participate voluntarily in the study. They were given brief about the purpose of the study and also assured confidentiality on the information which they provide in the questionnaire and data would be used only for research purpose.

Data analysis tool

Data were analysed using the SPSS 26, descriptive

statistics, reliability statistics and multiple regression was carried out and qualitative study by observing the Campus Physically and enabling the stakeholders to understand about the Sustainability Index, the metrics developed by panel of experts at MGNCRE who enable for District Green Champion award. The response is submitted directly to the council's data base and the student's questionnaire alone is analysed and reported in this report.

Measures

To measure Social Innovation construct 8-item scale was developed by the researchers from The Young Foundation (2012). To assess the personality trait of the respondents the researchers adopted HEXACO Personality Inventory Revised form 60-Item, English version developed by Ashton, M. C., & Lee, K. (2009). Authors developed Social Entrepreneurial Intention construct using 8-item scale, Network construct using 20 item scale and social vision construct using 5 items scale. 5-point Likert Scale with the response options like 1= strongly disagree, 2=Disagree, 3=partially agree, 4= Agree and 5= Strongly Agree.

Implementation of the Action Research Steps

List of Institutions-Online Institutional Workshops Conducted in Feb-March 2022

S. No	Activity – Online Institutional Workshops - Institution Name and State	Workshop Date	Workshop Timings
1.	Vels Institute of Science, Technology and Advanced Studies, Chennai, Tamil Nadu	25-02-2022	10.00 am to 11.00 am
2.	Idhaya College of Arts and Science for Women, Tiruvannamalai, Tamil Nadu	25-02-2022	12.00 Noon to 01.00 pm
3.	Kamban college of Arts and Science for women, Tiruvannamalai, Tamil Nadu	25-02-2022	04.00 pm to 05.00 pm
4.	Annai Veilankanni's College for Women, Chennai, Tamil Nadu	26-02-2022	10.00 am to 11.00 am
5.	Thiruvalluvar University college of Arts & Science, Tirupattur, Tamil Nadu	26-02-2022	12.00 Noon to 01.00 pm
6.	Hindusthan College of Engineering and Technology, Coimbatore, Tamil Nadu	26-02-2022	04.00 pm to 05.00 pm
7.	Karpagam Academy of Higher Education, Coimbatore, Tamil Nadu	28-02-2022	11.00 am to 12.00 Noon
8.	RAAK Arts and Science College, Villupuram, Tamil Nadu	28-02-2022	12.30 pm to 01.30 pm
9.	Thassim Beevi Abdul Kader College for Women, Ramnad,	28-02-2022	04.00 pm to 05.00

	Tamil Nadu		pm
10.	Dhanabagyam Krishnaswamy Mudaliar Women's College, Vellore, Tamil Nadu	01-03-2022	10.00 am to 11.00 am
11.	Palar Agricultural College, Vellore, Tamil Nadu	01-03-2022	12.00 Noon to 01.00 pm
12.	Vidhyaa Giri College of Arts Science, Sivaganga, Tamil Nadu	01-03-2022	02.00 pm to 03.00 pm
13.	Suraj College of Education, Thiruvannamalai, Tamil Nadu	01-03-2022	04.00 pm to 05.00 pm
14.	RMK Engineering College, Thiruvallur, Tamil Nadu	03-03-2022	10.30 am to 11.30 am
15.	Don Bosco College, Yelagiri, Tirupathur, Tamil Nadu	05-03-2022	11.00 am to 12.00 Noon
16.	Krishnasamy College of Arts and Science, Cuddalore, Tamil Nadu	06-03-2022	09.30 am to 10.30 am
17.	Sacred Heart Arts and Science Collge, Perani, Villupuram, Tamil Nadu	06-03-2022	11.00 am to 12.00 Noon
18.	Bharathiyar Arts and Science College, Attur, Salem, Tamil Nadu	06-03-2022	02.30 pm to 03.30 am
19.	Karthikeya Polytechnic College, Manapparai, Trichy, Tamil Nadu	06-03-2022	04.00 pm to 05.00 am
20.	Anandh Institute of Higher Education and Technology, Kazhipattur, Chennai, Tamil Nadu	08-03-2022	11.00 am to 12.00 Noon

Chengalpattu District Sustainability Workshops and Field Visit

S. No	Name of the Institution, District and State	Date	Timing of the visit/workshop
1.	SRM Institute of Science and Technology, Kattankulathur, Chennai, Tamil Nadu	03.03.2022	01.30pm to 05.30 pm
2.	Sri Sai Ram Institute of Technology, Tambaram, Chennai, Tamil Nadu	07.03.2022	09.30 am to 11.30 am
3.	Vels Institute of Science, Technology & Advanced Studies, Pallavaram, Chennai, Tamil Nadu	07.03.2022	02.00 pm to 04.00 pm
4.	B.S. Abdur Rahman Crescent Institute of Science and Technology, Vandalur, Chennai, Tamil Nadu	08.03.2022	02.00 pm to 04.00 pm
5.	Tamil Nadu Teachers Education University, Karapakkam, Chennai, Tamil Nadu	09.03.2022	10.30 am to 12.30 pm

Implementation of the Study

During the Field visit and by interacting with the stakeholders of 25 HEIs of Tamil Nadu the following were identified. Five Institutions were green champion award winners of 2020 .Their best practices and the deliberations on line and off line are noted with utmost care and the metrics of sustainability Index was detailed as they are very

keen to be recognized by MGNCRE .The HEIs started to effectively run the STPs ,Bio Gas Plant , Incinerators in a full fledge manner after Covid Lock down .It was a appropriate time of visit as all the HEIs started introspecting about the five aspects and revamped the scenario.

Sanitation, Hygiene and Land Management

Sanitizing campus per week, Clean India and green India, on intensive education and awareness campaigns to ensure the village peoples to understand the need of safe, hygiene, cleaning tanks and keeping them clean to getting rid of dung heaps in villages. Improving the ability of education and health systems to manage sanitations and hygiene facilities in institutions, every day there is activity by NSS, Rotract in a continuous manner. Vaccine camps were arranged 9 times in the campus for general public and students.

Ishari Mission Hospital is run by Vels Group of Institution through which health care is done free of cost to general public. Created awareness on the importance of using sanitizer and mask in adopted villages. Mega Vaccination Camp on 10th December 2021 conducted inside the campus, Vaccine camps arranged in all 5 adopted villages and more than 400 got benefitted during pandemic and endemic, by psycho social support services of students many helps are being done to the neighbourhood. On considering the Sanitation and Hygiene SRM IST committed to maintain an appropriate COVID protocol and safety measures to all the employees and visitors to the campus. Each and every entrance of the campus are equipped and programmed with an automated thermal scanner. The SRM IST ensures the cleanliness and sanitation in all aspects of the campus which includes toilets, safe drinking water and landscaping.

The Institution for the land management of degradable and non-degradable waste includes Solid waste management, Liquid waste management, biomedical waste management, E-waste management, water waste recycling system and Hazardous chemicals and radioactive waste management.

The physical and aesthetic values of the institute environment and physical buildings satisfies the physical, physiological and psychological development of students.

Student volunteers joined with the house keeping team to clean the campus and surroundings. Sanitizer and hand wash kept in each floor, labs, office, staff room and wash basin and separate

water canes. Created checklist and issued to the floor supervisors to maintain the cleanliness and monitored every week by Sanitation and Hygiene team. Some of the major up-liftment projects undertaken by this institute includes laying of bitumen road, Cleaning of Lakes, Computer literacy for the adopted School, Donated computers to the adopted School, Establishment of Internet service centre for popularization and Enrolment of various schemes. Implementation of SwatchhtaBharath Scheme in the adopted villages. Mega tree plantation in the nearby villages. Roof top solar power plant's capacity is 50% of the sanctioned demand, green campus, Rainwater Harvesting, Biogas plant, Solar water heaters, Sewage treatment plant, Solid, Liquid & E- waste Management.

In the Institution for the management of the following types of degradable and non-degradable waste includes Solid waste management, Liquid waste management, E-waste management, Waste recycling system Hazardous chemicals and radioactive waste management.

Water Management

Providing Ro water plant in villages to prevent from water borne disease and make healthier community, Sewage treatment plant in campus to recycle, reuse helps to reduce waste water, Providing education and awareness campaigns to ensure the village peoples to understand the need of water management, As the University has NAAC –A grade and 8 programs with NBA Accreditation with 12 B status all apex bodies have frequent visit to the campus which is nearby Airport, thereby the Water management is done with the help of Chennai Corporation, Audit was done in the campus. The Institute has taken tremendous efforts to reduce the water consumption and also to treat the wastewater generated within the campus so that it can be effectively reused for gardening and toilet flushing 250 numbers of urinals with automatic flush controller fitted with sensors that controls the wastage of water and provides a hygienic environment near the urinals thereby reducing the risk of diseases. Awareness to save water is done in a massive manner to the adopted villages.

Adding the values to the water demand, SRM IST has committed to achieve zero wastage of water in and around the vicinity. The campus is equipped with huge water treatment plant in which all the waste water undergoes three stages of treatment including ultraviolet radiation exposure to remove the chemical contaminations. Additionally, the SRM IST has implemented reverse osmosis (RO) plant at UBA adopted villages.

Drinking water facility is arranged in every building of the campus. Wastage of drinking water is minimized through proper counselling. Drained water is utilized for plants and to maintain the greenery in the campus. Proper drainage system is arranged for all the buildings of the campus. Water conservation like Rain water harvesting, Bore well /Open well recharge, Construction of tanks and bunds, Waste water recycling, Maintenance of water bodies and distribution system in the campus.

As a team carried out the activities like Identifying water sources in the campus, estimation on yield of water from each source, categorization of usage of water from particular source, identified the amount of water consumption in campus, conducted few awareness programmes in village on water management, also identified water sources and consumption in nearby villages. They had taken active part in Rain water Harvesting and maintenance to store rain water which increases the underground water level for future use and working on the recovery process of reverse osmosis plant, cooler and functional taps which are under maintenance.

Open well water and outsourced water facilities are available. The water is treated in the reverse osmosis plant enabling the drinking water facility to the hostel. The liquid wastes are collected treated at two Sewage Treatment Plants; whose capacity is 500KLD. The treated water is used for gardening and toilet flushing purposes. Incinerator machines are deployed in all the ladies hostel toilets and Medical Centre for Women. All the buildings have Rain Water Harvesting facility.

Liquid waste from different office buildings and hostels are treated in the Sewage Treatment Plants.

The treated water is recycled and utilized further for gardening, toilet flush and building construction. Some of the excess treated water is also recharged into the ground to improve groundwater level. Generators are used to provide power during power cuts. The generators are a source of used lube oil. The waste oil from the generators is directly collected every six months and it is used to lubricate the iron sheet in the Generator to prevent it from rusting. To reduce usage of generators, rooftop solar power panels is installed in the campus to provide power to the street lights in the campus and to the hostel buildings. Water conservation facilities available in the Institution like rain water harvesting, bore well /Open well recharge, construction of tanks and bunds, waste water recycling, maintenance of water bodies and distribution system in the campus.

Energy Management

Solar power plant in campus helps to reduce electricity fluctuation, solar power plant is pollution free and cause no greenhouse gas can emitted after installation, Renewable clean power that is available in campus for everyday in a year even cloudy day to produce some energy, In the long run solar power is economical in campus. Low maintenance cost and reduce electricity bills in an institution, Wind turbines are owned by the group so that two third of the energy needed is met by it. The power generated is fed in to Tamil Nadu Electricity board grid. Energy audit was done in the campus, Net Zero Pole Centralized Solar Street Lighting System for 35 Numbers Street Lights, 168 number of solar water heaters have been installed on the roof top of the Hostels and staff quarters. Solar energy is fully utilized in VC's Chamber.

Being a multi-disciplinary University, one of the great challenges is to utilize the energy efficiently. SRM IST confirms that it almost 50% of energy sources are through the concept of green building and green spaces. Most of the street lamps are LED provided with appropriate solar panels. The campus is stationed with a solar hub where they track the consumption in an effective manner.

To conserve energy like Solar energy, Biogas plant, Wheeling to the TNEB Grid by wind turbines, Sensor-based energy conservation, Use of LED

bulbs/ power efficient equipment installed and Biomedical Waste Management VISTAS has signed a Biomedical waste disposal agreement with GJ Multiclave (India) Pvt Ltd establish a common off-site Bio-Medical Waste treatment facility to provide solution for the health care establishments and other clinics. The Biomedical waste generated in various laboratories and animal houses are collected in different color-coded bins and disposed through G J Multiclave (India) Pvt Ltd.

By implementing renewable energy resources like solar energy and bio-gas energy reduction up to 20% of power consumption from substations. Then by replacing LED lamps instead of CFL reduction up to 10% of energy consumption is attained. Major part of energy is consumed by library and hostel about 21% and 17% respectively. It is reduced by switching off the equipment when they are not required.

Roof top solar power plant (650KWp), Bio-Gas Plant, Solar Water Heater, Solar Street Lights etc., are available and this would be more than 50% of the sanctioned energy demand of this institute. On an average, more than 30% of energy consumption is through renewable energy resources.

The Institution has facilities for alternate sources of energy and energy conservation measures like solar energy, biogas plant, wheeling to the Grid, sensor-based energy conservation, and use of LED bulbs / power efficient equipment.

Waste Management

Bio-gas generation helps to reduce soil and water pollution, each week campus is cleaned and the trash gathered and recycled, the 'Organic trash', which is composted and then used as a Natural fertilizer and the 'Reusable' waste which is recycled, Shredded leaves from trees inside campus used as a fertilizer for that tree.

Waste minimization or waste avoidance which involves Recycling old items, donating items in no longer use.

Avoiding the use of disposable items, etc., Reduce the amount of waste that will end up in landfills.

Conducted a rally on the disadvantages of using plastic in the adopted villages, A Biogas plant of 50 m³ capacity for Ladies Hostel was commissioned in June 2017. The gas generated from the plant is utilized for cooking in Ladies Hostel Mess Kitchen, CSIR - CLRI SPONSORED PROJECT – BIOGAS PLANT 500 KGS/DAY (ON GOING)

Establishment of new Biogas plant 500kg/day at Men's Hostel. Biogas Plant 500 kgs/day from CSIR-CLRI, Govt. of India, Chennai funded by DST New Delhi in collaboration with KANKYO Technologies. Cleaned temples and social spots through the NSS volunteers and engaged the villagers also.

The other primary part of SRM IST is to reduce the voluminous waste generation and increasing the proportion of waste recycling process. It has been observed that 100% of the food wastes are utilized for the purpose of biogas plant. Almost it was an evident that SRM IST delivered a 60% of reduction in solid waste generated from various sources of the campus.

The solid waste management is carried out at two different levels namely one at the hostel and other at the classrooms & administrative offices. The hostel generates food, vegetables and paper. The classrooms and administrative offices generate mainly paper wastes. The wastes are segregated at the source itself. The administrative supervisor in each block ensures that the waste in each floor is collected at designated time intervals. The Maintenance workers in each floor collect, segregate and compile the waste in the dustbins (Green and Blue) provided at each floor. The floor dustbins are emptied in movable containers/dustbins provided for each block and is taken to the dumping yard provided by the institution. The use of plastic has been prohibited on campus, which has resulted in a reduction in the production of plastic waste. By encouraging e-communication and intranet services, steps have been taken to minimize paper use on campus. The organic waste generated from hostel kitchen, mess and canteen are sent to Biogas plant and biogases generated are used for cooking purposes. The garden waste and dry leaves are sent to the compost yard.

The college campus has made efforts to implement sustainable waste management practices on campus through multiple initiatives. Actively involved the students to take part in the Waste Audit activity, which helped them to understand the importance of Segregation at source and also, it helps to identify what types of recyclable materials and waste our facility generates and how much of each category is recovered for recycling or discarded. 58% of food waste can be recycled inside campus using composting by constructing composting pits inside college. Manure taken from composting pits and used for maintaining the trees inside the campus.

Segregation at source and quantification of the various categories solid waste is managed efficiently both through in-house technology and through collaborative Japanese technology, with the support of M/s. Kankyo Technologies. The solid waste is also converted into the composting unit and the manure is used for gardening purpose. The solid waste is also converted into the composting unit and the manure is used for gardening purpose. The food waste is also used to generate Bio gas and the same is used in the ladies' hostel kitchen.

The waste is generated by all sorts of routine activities carried out in the University, which includes paper, plastics, glass, metals, foods, etc. The waste is segregated at each level and source. The floor dustbins are emptied in movable containers/dustbins provided for each block and are taken to the dumping yard provided by the university. The University used to contact the authorized vendors who collect the waste from the designated place, segregate them, recycle them and disposed them at the landfills authorized by the Government.

A very effective waste collection infrastructure is maintained for segregation of waste. An initiative is made by the university in which organic solid waste is properly collected from the campus and converted into biogas as renewable source of energy. A small composting plant is maintained for recycling of waste for house need of manure. The manure is used for farming within the campus to grow vegetables, medicinal and fruit bearing plants. Paper wastes from Academic Blocks, Library,

Examination Centre and Administrative offices, are disposed through TNPL for recycling periodically. The wastes are properly collected and stacked in designated place from where they are disposed through vendors for proper waste management. University consciously promotes reduction in usage of paper by using digital platform for communication and sharing of documents.

Green Management

To facilitates water management and promoted bio diversity in built up areas and can Reduce the effects of noise pollution, Inside the campus green spaces such as parks, sports fields lakesides and gardens gives peoples the space for physical activities, relaxation, peace and an escape from heat green space in campus helps to reduce stress and boost mental and physical health.

NSS is in tie up with forest department and many NGOs. Free samplings are received, planted and maintained in the 5 adopted villages nearby which is a very big societal contribution to a metropolitan city.

Cultivated variety of vegetables in the campus garden. OXYZONE CAMPUS – BEEMA BAMBOO PLANTATION.

Our Institute is provided first OXYZONE inside our campus. Beema Bamboo Plants 2000 Nos Planted in whole campus for CO₂ reduction.

The other great initiative taken by the management is Go Green concept in which they maintain the entire campus as greenery with medical plants. Additionally, the campus comprised of nursery garden which is highly occupied with an indigenous plant which have more medical values and subsequently organic farming which provide a consumer yields like vegetables and coconuts for the employees and beneficiaries.

There are more than 1,000 segregated recycling bins following the sustainability policy on campus for biodegradable and non-bio degradable materials like paper, plastic, and aluminium cans, as well as a newspaper and cardboard drop-off.

Adding values to SDG goals on Gender equity and quality education the SMR IST every year provide

free seats to the meritorious one candidate from each adopted Unnat Bharat Abhiyan villages. Also provides 300 free seats to the meritorious students from the Perambur constituency.

E-waste is collected on a regular basis at the source and transported to an e-waste storage facility and will be disposed of using an authorized vendor. E-waste is managed in compliance with the Pollution Control Board's recommendations using green computing. Laptops, desktops, servers, projectors, biometric systems, condemned computer appliances, printers, scanners, and cartridges are among the most common types of e-waste. E-waste generation is reduced by going for superior data storing devices. Use of CDs is slowly phased out. Old computers and gadgets are collected and disposed of through contract persons. Under exchange options and buy back systems certain gadgets are replaced. In Order to maintain Green campus restricted entry of automobiles, use of bicycles/ battery powered vehicles, pedestrian friendly pathways, ban on use of plastic, landscaping with trees and plants, provision for enquiry and information : human assistance, reader, scribe, soft copies of reading material, screen reading, assistive technology and facilities for divyangjan accessible website, screen-reading software, mechanized equipment.

A Green Campus is a place where environmentally friendly practices and education combine to promote sustainable and eco-friendly practices in the campus. Generating mass awareness on cleanliness and hygiene amongst students and staff

Results of the Analysis

Since we have two and more independent variables, Multiple Linear regression could be used to study the relationship between a metric dependent variable and independent variables being metric and more than two in numbers for the data collected from the students to know about the Social Innovations they have in their mind and find

members by holding regular cleanliness drives. Activities under 'Swachh Bharat Abhiyan' is a key component of all the community work being done by NSS, NCC, UBA and Club volunteers of the college. Staff Members and Students are encouraged to participate in the cleanliness drive in the campus. The campus is covered by 30% green coverage and this is the home of several flora & fauna and some of them are unique. Solar water pump and sprinklers are used for gardening. Mega tree plantation in the nearby villages. No plastic zone, several measures have been initiated for Sustainability and Environment consciousness, Green Building Certification, Recycling of papers through ITC, Differently-abled friendly campus, zero discharge of waste, Adoption of nearby villages Supporting nearby village Panchayats, Government Organisations.

The University follows a very efficient mechanism to dispose E-wastes are generated from computer laboratories, Academic and Administrative Offices. The e-waste includes the used or obsolete items like lab instruments, circuits, desktops, laptops and accessories, printer, charging and network cables, Wi-fi devices, cartridges, sound systems, display units, UPS, Biometric Machine and scientific instruments. Some of the equipment are purchased through Buy-Back option for technology up gradation. All such equipment's which cannot be reused or recycled are being disposed of through Pollution Control Board. Green campus initiatives include restricted entry of automobiles, use of Bicycles/ Battery powered vehicles, pedestrian Friendly pathways, ban on use of Plastic, landscaping with trees and plants.

if the Sustainable problems are known to them as they visualise the ambience of the HEIs.

Hypothesis frame to study the combined effect is follows

H₀: Social Innovation does not depend on social vision, Social Entrepreneurial Intention, Network and personality traits.

Table No 1: Adjusted R Square

Dependent variable	Independent Variable	R	R Square	Adjusted Square	Std Error of the Estimates
Social Innovation	Social Vision Social Entrepreneurial Intention Personality Trait Network	0.814	0.662	0.662	0.32828

From Table no:2, R value 0.814 and R Square value 0.662 depicts that 66.3 % of variance existing in Social Innovation is from predictors Social Vision, Social Entrepreneurial Intention, Personality trait and Network.

Table No 2: ANOVA

	Sum of Squares	Df	Mean Square	F	Sig
Regression	468.447	4	117.112	1086.724	0.000b
Residual	238.917	2217	0.108		
Total	707.363	2221			

F -Value 1086.724, From table no:3 We could infer that there exists statistically significant dependency of Social Innovation with the predictor variables namely social vision, social entrepreneurial intention, personality trait and network

Table No 3: Coefficients

Dependent Variable	Independent Variable	Unstandardized B	Coefficients St. Error	Std Coefficients Beta	T	Sig
Social Innovation	Constant	-0.727	0.099		-7.378	0.000
	Social Entrepreneurial Intention	0.127	0.015	0.121	8.238	0.000
	Network	0.527	0.017	0.560	36.145	0.000
	Personality Trait	0.395	0.030	0.172	12.955	0.000
	Social Vision	0.178	0.015	0.182	11.950	0.000

From table no: 4 the coefficients corresponding to all the independent variables were 0.127(social Entrepreneurial Intention, 0.527 (Network), 0.395(Personality trait), 0.178 (Social Vision). The coefficients express change expected in our dependent variable, when one unit rise occurs in the independent variable which is associated with a

one unit increase in the independent variable. A positive effect is found among the predictor variables with the outcome variable. There exists a significant relationship found in between social innovation and social Entrepreneurial Intention, Social Vision, Personality trait and Network Ince p value is 0.000(p< 0.05).

So, the predictive Equation is

Social Innovation =-.727+0.527 (Network)+0.395 (Personality Trait) +0.178 (Social Vision) + 0.127(Social Entrepreneurial Intention).

Consolidated observation of the Field Visit

Name of the DSM	Dr. G. RAJINI
District	CHENGALPET, Tamil Nadu
Common Sustainability Practices in Institutions	Rain water Harvesting Covid Protocol Solar lamps and Power panels Bio Gas Plants Plant Nursery Clean Campus Green Campus Dust Bins
One or two Unique Sustainability Practices in each Institution	No 1. Advanced STPs and Very Green Campus for a huge group of students No.2.Students projects based on SDGs No.3 Wind Turbine in south Tamil Nadu to feed the TNEB Grid No.4 Installed capacity for Waste Management is 3 to 5 times more than the waste collected No.5 The Campus facility is more than sufficient for the number of stakeholders. They are role model to the affiliated B.Ed. Colleges of the state.
Urgent Action recommended	Awareness amongst Students to throw the waste in Appropriate Bins Training/Motivating the Non-Teaching i.e., staff involved in energy conservation, Housekeeping, STP Plants regarding the Sustainability Index
Any other reaction /response /activity	Certificates of recognition to all individuals who significantly contribute to SDGs. This is the major trump card with our MGNCRE to involve many more in this work.

Outcomes of the Action Research

Implication for Educational Institutions

Though few initiatives have been established to foster social innovation at grass root level would not suffice to solve the social challenges. Much emphasis could be given for social innovation at tertiary education level also from the high school level. Creating an ecosystem in educational institution to supports social innovation could create solutions for social challenges. Education Institution is one of the pillars upon which every nation is build. Educational institution plays a lead

Implication to Government/funding Agency

Governments can provide a climate that foster innovation and growth of innovation, science & technology. The institutions could provide a platform that support collective effort through collaboration and partnership within and among newly started and well-established organizations. Government body on science, technology, innovation and research should impose a policy that innovations is considered as one of the criteria for bidding in public procurement which is a good approach to make contract agencies to foster innovation. A portion of funding for departments in government sector should be allocated for innovation and development of the society. The foremost thing which needs to be considered now is creating awareness amongst the students about

Findings of the Action Research

Implication to Academicians

As the study results shows that students are being innovative, it very essential to have social incubation centres in every higher education institution. Just like corporate houses hire students through Campus interview social incubators, foundations and other organisation functioning under different registration of organisation keen in social innovation could hire, train and place the students in their organisations. Therefore, networking can be created by Internship, Apprenticeship, field studies and by projects works. The curriculum should be designed with such a way that credits are assigned to these application-oriented subjects and they should be connected

role in personality building through which social innovation thought process could be nurtured and developed. Programs catering to the need of social entrepreneurship education has started in many developed countries unlike developing countries. Cultivating innovative practices and innovative entrepreneurship should involve nature as well as in nurturing personality and experience. Matthew J. Mayhew, associate professor of higher education at NYU Steinhardt.

the policies and schemes related to entrepreneurship or the developmental initiatives to the farmers, Underprivileged, Subsidies functioning of financial institutions, role of Industrial investment corporation, District Industries centres, Cooperative banks, SIDBI, SIDCO, NABARD etc. Financial literacy is created in a small extent now which could be emphasised more amongst students. Like educational loans, professional loans should be given in an easy clearance particularly for export goods or products which focuses on Sustainable development goals which caters to education, health, sanitation, environment, water, Solar power or any other conventional energy.

with farmer producer organisations, Cooperatives and Non-Governmental Organisation. With the support of top management programs related to this should be organised by active members of REDC and SESREC wing leaders. This needs lots of mentoring skills and patients in nurturing the budding entrepreneurs.

Implication to Students

Students come from different background and knowing the social problem pertaining from the place they hail or the problem they experienced personally would definitely come forward to solve their problem by themselves with their innovative ideas. Disadvantaged students could reap the

benefit of creating innovation solutions to the social problems could be achieved by assuming more responsibilities thereby an organised better control of lives people could have. Many mediocre students or slow learners will have extraordinary talent in certain areas. The students interest and passion can be tapped and should be linked as a career option in social /Rural entrepreneurial skills. Risk taking behaviour, creativity and social concern should go hand in hand with this sort of extracurricular activity. Informal groups will bring out such outcome and buddy group activity will a best fit model to this initiative.

Implication to Innovators

Social Innovators should not end their innovation with patenting but also could create change through the creation of new ventures. They could also leverage the resources, advantages and capacities of established organizations. Grass root innovators should come forward to enterprise their innovation for the benefit of the whole society. The societal problems should be identified and the incubation centres in the HIEs should provide a platform to the young and versatile minds to think out of the box. The solution to the local problems should culminate from the centres where they a sense of belongingness and contentment can be generated in the minds of the students. If such an ecosystem is provided in the campus then the potential of the young minds can be used in a constructive way rather than being exploited by any other toxic concern.

Discussion

Regression results show a positive relationship among the Network, personality triat, social vision, social entrepreneurial intention, and network (independent variables) with the Social Innovation (dependent variable). The study highlights that Social Innovation is highly dependent on the network followed by Personality trait, social vision and social Entrepreneurial Intention from the model.

The variance in social innovation could happen if there is an incremental support from the network

in which the student acts. The Impact created by social Innovation is because of the network which includes friends, family, social incubators, mentors, R&D centre, financial Institution, Partnership firms which were considered in network construct in our study. As such innovation cannot occur with single relationship. It should be a combined effort. Social innovation process is based on its knowledge sharing network interaction. Social innovation process is a function of the structure of its knowledge sharing network. (Cowan and Kamath, 2013).

Our study is in line with Leenders, R. T. A. J., & Dolfsma, W. A. (2015) who distinguishes various types of networks viz. networks among and surrounding the organizations, networks outside the boundary of the organization, interorganizational networks all of which contributes to innovation. However, this finding does not mean that the network alone is a contributing factor for increased social Innovative activity among students. In a country like India, with diversities, multiple hierarchies, and a large number of communities and religions, different culture whom a person knows and from where you hailed from is important. For so many years much of economic activity has its foundation on trust especially the financial dealing in informal sector (Harris, 2002). Network and trusts are thus important to access financial and non-financial support for a venture, also support for knowledge sharing through which social capital for a venture could be built.

There is also other variable Personality trait which is the second important predictor of social innovation. Every innovator is an individual (Kelly. G. Shaver,1991) responsible for the initiation of innovative activity. Openness is the trait that emerges as a common factor that supports innovativeness was identified from research work of Rogers 1996, Wood and Swaut, 2002. Social Innovation is supported by the stakeholders scored high on empathy triat and agreeableness triat (Wood, S. 2012). Implies that in general personality trait is a predictor of innovation/Social Innovation.

The third predictor is social vision in our study which holds good for reasons: a. A vision is the starting point of any enterprise - social or otherwise (ashoka.org).

The social vision gives the capacity to see problems and associated opportunities beyond current situation to be an art of creating social change. (Barendsen and Gardner, 2004; Dees, 2001; Keogh and Polonsky, 1998).

The four-predictor variable is Social Entrepreneurial intention which is in line with the notion of Phillips et al. 2015 who said that social innovation could take social entrepreneurship to next level. Many a times social innovation is in disguise of social entrepreneurship and vice versa. So, it is evident that a student when inclined to do social Innovation would opt for social enterprise model.

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About the Author

Dr. G. Rajini, MBA., Ph.D., is Director-Institutional Collaborations and MoU, Professor & Head-MBA (General) School of Management Studies and Commerce, Vels Institute of Science, Technology and Advanced Studies, Pallavaram, Chennai, India. She has an academic experience of 17 years and industrial experience of around five years, specializing in Strategic Human Resource Management from VIT–Vellore. She is an active Resource Person for Mahatma Gandhi National Council of Rural Education, Department of Higher Education, GoI and conducted many workshops nationwide on Rural Entrepreneurship and Curriculum Development. She is Principal Investigator (2020-23) for the NSTMIS Project, Department of Science and Technology, Government of India.

Dr. Rajini has authored 6 Books. She has published 60 papers in International, National and Edited volumes of Books indexed in Scopus, Elsevier, Springer Nature, ICI, Google scholar, Ebsco and by reputed publishers like Sage, Inder Science, IGI, etc. She has a patent granted from Australia. She has produced 5 Ph.Ds and currently 8 doctoral scholars are working under her supervision.

She has presented nearly 40 papers in India, Malaysia, Bangladesh (Invited as Guest Presenter), and Sri Lanka in addition to a Global Immersion program in Singapore. Dr. Rajini is an Editorial board member of seven journals, Occupied as Chairperson in 9 International Conferences and 8 National levels Executive meet and conferences. (Consultancy offered by drafting "Business Development Plan Netherlands Based Company) Served as a Resource person for ICSSR sponsored workshop for Ph.D. scholars at the University of Mysore, Entrepreneurial Development programs sponsored by the Ministry of HRD, India at DKM College for Women, Vellore (Autonomous) and Academy of prison & correctional Administration, Vellore and Police Training College, Vellore, Corporate Trainer and consultant for Coromandel International Limited (Murugappa Group) for Eight years. She has Coordinated and Convened International and National Seminars, conferences, symposiums, workshops, etc. Feels proud in mentoring future managers and entrepreneurs for the Emotional Well-being of individual and prosperity of the society.

Annexures

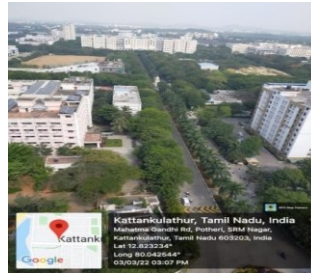
Pictures of the Visits to Higher Education Institutions

SRM Institute of Science and Technology





Workshop



Green Cover

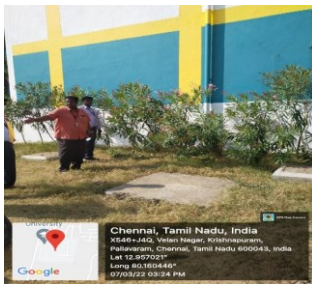


Energy Source



Recycling of Water

Vels Institute of Science, Technology & Advanced Studies



Rain Water Harvesting Pits Management



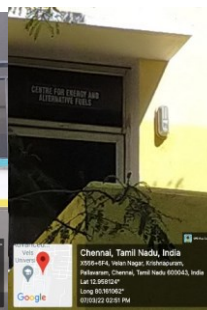
Solar Panels



Covid Protocols



Solid Waste



Research Centre for Alternative fuels

Sri Sairam Institute of Technology



Rain Water Harvesting Pits



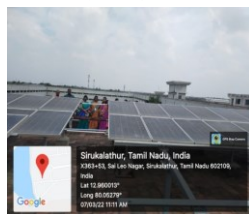
Recycling of Water



Compost Pit



Herbal Garden



Solar Panels



Covid Protocol



Work Shop

B.S. Abdur Rahman Crescent Institute of Science and Technology



Rain Water Harvesting

Recycling of Water

Garbage Incinerator

Green House

Solar Panels



Robot cleaning of Solar Panels

Bio Gas

Covid Protocol

Sewerage Treatment Plant



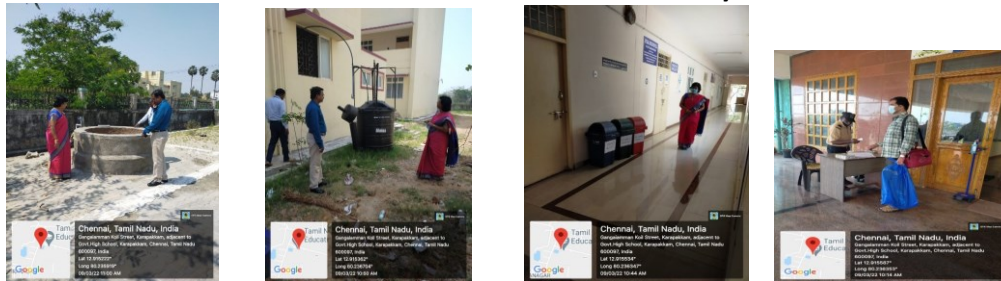
Solid Waste Management

Battery Operated Vehicle

Zero Waste Management

Workshop

Tamil Nadu Teachers Education University



Rain Water Harvesting Pits Recycling of Water

Compost Pit

Covid Protocol



Work Shop

Bio Gas

Model Green house

Successful Mentorship Mechanisms of District Sustainability Mentors for Facilitation of Environmental Sustainability in Higher Education Institutions in 10 Districts of Tamil Nadu An Action Research Project

Padma Juluri

Abstract

Higher Educational Institutions (HEIs) need to work towards conservation of natural resources, increase the green cover and manage available land and also focus on sanitation and health with a greater determination post covid and contribute to the National Goals of Environmental Sustainability and UN Sustainable Development Goals. Mahatma Gandhi National Council of Rural Education (MGNCRE), Department of Higher Education, Ministry of Education, Govt. of India has been mandated with the Swachhta Action Plan (SAP) implementation in HEIs and seeks to build these practices in the Higher Educational institutions of the country and their adopted villages. As a first step, to build an awareness and/or to find out the quantum and quality of such practices in Higher Educational Institutions in ten districts of Tamil Nadu, a District Sustainability Mentor (DSM) was appointed in each of the districts – Chengalpattu, Cuddalore, Erode, Kanniyakumari, Madurai, Perambalur Salem, The Nilgiris, Tiruvarur and Tiruchirappalli. Each of them was assigned the task of finding out the current environmental sustainability practices in 5 institutions in their neighbourhood through a field visit and also get them to fill in an online Sustainability Index Proforma in a three-week long project.

For this, it is important to mentor the DSMs to facilitate the sharing of knowledge, expertise, skills, insights and experiences through written messages, dialogue and collaborative learning—also known as mentoring. Mentoring benefits the organization, the mentors and, of course, the mentees. Mentoring helps mentees to perform more effectively as the mentors are more experienced, and effective mentoring shortens the project time. The quality of project output is also higher. Mentors gain recognition for their mentoring and mentees gain new knowledge and skill and also the confidence to seek support in case they experience roadblocks leads them to perform better. Effective mentorship led to higher productivity, mentee satisfaction and retention.

This paper presents successful mentoring mechanisms for facilitating the MGNCRE District Sustainability Mentors in each of the ten identified districts, who were mentored on the requisite Skills, Attitude and Knowledge to in turn mentor Higher Education Institutes in the District on Environmental Sustainability in the campus and the adopted villages, thereby contributing to the District Sustainability Goals, State Sustainability Goals, National Sustainability Goals and most importantly the UN Sustainable Development Goals through Mentorship (of students) in various courses (Experiential Learning with Curriculum Specific Practical Work and Projects) that the institutions offer. Environmental Sustainability and Green Audit under Swachhta Action Plan for Higher Educational Institutions has been a key thrust area for the Ministry of Education, Govt of India and MGNCRE is the nodal agency that has been assigned of implementing and monitoring this project across all states and union territories in India.

Keywords: Mentoring Skills, Facilitation Tools, Mentor, Mentee, MGNCRE, District Sustainability Mentors, Sustainability Index Proforma, Swachhta Action Plan, Ministry of Education, Tamil Nadu, Faculty development Programmes, Workshop, Skills, Attitude and Knowledge

Introduction

Mentoring and Facilitation

It is important to foster mentorship skills to create the socially responsible leaders of the future. Institutions should look to set up mentorship practices that help students develop the skills they will need to create successful and sustainable campuses.

COP26 (26th Conference of Parties held in November 2021 at Glasgow) created a great deal of discussion around what our future organizations, systems and practices may look like. Following the climate change summit, it is time to turn words into action and start

implementing practical methods to encourage the next generation in the right direction. Educational institutions and universities are where many of the leaders of tomorrow start their entrepreneurial journey, so the question is, what are the best skills and practices to not only set them up for the future, but to enable them to make a positive and meaningful impact on society? One fundamental practice is mentorship – the art of communicating and collaborating to both pass on and receive knowledge and expertise, in order to learn, grow and develop. Although mentorship is far from a new concept in itself, the way in which this practice can be taught, encouraged and implemented can be creative and fresh, offering new perspectives and fostering resilience.

(Source: Times of India)

Mentorship in Education

It is important for institutions and academics to adopt mentorship practices and make them work on a practical level. As mentorship is flexible, the principles can be embedded into courses, or provided as the focus of an elective or separate programme. The mentorship journey can also be continuous or divided into small projects, depending on the needs of those taking part. The important element is how the mentorship is delivered and the following tips provide a guide to ensure that it can be implemented in the most impactful way possible:

- Be flexible and try new approaches
- Encourage questions rather than statements
- Practice transparency and honesty to build trust
- Focus on building core skills

Brief Introduction to Green Audit for an Environmentally Sustainable Campus

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of various establishments. It aims to analyze environmental practices within and outside of the concerned sites, which will have an impact on the eco-friendly ambience.

Green audit can be a useful tool for a college to determine how and where they are using the most energy or water or resources; the college can then consider how to implement changes and make savings. It can also be used to determine the type and

volume of waste, which can be used for a recycling project or to improve waste minimization plan. It can create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of green impact on campus. If self-enquiry is a natural and necessary outgrowth of a quality education, it could also be stated that institutional self-enquiry is a natural and necessary outgrowth of a quality educational institution. Thus, it is imperative that the college evaluate its own contributions toward a sustainable future. As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relation to environmental sustainability is more prevalent.

The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green Campus for the institutes which will lead for sustainable development and at the same time reduce a sizable amount of atmospheric carbon-di-oxide from the environment. The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory that all Higher Educational Institutions should submit an annual Green Audit Report. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through Carbon Footprint reduction measures.

In recent time, the Green Audit of an institution has been becoming a paramount important for self-assessment of the institution which reflects the role of the institution in mitigating the present environmental problems. Many institutions undertake lot of good measures to resolve these problems but are not documented due to lack of green documentation awareness. All these non-scholastic efforts of the administrations play an important role in ensuring the green quotient of the campus is intact.

Therefore, the purpose of the present green audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies

and standards.

Main Areas of Green Audit:

- Geographical Location
- Floral and Faunal diversity
- Meteorological parameter
- Energy Consumptions
- Waste Disposal System
- Ambient Environmental Condition
- Awareness & Training on Sustainability for Students

(Source: Article in LinkedIn by Conserve Consultants)

About the State & Districts Covered

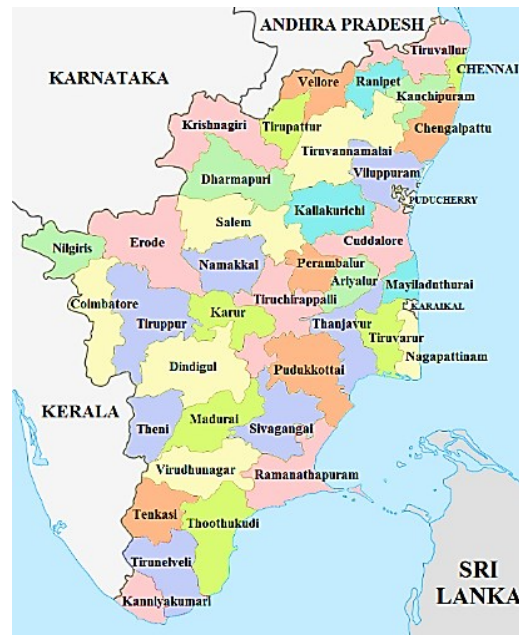
Tamil Nadu

Tamil Nadu is a state in southern India. Its capital and largest city is Chennai. Tamil Nadu lies in the southernmost part of the Indian subcontinent and is bordered by the union territory of Puducherry and the South Indian states of Kerala, Karnataka, and Andhra Pradesh. It is bounded by the Eastern Ghats on the north, by the Nilgiri Mountains, the Meghamalai Hills, and Kerala on the west, by the Bay of Bengal in the east, by the Gulf of Mannar and the Palk Strait on the southeast, and by the Indian Ocean on the south. The state shares a maritime border with the nation of Sri Lanka.

(source: wikipedia.com)

The region was ruled by several empires, including the three great empires – Chera, Chola and Pandyan empires, which shape the region's cuisine, culture, and architecture. After the fall of Kingdom of Mysore, the British Colonial rule during the modern period led to the emergence of Chennai, then known as Madras, as a metropolitan city. Modern-day Tamil Nadu was formed in 1956 after the reorganisation of states on linguistic lines.

Tamil Nadu is one of the most literate states in India. Tamil Nadu has performed reasonably well in terms of literacy growth during the decade 2001–2011. A survey conducted by the industry body Assocham ranks Tamil Nadu top among



Indian states with about 100 percent gross enrolment ratio (GER) in primary and upper primary education. One of the basic limitations for improvement in education in the state is the rate of absence of teachers in public schools, which at 21.4 percent is significant. The analysis of primary school education in the state by Pratham shows a low drop-off rate but the poor quality of state education compared to other states. Tamil Nadu has 37 universities, 552 engineering colleges, 449 polytechnic colleges and 566 arts and science colleges, 34,335 elementary schools, 5,167 high schools, 5,054 higher secondary schools

Brief about Current TN Govt Action on Environmental Sustainability and Climate Action

The TN State government has initiated **Tamil Nadu Climate Change Mission, Tamil Nadu Wetlands Mission and Green Tamil Nadu Mission** with substantial budgetary allocation. The Climate Change Mission would focus on climate change adaptation and mitigation activities at an outlay of Rs 500 crore headed by Chief Minister MK Stalin.

Being a coastal State with nearly 1,000 km of coastline, the climate change emergency is more manifested here and it is imperative to make informed decisions. International, national and local experts will be roped in to identify the areas of concern and initiate appropriate measures at district-level. Climate budgeting, exploring whether each department can allocate some funds and look at new, innovative green initiatives will be looked at.

The State has also launched the Tamil Nadu Wetlands

Mission at a cost of Rs 150 crore, with the objective of ecological restoration of wetlands in Tamil Nadu. It will identify and map 100 wetlands in five years and restore the ecological balance with the focus being on livelihood options. Efforts are on to push for five **Ramsar Sites (Currently 49 Designated Wetland Sites in India)** in the next five years. Currently, Point Calimere (kodiakarai) is the only Ramsar Site in the State. Pulicat lake, Pallikaranai marshland in Chennai and Kaliveli wetlands in Villupuram are possible contenders.

The Green TN Mission would aim to increase the total area of forest and tree cover in TN to 33 percent of the land area of the State. Under this mission, a massive tree plantation programme in collaboration with multiple departments, public and private institutions, and people's participation would be initiated over 10 years.

Work at Covelong beach, one among the 13 beaches identified by the Centre for the coveted Blue Flag certification, is being carried out at brisk pace.

TN Current Green Cover

Protected area - Total 23.9%

- 20.27% (5 national parks, 29 wildlife sanctuaries, 2 conservation reserves)
- Tree cover outside forest area 3.63%

TN State's Goal -33% of the total land area of TN

Environmental Stress Points in TN

1. As per an Anna University study, by 2100, the average day temperature in Tamil Nadu is likely to go up by **3.1 degree Celsius**
2. 41% of the State's coast is eroding, as per the latest report by the Chennai-based National Centre for Coastal Research (NCCR)
3. 4% Tamil Nadu constitutes 4% of India's land area and is inhabited by 6% of India's population, but has only 2.5% of India's water resources
4. 9% The Tamil Nadu State Action Plan on Climate Change (TNSAPCC) states that, by 2100, average annual rainfall in State could reduce by up to 9%

(Source: Indian Express Dated 14 Aug 2021)

Purpose of the Action Research

The main purpose of the Action Research is to create MGNCRE District Sustainability Mentors in each of the ten identified districts, who will be trained on the requisite Skills, Attitude and Knowledge to mentor Higher Education Institutions in the District on Environmental Sustainability in the campus and the adopted villages, thereby contributing to the District

Sustainability Goals, State Sustainability Goals, National Sustainability Goals and most importantly the UN Sustainable Development Goals through Mentorship (of students) in various courses (Experiential Learning with Curriculum Specific Practical Work and Projects) that the institutions offer.

Environmental Sustainability and Green Audit under Swachhta Action Plan for Higher Educational Institutions has been a key thrust area for the Ministry of Education, Govt of India and MGNCRE

is the nodal agency that has been assigned of implementing and monitoring this project across all states and union territories in India.

Scope of the Action Research

The scope of the Action Research is limited to the 10 District Sustainability Mentors and 5 institutions each from the following 10 Districts in Tamil Nadu:

1. Chengalpattu – Dr G Rajini
2. Cuddalore – Dr R Kalai
3. Erode – Dr R Vanathi
4. Kanniyakumari – Dr Savitha Ambika Raveendran Nair
5. Madurai – Dr T Venkatesan
6. Perambalur – Dr Santhakumari
7. Salem – Dr B Sendilkumar
8. The Nigiris – Dr H Sivalingan
9. Tiruchirappalli – Dr Suhasini Ernest
10. Tiruvarur – Dr S Amudha

Brief about Institutions Covered

The 50 institutions where Sustainability Practices Workshops were done and who filled the Sustainability Index Proforma Google Forms (Baseline Data) were Colleges of Arts and Science, Colleges of Education, Colleges related to Health and Nursing, Colleges of Engineering etc. either or all of the courses in Diploma or Bachelor and Masters in Education.

They were affiliated to

1. Anna University
2. Annamalai University
3. Bharathiar University
4. Bharathidasan University
5. Directorate of Technical Education
6. Madurai Kamarajar University
7. Manonmaniam Sundaranar University
8. Tamil Nadu Teachers Education University
9. The Tamil Nadu Dr. M. G. R Medical University
10. Thiruvalluvar University
11. University of Madras
12. Vinayaka Missions Research Foundation-Deemed to be University

Objectives of the Action Research

The two key objectives of the Action Research are:

1. To Analyze the Mentoring Skills of the Researcher who is the mentor to the 10 DSMs and identify key skills of mentorship that worked in ensuring smooth completion of the project within the given timeline
2. To Analyze key Mentee's Skills and competencies that help in ensuring smooth completion of the project within the given timeline

Review of the Literature

My review is on the research paper detailed below – I found some interesting insights into various aspects and importance of mentoring in this paper and am detailing relevant points.

Research Paper on SKILLS FOR SUCCESSFUL MENTORING: Competencies of Outstanding Mentors and Mentees by Linda Phillips-Jones, Ph.D. published in 2003

The author believes that effective mentoring is more than common sense, and mentor -mentees who have a good relationship also develop identifiable skills that enable learning and change to take place.

Linda Phillips-Jones (1977) studied hundreds of mentor-mentee partnerships as well as individuals unable to identify any mentors in their lives. The conclusion: mentoring was much more examinable and yet more complex than first thought.

On the “demystifying” side, Phillips-Jones discovered that effective mentors and mentees use specific processes and skills throughout their relationships. Further, the skills and processes can be learned, and relationships can be better—more enjoyable, productive, and even time-efficient—as a result.

Additional research by The Mentoring Group revealed that unless a fairly structured process and specific skills are applied, mediocre mentoring relationships occur. Not much happens, and participants become frustrated with their well-intended but haphazard efforts.

Worse, disappointed participants become convinced that mentoring does not work. On the positive side, when individuals use these skills and add structure, important, satisfying changes take place in the lives of both mentees and mentors.

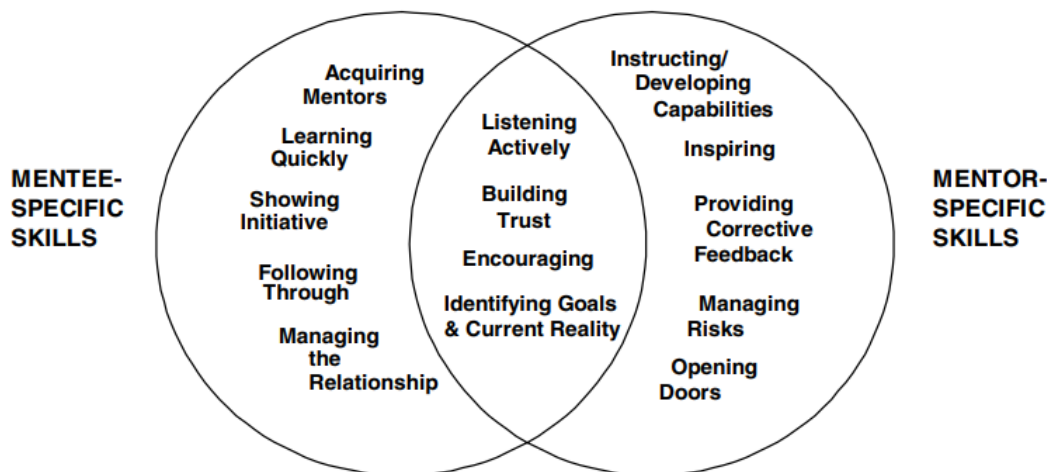
If you possess these skills to an adequate quality level—and if you use them as frequently as called for—your chances of having mutually satisfying and productive mentoring relationships will be greatly enhanced. The model below illustrates the shared core skills used by both mentors and mentees and the unique skills needed by each group.

Hypothesis

There will a positive impact of Mentoring on the District Sustainability Mentors in facilitating timely performance for achievement of MGNCRE’s Swachhta Action Plan Project Goals

THE MENTORING SKILLS MODEL

SHARED CORE SKILLS



The research paper analyses the researcher's mentoring skills in Mentoring 10 District Sustainability Mentors in Tamil Nadu and also makes an analysis of mentee skills that helped to complete a 3-week project on Capturing Environmental Sustainability Practices in 5 Institutions in their respective districts

Need for the Action Research

● **Need for District Sustainability Mentors**

MGNCRE, at the behest of the Ministry of Education, has been given the responsibility of implementing the Swachhta Action Plan in the Higher Education Institutions across the country. The mission began in 2020 with online workshops in institutions and creation of Swachhta Action Plan (SAP) Cells and Swachhta, Social Entrepreneurship and Rural Engagement Cells (SESREC) in Higher Education Institutions. This was followed competitions for students on Social Entrepreneurship related innovations and then in May/June 2021 by a 5-Day Faculty Development Programmes on Mentoring and Facilitation Skills to enable the faculty to do a baseline study of the Sustainable Environmental Practices in their institutions in the five areas of Greenery Management, Energy Management, Water Management, Waste Management and Sanitation and Hygiene and also transfer this learning to their adopted villages and help the villages in improving their environmental sustainability.

MGNCRE also is the nodal agency for the District Green Champion Awards and awarded identified institutions in 400 Districts with a "District Green

Champion" Award per district.

Many strategies were tried out to include more institutions into the Abhiyan and to encourage them to study and understand their baseline. Physical visits to the institutions were also needed to assess and validate the practices listed in the baseline form. It is humanly impossible to carry out this mammoth task with the limited pool of MGNCRE resources and so there came up the need to appoint District Sustainability Mentors and train them to mentor institutions in their district to take up Mentoring and Facilitation of Sustainable Environmental Practices in institutions in their districts.

In Feb 2022, the researcher was given the task of mentoring 10 District Sustainability Mentors (DSMs) in as many districts of Tamil Nadu with the aim of reaching out to and visiting 5 institutions each and the project duration was three weeks from identification of the mentors, training and mentoring them on how to fill the Sustainability Index Form (Google Form), monitoring them to help them reach their goal and submit the reports and invoices.

Challenges

- **Low Awareness on Green Audit of the Campus** - We need to reach each and every institution and work with them on improving environmental sustainability to increase awareness about green audit in the campus and in the adopted villages
- **Lack of Trained Mentors** – To reach every institution and create this awareness, we need trained human resources who are stationed in the district. And we need at least one such trained District Sustainability Mentor in every District who will hand hold and support mentee institutions
- **Need for creating and Experiential Learning Opportunities in the Curriculum** - All departments in a HEI need to connect their curriculum to environmental sustainability. We have a huge demographic dividend as our youth population is the highest in the world. They are at an impressionable age and when exposed to experiential learning activities related to swachhta or community engagement, they will pick up life skills and volunteering skills. This is true learning as mentioned in the Delors Report – Learning to Know, Learning to Do, Learning to Be and Learning to Live Together

- **Global Facts and Figures**

- Today, 1 in 4 people – 2 billion people – around the world lack safe drinking water. (WHO/UNICEF 2021)
- Almost half of the global population – 3.6 billion people – lack safe sanitation. (WHO/UNICEF 2021)
- 1 in 3 people – 2.3 billion people – around the world lack basic handwashing facilities at home. (WHO/UNICEF 2021)
- Achieving universal access to safely managed sanitation by 2030 will require a four-fold increase in current rates of progress. (UN-Water 2021)
- Almost half of the schools in the world do not have handwashing facilities with soap and water. (WHO/UNICEF 2020)
- Approximately 50 litres of water per person per day are needed to ensure that most basic needs are met while keeping public health risks at a low level. (WHO, 2017)
- 207 million people spend over 30 minutes per round trip to collect water from an improved source. (WHO/UNICEF 2019)
- Globally, at least 2 billion people use a drinking water source contaminated with faeces. (WHO 2019)
- Every day, over 700 children under age 5 die from diarrhoea linked to unsafe water, sanitation and poor hygiene. (UNICEF, 2021)
- Under-fives living in countries experiencing protracted conflict are 20 times more likely to die from causes linked to unsafe water and sanitation than from direct violence. (UNICEF, 2019)
- 1 million deaths each year are associated with unclean births. Infections account for 26% of neonatal deaths and 11% of maternal mortality. (WHO/UNICEF 2019)
- Hygiene promotion is the most cost-effective health intervention. (World Bank 2016)
- Loss of productivity to water- and sanitation-related diseases costs many countries up to 5% of GDP. (WHO 2012)
- Universal access to safe drinking water and adequate sanitation and hygiene would reduce the global disease burden by 10%. (WHO 2012)
- Investment in water and sanitation services generates a quantifiable, positive return on investment through saved medical costs and increased productivity: (Hutton et al. 2015)
 - Urban basic drinking water: \$3 return for every \$1 invested.
 - Urban basic sanitation: \$2.5 to \$1
 - Rural basic drinking water: \$7 to \$1
 - Rural basic sanitation: \$5 to \$1

(Source: <https://www.unwater.org/water-facts/handhygiene/>)

- **Need for every Higher Education Institution to practice Institutional Social Responsibility** – To contribute to the reducing and eliminating the above listed issues and create trained student volunteers

Actions Planned to Address the Challenges

The following were the Actions Planned to address the above challenges:

- **Train the MGNCRE Master Trainers:** A 10-day Training Program on Mentoring and Facilitations Skills was organized by MGNCRE for the Master Trainers. This was conducted for 2 hours every day by DoPT Trainers. Each DoPT trainer had about 6-7 MGNCRE Master Trainers as his/her mentees and covered various aspects of Mentoring Skills and Facilitation Tools

- **Pre-FDP Workshop 3-4 days prior to the FDP on Mentoring for Institutional Social Responsibility and Facilitation for Community Engagement** - Two such workshops were conducted prior to the two FDPs wherein the participants were oriented about the FDP and how to fill in the online Sustainability Index Form. This form submitted by the institute would make them eligible to attend the FDP. So, the institute and its faculty became familiar with the measurable performance indicators parameters of Environmental Sustainability
- **FDP on Mentoring for Institutional Social Responsibility and Facilitation for Community Engagement** – Two such FDPs were conducted jointly with Dr Vanathi and the following were the steps in 10 districts of Tamil Nadu: Chennai, Cuddalore, Pudukkottai, Ranipet, Tirupathur, Thiruvallur, Tiruchirappalli Tiruvarur and Vellore.
- **Identify 10 District Sustainability Mentors (Principals/Vice-Principals/Deans/HoDs/Faculty)** in as many districts of Tamil Nadu, some of them were Principals of colleges who participated in the FDP
- **Mentor the ten identified District Sustainability Mentors (DSMs)** to complete:
 - Identifying 5 Higher Education Institutions in their neighbourhood
 - Introducing MGNCRE District Sustainability Programme and its components
 - Supporting the 5 institutions in gathering data for various environmental sustainability practices under Water Management, Waste Management, Energy Management, Greenery and Land Management and Sanitation and Hygiene
 - Preparing Visit Reports and a District Sustainability Analysis Report on best practices observed, unique practices in each institution and recommending urgent action that is needed
 - Handholding them to complete and submit the reports to MGNCRE.

Research Methodology

The Research methodology followed was both quantitative and qualitative i.e. mixed methodology

Implementation of Action Plan

The following were the various stages in implementing the action plan

1. Identification and Communicating with District Sustainability Mentors

The following steps were followed:

S No	District	Method followed to identify DSM
1.	Chengalpattu	MGNCRE Resource Person
2.	Cuddalore	Chosen from a SAP Institution
3.	Erode	MGNCRE Resource Person
4.	Kanniyakumari	Chosen from a SAP Institution
5.	Madurai	Chosen from a SAP Institution
6.	Perambalur	Chosen from a SAP Institution
7.	Salem	Chosen from a SAP Institution
8.	The Nilgiris	Chosen from a SAP Institution
9.	Tiruchirappalli	Chosen from FDP that was conducted
10.	Tiruvarur	Chosen from FDP that was conducted

This was followed by registration of the DSMs through a google form, asking them to identify their 5 institutions and thereafter giving them an official work order

2. WhatsApp Group Formation and Communication

- This has been key in continuous and consistent communicating with the DSMs
- After the DSMs registered for the workshop and join the WhatsApp group, Material related to the project was shared in the WhatsApp groups including the Sustainability Index Proforma Google Form, Rural Immersion Manual, Swachh Campus and Jal Shakti Manuals

A Welcome Onboard and Orientation Meet for the DSMs - This was organized on 25 February 2022 from 4.30 PM to 6 PM and the DSMs were given a brief on the how of the work to be done. They were taken through the Sustainability Index Proforma (google form) which had clear guidelines of how to fill in through examples. The three deliverables were clearly explained in this orientation session

- Mentee institutions must fill in the Sustainability Index Form (Annexure 1)
- DSMs must make a physical visit to the HEI and capture pictures of the sustainable practices in the institutions on or before 7 March 2022 and prepare a report (Annexure 2)
- Submit the invoice along with the reports by 15 March 2022, not later than 18 March 2022

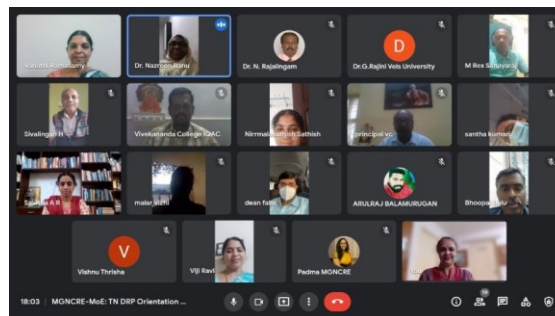
Online Orientation for TN DRPs on Campus Sustainability Index and Best Practices

25 Feb 2022: 4.30 PM

Google Meet: <https://meet.google.com/wbi-pybk-hrg>

S No	Activity	Duration
1.	Welcome Address	05 min
2.	Objectives of the Orientation	05 min
3.	Steps for the Institutional Activity	05 min
4.	Tools for the Institutional Activity <ul style="list-style-type: none"> • Sustainability Index Proforma • Sustainable Practices in The Campus – A Report • Invoice Format • Supporting Material from MGNCRE 	30 min
5.	Timelines	05 min
6.	Queries	05 min
7.	Feedback Form & Word of Thanks	05 min

Picture 1: DSM Orientation Schedule



Picture 2: DSM Orientation Workshop

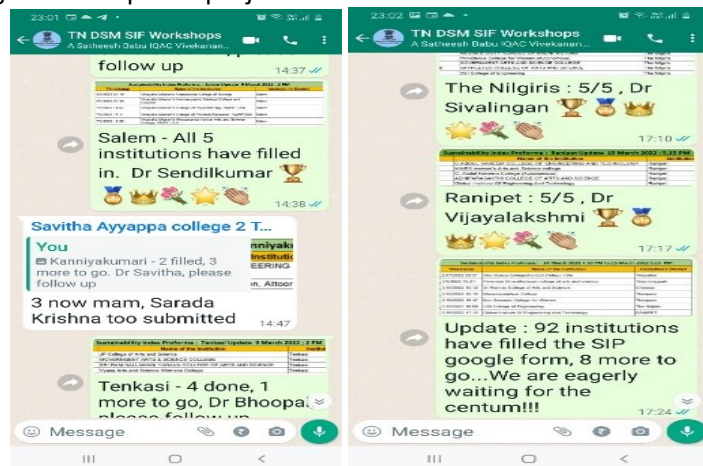
Two Key Learning Points from Orientation	What You Liked About the Orientation
Filling of Sustainability Index Form and field visit	Very clear and useful
Ideology on what am going to Serve	Content
How to work on this project and preparation of the report	Mentors are very patient in facilitating
Understood the purpose of physical visit, how to fill the sustainability index form	Explanation about each aspect with examples
Objective of the orientation, clarity about form filling	Yes
Knowledge about Mentoring and content about DSM	Explained well about the task of the venture to be carried out and completed
(1) Collect data from the mentee institutions for Sustainability Index Report, (2) Information for filling the google form	Informative presentation
ideology AND Process	Content
Need for Sustainable Measures in HEI 2. Steps to approach HEIs and the process of assessment	The explanations given by the Mentors were comprehensive, interesting and motivating
LO 1: Learnt how to make field visit. DOs And Don'ts with Mentee Institutes	Very interactive. Very useful nice mentors
Guidelines about the process	Good beginning
Full content about the project which we are going to work.	The way of presentation and the interaction

Picture 3: DSM Orientation Workshop Feedback

Project Commencement: All DSMs stated to work on their project

- Most of them conducted an online workshop for their mentee college key stakeholders and explained the objectives of this project
- They shared the Sustainability Index Form and suggested to form 5 pairs of Faculty member who would gather the required data to fill in the form
- They then fixed up the visit to the institution and visited them on the given date and time
- They met the management and faculty members and interacted with the students
- They helped the institution fill in the Sustainability Index Form
- They surveyed the campus and noted the best practices being followed and also noted innovative practices
- They also noted celebratory and special days being observed to motivate students and faculty
- They prepared a Campus Sustainability report for each institution – captured objective and subjective best practices and included geotagged images in the reports

Daily Updates – The DSMs were given daily updates about who all filled in the Sustainability Index Form and how the team was reaching the target and individual District wise achievements on a daily basis. This created a healthy competition and motivated them to achieve their targets and kept the project on track



Picture 4: Daily Updates on WhatsApp

18 March 2022 @ 3 PM Sustainability Index Proforma Submission: TN Update (98 Institutions)

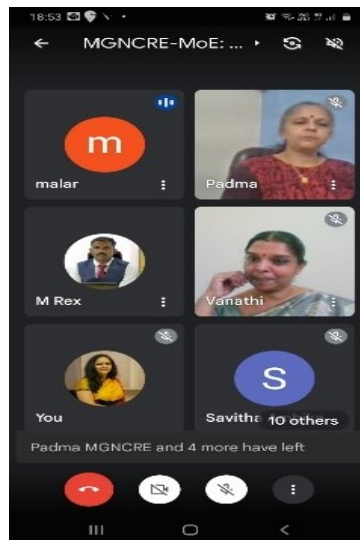
Received SIP google form submissions from all **5 institutions in Chengalpattu, Chennai, Coimbatore, Cuddalore, Erode, Kanniyakumari, Madurai, Perambalur, Pudukkottai, Ranipet, Salem, Tiruvallur, Tenkasi, The Nilgiris, Tiruchirappalli, Tirunelveli, Tirupathur, Tiruppur, Tiruvarur**

Received SIP google form submissions from **3 institutions in Thanjavur**

Picture 5: Daily Updates on WhatsApp

One-on-One Mentoring – As a mentor, the researcher was available and individually coached and clarified any doubts that the DSMs had. This was done through phone call or WhatsApp messages

Status Update Meeting on 4 March 2022 – A Status update meeting was held to understand the success and bottlenecks in the project – there was a lot of learnings shared by the early adopters and implementors and this helped the DSMs who were a little hesitant. This also gave all the DSMs confidence about the validity and importance of the project as their contribution to National development. The DSMs were also asked to analysis the Environmental Sustainability Practices and prepare and present the District Sustainability Analysis Reports (Format in Annexure 3 and all DSA reports in Annexure 5)

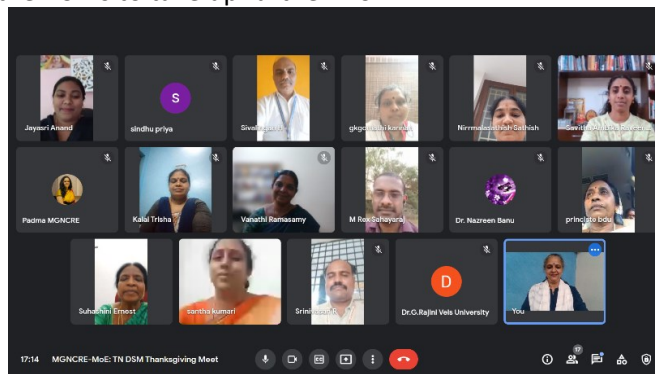


Picture 6: Status Update Online Meeting on 4 March 2022 on WhatsApp

Individual follow-up for Submission of Reports and Invoice – This was done with each DSM till their reports reached in the correct format and with information as required in all the fields This was also done in oral and written communication (over mail and WhatsApp)

Submission of Reports and Invoice – All DSMs submitted their visit reports, District Sustainability Analysis Reports and Invoices between 08 March and 18 March 2022

Thanksgiving and Celebratory Meet – This was conducted on 24 March 2022 to celebrate the team work of completing the task and also to share experiences and learning as a genuine thanksgiving meet as well as to motivate the DSMs to take up further work



Picture 6: Thanksgiving and celebratory meet on 24 March 2022

Certification – All DSMs will be certified. The institutions that filled in the Sustainability Index Form will also be certified

Outcomes of the Action Research

- **The following are the key outcomes of the action research:**
 - The Master Trainer cum Researcher sharpened her skills of mentoring and facilitation
 - She conducted two FDPs in Tamil Nadu covering 10 districts and impacting 54 participants with a partner Master Trainer
 - She identified 10 DSMs in 10 districts of Tamil Nadu and trained them to implement the project

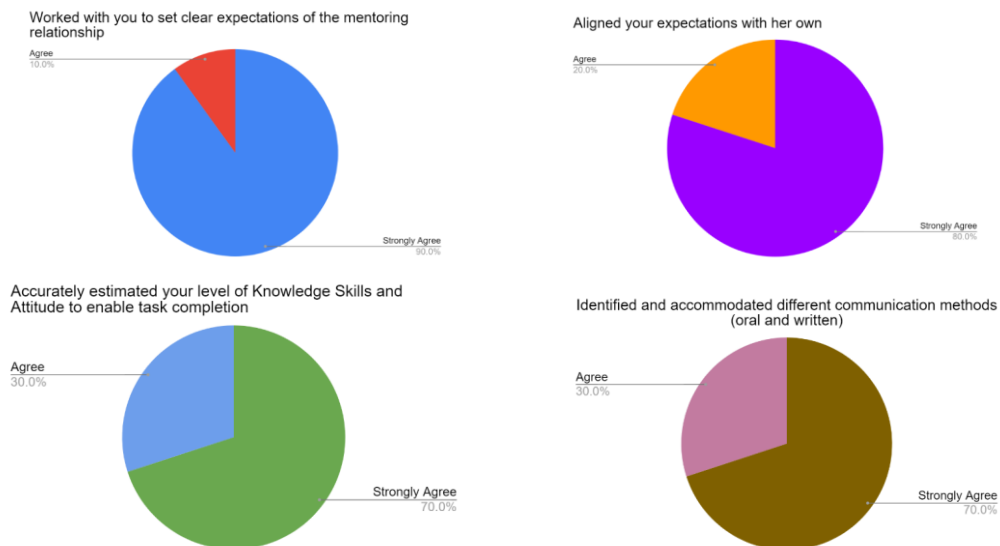
- 50 institutions filled in the Sustainability Index Form
- 50 institutions were analyzed through physical visits on actual on-ground best practices being followed.
- These institutions have understood where they stand in Sustainable Campus practices and what steps are to be taken to conserve natural resources in the campus
- A few institutions were not aware about the role of MGNCRE, they got to know of its national organization and are looking forward to its support
- The 10 DSMs will be the MGNCRE representatives at the District Level for Environmental Sustainability Practices
- A good network of mentor-mentee institutions has been set up and this can be scaled up in the future
- The DSMs feel a sense of pride in being MGNCRE representatives and for their accomplishments and it has increased their self esteem
- Ten District Sustainability Analysis Reports have given a clear idea on the way forward for these 5 institutions
- The learnings from this project will help in improving the future work in these districts and for replicating similar projects in other districts

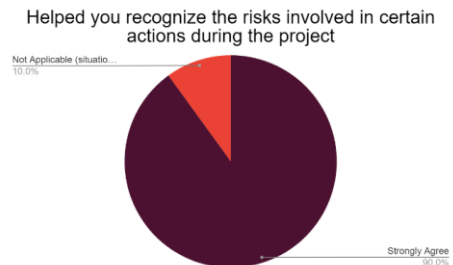
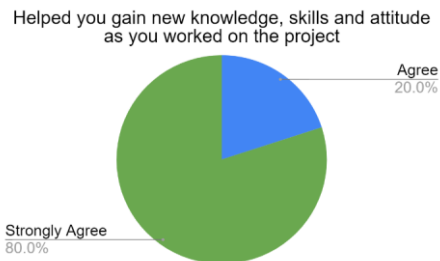
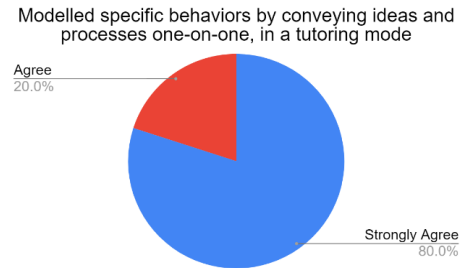
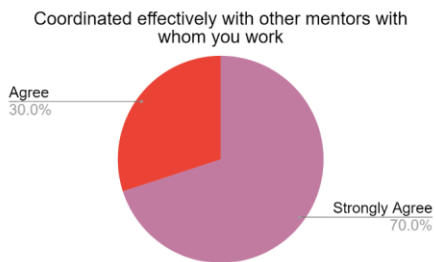
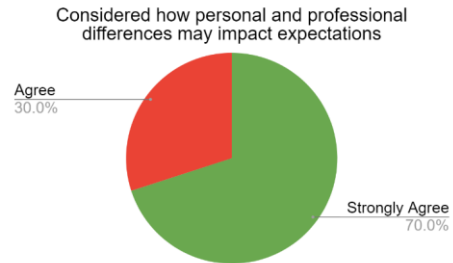
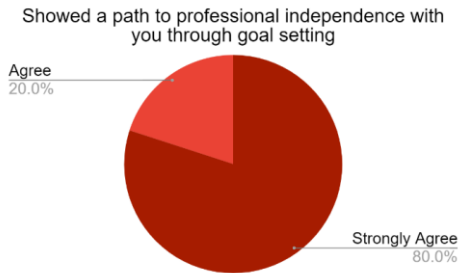
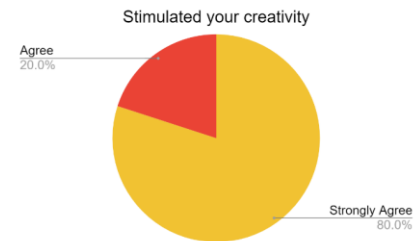
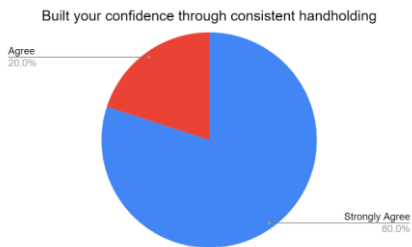
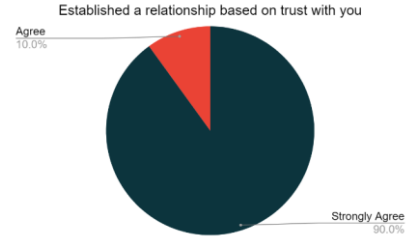
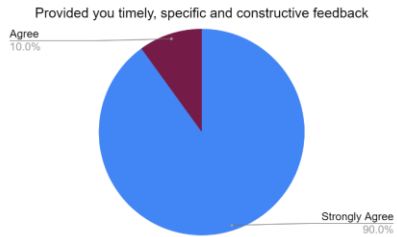
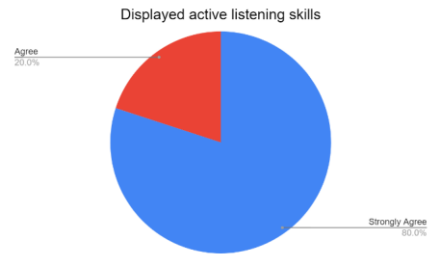
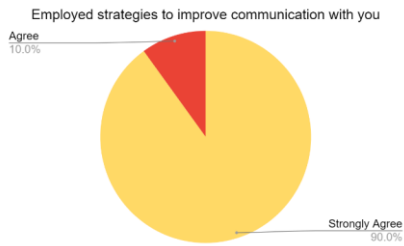
Findings of the Action Research

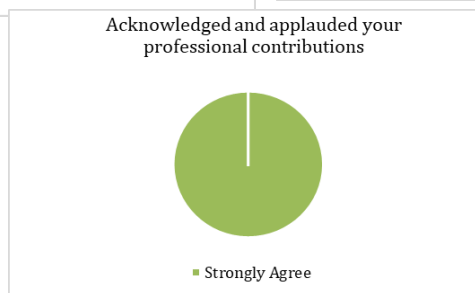
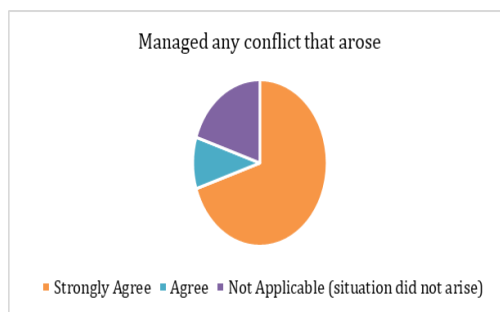
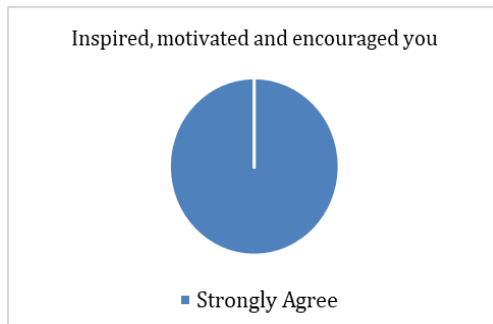
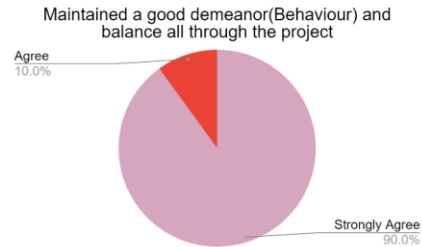
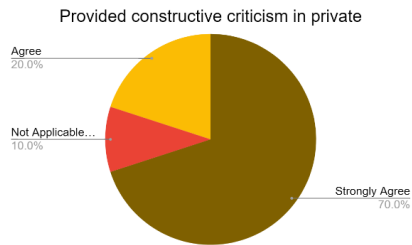
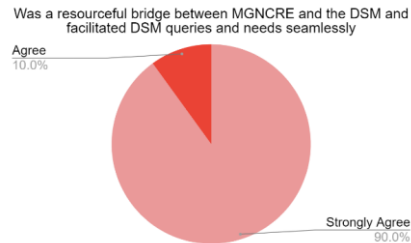
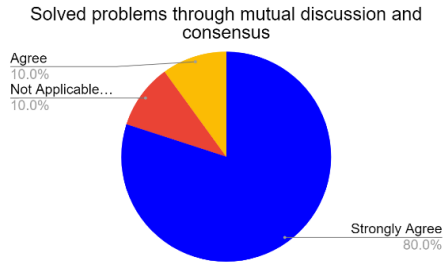
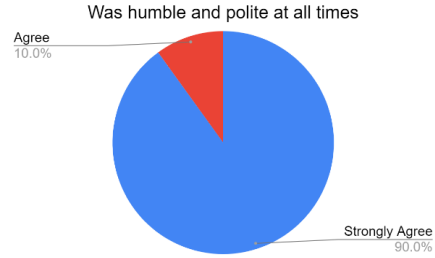
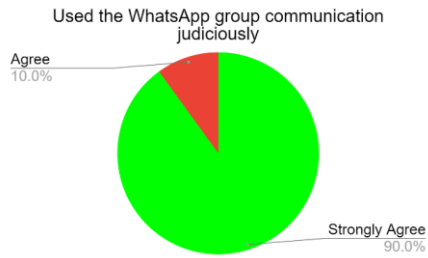
A questionnaire (Annexure 8) was administered to the DSMs asking them to share feedback on mentoring skills of their mentor. This was both through closed and open-ended questions. The findings are share below in graphical formats with clear data on how the mentor’s skills have helped the mentee DSMs in completing the project assigned to them

No. of Respondents: 10

Rate your mentor on the following:







Some of the qualitative questions that were asked along with their responses:

1. What aspects of the mentoring helped you approach the institutions easily?

- Workshop related to the Sustainable Index Proforma; Corrective action plan based on day-to-day interactions

- Sustainable practices in the campus and villages
- Recognition
- Project was clearly explained by mam. Online session and interaction have made me confident to move further with institution.
- The mentor's objective as well the outcome was perfectly communicated. Her instructions and protocols of approaching Head of the institution and introduction to right person helped lot.
- The FDP was a motivator that we should pass on share experience /knowledge
- Trust built with DSMs
- Meeting held with DSM for sharing their experience
- The assignment was well explained

2. What specific Knowledge or Skill or Attitude related aspects of your mentor facilitated the project implementation?

- All aspects
- Communication Skills (through oral & written) -The way she managed to give inputs irrespective of timings ...I am the first one to complete the project on said date. Easily approachable /Humble at all times
- Unique features of the institution
- Competence based learning
- Ma'am was always ready to support us when there is need. Also didn't show any negative reaction when there was a little delay to complete the process.
- Knowledge about the project, its outcome and related activities.

- Efficient skill in Communication, correctness, clarity, consistency and completeness
- Positive attitude and practical approach
- Solution based approach of my mentor facilitated
- Mrs. Padma was always willing to listen
- Continuous guidance, shouldering at critical time.
- Continuous motivation and timely support
- The relevance of the project was well explained by specifying its importance in terms of Ranking and Accreditation in the institutions and its role in bringing in sustainable development in the country

3. What specific skills did you sharpen/learn from your mentor during the course of this project?

- Work dedication and time commitment
- Communication skills /Team building
- Communication skill
- Identifying Goals & Current Reality
- Patience, Complete the task on time. Keep up the commitments etc... Usage of encouraging words always.
- I learnt focus, humility, empathy
- Techno-friendly and smart work.
- Kept the team together for the entire period of the course
- Approaching problems without tension and with a smile.
- Punctuality, leadership and the way of appreciation
- The level of patience in dealing with the queries with a smiling face and through constant motivation, the

mentor could bring out the best in us

4. Any other feedback your wish to share about your mentor or about the project

- Really fantastic to have mentor like Padma madam. Kudos to madam & team 🌸🌸
- Mentor- kind and easily approachable
- Project- follow up, framing action plan and execution
- Very supportive and worked with us in an understanding and helpful way within a short span of time.
- Excellent opportunity given by MGNCRE. Very supportive mentor. Ready to support at all times.
- Learning together is a great experience. Unbelievable relationship developed virtually with deep understanding, team contribution, open-mindedness and optimum utilization of resources. My mentor is special to me...She

reminds me of Aparna, Karthick...My gratitude to MGNCRE and also Smt. Padma

- The project is a very good initiative and the encouragement by the mentors makes the project interesting
- This project helped us to make a self-study to understand where we are and where to go. It serves as an eye-opener. Mentor played a vital role. She moulded us by exhibiting many living examples, and through role play. Her continuous availability and encouragement made us to complete this task
- My mentor is an Energy booster and the project enlightened my path towards sustainability
- Really thankful to Padma ma'am for leading us through the right way and guiding to complete the project in time.



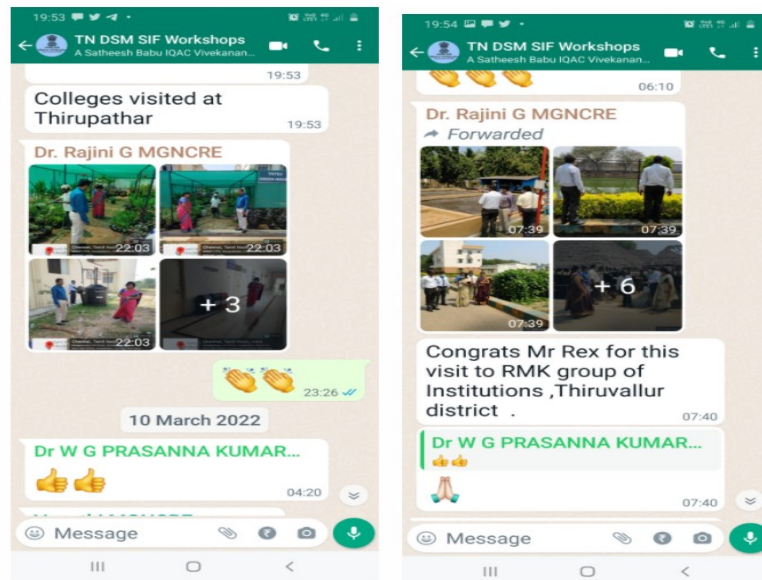
Picture 7: Rain Water Harvesting Unit was constructed after DSM visit at Govt. Arts College Thiruthuraipoonid, Tiruvarur

Reflections and Implications

- The ten District Sustainability Mentors completed the task as was envisaged and have impacted 50 institutions – Most of the institutions have expressed an interest to tie-up with MGNCRE and implement the Environmental Sustainability Program

- As per their feedback, successful mentoring mechanisms that would reside in the **skills of the mentor** and helped the mentees (DSMs) most in transferring their learning to the field were:
 - *Lead by example to Inspire, Motivate and Encourage the mentee*
 - *Acknowledge and applaud the mentee's professional contributions*
 - *Setting clear expectations of the mentoring relationship*
 - *Employing the correct strategy to improve communication with the mentee*
 - *Providing timely and constructive feedback*
 - *Establishing a relationship of trust*
 - *Helping the mentee recognize the risks involved in certain actions during the project*
 - *Use of the WhatsApp group communication judiciously*
 - *Being humble and polite at all times*
 - *Being a resourceful bridge between MGNCRE and the DSM and facilitating DSM queries and needs seamlessly*
 - *Maintaining a good demeanor (behaviour) and balance all through the project*
- The project was completed within the stipulated time with all the project deliverables
- The **mentee skills** that helped impact the project positively were:
 - A drive to succeed – Each and every mentee had a healthy competition between themselves and had the drive to complete the task in the given timelines – they had the drive to succeed as they completed the project as per plan.
 - Hardworking – All mentees worked on the project, which was an additional responsibility for them amidst their work in the college. The project could be completed as they worked hard to juggle all the roles and responsibilities
 - Time Management – They took time out to attend the project meetings and also visit the colleges, even on holidays
 - Positive attitude – There was no frustration seen or experienced, a long-lasting relationship has been forged and the mentor and mentee had an enjoyable project experience. It is also true that a mentee with a positive attitude is optimistic and optimistic persons always perform better
 - Mutual Respect – There was a mutual respect as the mentor and mentees used their strengths to bring out the best
 - Open to learning – Both mentor and mentees were open to learning and trying new solutions to the problems encountered.
 - Clear communication - The mentee communicated anytime there was a roadblock, as the channels of communication were always open and there was no hesitation
 - Leadership skills - Most of the mentees were Principals or Vice-Principals or Deans or Heads of Departments and used their leadership skills to bring out the best outcome in this project
- The DSMs were also able to analyze the common Environmental Sustainability Practices across the five institutions they visited and also identified unique practices in each institution – two sample documents are available in Annexure 5
- Some learning that was shared by the DSMs in the Thanksgiving meet on 24 Mar 2022:
 - A large project was completed very easily
 - We are extremely happy and proud to be a part of the MGNCRE team
 - Felt a sense of pride while representing MGNCRE – was asked to be the Chief Guest at the Women's Day Celebration
 - Institutions were earlier unaware of environment related days; they are now aware and have started celebrating them. Health Day is being celebrated on April 7th in some of the institutions

- We were happy that Chairman MGNCRE also appreciated our progress regularly on the WhatsApp group, despite his busy schedule



Pictures 8 and 9: Encouragement by Chairman MGNCRE motivated the DSM Team

- The mentor responded almost immediately to queries posted – either verbally or through a written message
- We learnt how to geotag pictures and feel empowered
- We understand that Environmental Sustainability is a wonderful area to work with the adopted villages; earlier we had FDP on Community Engagement from MGNCRE, but now we have new ideas to engage with the community
- We can network with the 50 institutions covered and help each other – e.g., find out vendors for solar power. This is a very good network that has been created
- We looked forward to the daily updates and accolades, it was really motivating
- My own college celebrated World Water Day for the first time because of the awareness created by this project
- The project has used all principles of Social Work through Experiential Learning
 - 1) Principle of planned organisation of the group.
 - 2) Principle of understanding each individual as a member of a group and as an individual.
 - 3) Principle of equality.
 - 4) Principle of understanding relationship as tool for solving group problems as well as individual problems and also for development of the group.
 - 5) Principle of encouragement of each member of the group.
 - 6) Principle of recognition of variety of groups with different objectives.
 - 7) Principle of self-development, i.e., full opportunity to the group to organize its programmes according to its needs.
 - 8) Principle of self-problem solving. Members should be involved in understanding and solving problems themselves.
 - 9) Principle of use of programme according to diagnosis of the group. Different types of programmes are needed according to the problems of the group.
 - 10) Principle of experience development. Each member of the group should get opportunity to act and express his feelings in the group.

- 11) Principle of understanding the importance of group life in shaping and moulding one's character and personality. The group worker should believe the importance of group experience.
- We learnt that Institutions need to maintain the resources for NAAC Accreditation and this is non-negotiable
- I learnt how to work with perfection and sincerity in my work
- The mentored assigned the work very clearly and the way of guiding made all the difference

Plan for Further Action

The following actions may be planned:

- This project can become a very important one in Tamil Nadu as it can be dovetailed into the TN Govt's Action Plan for the Environmental Stress Points (listed in the Background Section of this document).
- For this the DSMs need to be trained on mentoring skills and can reach out to mentee institutions across their District, in a phased manner for suitable interventions, in the colleges and villages as envisaged by **Tamil Nadu Climate Change Mission, Tamil Nadu Wetlands Mission and Green Tamil Nadu Mission**
- UN Global Facts and Figures of Hand hygiene (<https://www.unwater.org/water-facts/handhygiene/>) and Sustainable Development Goals will also be impacted through such projects
- Such projects will give the much need experiential learning to the students and improve their skills as the mentees transfer their learning to their students.

Conclusion

The hypothesis has been proved true as there is a positive impact of Mentoring on the District Sustainability Mentors in facilitating timely performance for achievement of MGNCRE's Swachhta Action Plan Project Goals. The performance indicators were:

- 50 institutions filled in the Sustainability Index Proforma in the stipulated time

- Visit reports which captured objective and subjective aspects of environmental sustainability in the campus was filled in with minimal handholding
- They also included geotagged pictures of their visit to the institution in their reports.
- Each DSM analysed the 5 institutions and submitted a District Sustainability Analysis report
- Each DSM sent the invoice on time with the above attachments

References

- Phillips-Jones, L. (2003) *The Mentor's Guide: How to Be the Kind of Mentor You Once Had—Or Wish You'd Had*. CCC/The Mentoring Group, 13560 Mesa Drive, Grass Valley, CA 95949, 530.268.1146
- Butorac, D. (2015). *Mentoring for Successful OPM Implementation. PMI White Paper*.
- Verma R.B.S, *Principles, Skills and Models of Group Work Practice*, IGNOU Social Work Course Material

Online Resources

- <https://www.timeshighereducation.com/campus/foster-mentorship-skills-create-socially-responsible-leaders-future>
- <https://www.unwater.org/water-facts/handhygiene/>
- <https://www.togetherplatform.com/blog/the-mentees-guide-101>



About the Author

Ms Padma Juluri holds an MA in Education with a Diploma in Training and Development from ISTD, New Delhi. She is a Management Professional in the Education & Training Sector. For the last three decades she has been associated with work ranging from Mentoring/Teaching/Training to Business Operations and Creating Innovative Program Models and Customized Solutions in various areas including Employability Skills in Technical & Higher Education, Stakeholder Empowerment in K-10 Schools, Technology & Multimedia Education, Training of Trainers, Content and Curriculum Development and Adult Education. She has been working with Mahatma Gandhi National Council of Rural Education (MGNCRE), Hyderabad since December 2017 as a Project Consultant. With MGNCRE, she has been involved in Curriculum Development, conceptualising and delivering Faculty Development Programs on Nai Talim, Rural Immersion, Rural Management, Waste Management and UNICEF's SDGs, Disaster Management, Water Sanitation & Hygiene (WASH) and Rural Resilience Programs and also Mentoring Interns. She has also contributed to the Publications and Manuals of MGNCRE as a writer and an Editor, some of them being Facilitator Manuals for Faculty Development Program for MBA in Waste Management and Social Entrepreneurship and another on Fostering Social Responsibility and Community Engagement in Higher Educational Institutions; yet another on the UNICEF's Student Volunteerism Program for the WASH and the most recent one was Gandhiji's Nai Talim in the 21st Century – A Handbook on Experiential Learning Activities for Teacher Educators.

Annexures

Annexure 1- Facilitation Tool 1

Sustainability Index Proforma – Google Form

<p>MGNCRE Sustainability Index Proforma</p> <p>Ministry of Education Government of India Department of Higher Education MGNCRE Can be filled by the Head of the Institution/Faculty Member/IQAC team</p> <p>padmamgncre@gmail.com Switch accounts</p> <p>*Required</p>	<p>Address of the Institution *</p> <p>Your answer _____</p>
<p>Email *</p> <p>Your email address _____</p>	<p>Affiliated to *</p> <p>Your answer _____</p>
<p>Mahatma Gandhi National Council of Rural Education</p> <p> महात्मा गांधी राष्ट्रीय ग्रामीण शिक्षा परिषद Mahatma Gandhi National Council of Rural Education (Formerly National Council of Rural Institutes) Department of Higher Education, Ministry of Education, Government of India</p> <p></p>	<p>Institution's District *</p> <p>Your answer _____</p>
<p>Name of the Institution *</p> <p>Your answer _____</p>	<p>State *</p> <p>Your answer _____</p>
	<p>Name of the Principal/Head of Institution *</p> <p>Your answer _____</p>

Contact Number (WhatsApp Number) of the Principal/ Head of the Institution *

Your answer _____

Email of the Principal/ Head of the Institution *

Your answer _____

WATER MANAGEMENT 1) Usage of Water (liter / day) in your institution?

_____ HINT: To ensure Usage of water the following quantification needs to be considered by the Higher Education Institutions: i. (No. of Day scholars+ faculty+ staff) X (30 liters) + (No. of hostellers X 100 liters) = *

Your answer _____

2) Water Availability for usage (liter / day)? _____ (HINT: Please observe the above response for water usage and comment accordingly with reference to the present situation of the institution's location and sources of water) *

Your answer _____

3) Rainwater Harvesting on campus (liter / Season)? _____ Example and calculation is given below *

Your answer _____

EXAMPLE Rainwater Harvesting on campus (liter / Season)? _____ Example and calculation is given below

Rain Water Harvesting Per Day Per 100 Sq. mts	litres
Andaman and Nicobar Islands, Assam and Meghalaya, Arunachal Pradesh	412
Tuchimihayam West Bengal and Sikkim	232
Nagaland, Manipur, Mizoram and Tripura	295
West Bengal, Orissa, Bihar, Lakshadweep	232
Uttar Pradesh, Himachal Pradesh, Jammu and Kashmir, Madhya Pradesh, Gujarat	180
Haryana, Punjab, Chandigarh and Delhi	98
Rajasthan, Gujarat, Saurashtra and Kachchh	65
Karnataka and Goa, Kerala, Coastal Karnataka	493
Maharashtra, Andhra Pradesh, Telangana, Karnataka, Pondicherry, Tamil Nadu	131

Example : Government Degree College for Women Hyderabad, Telangana.
 Steps:
 Open Google Map, and Enter your college name and the district name in the search bar; next Utilize the Satellite view or map view of your college; next Calculate the Area of the roof top in Sq. metres with the help of map scale given in the Google map.
 Rain Water Harvesting per Day per 100 Sq. mts of the region = 131 litres
 Number of rainy days in rainy season this year = 28 days
 Area of the roof top in Sq. metres = (60m X 20m) + (125m X 10m) = 600m² + 1250m² = 1850m² Area of the roof top of Government Degree College for Women Hyderabad, Telangana.
 Apply the formula:
 Rainwater Harvesting on campus (liter / Season) =
 [(Rain Water Harvesting per Day per 100 Sq. mts of your region) X (Number of rainy days in rainy season this year) X (Area of the roof top in Sq. metres)] divided by 100 =
 [(131) X (28) X (1850)] divided by 100 = 68,308 litres

4) Recycling of water from sewage treatment plant (liter / day) ? = _____ if applicable ...otherwise mention not applicable

Your answer _____

5) Water Sources Audit ? Utilize Swachh Campus Manual *

- Done
 Not yet done

SOLAR ENERGY AND ENERGY CONSERVATION 1) Are you a part of installation of renewable energy project (Yes /No) *

- Yes
 No

2) Are you taking any remarkable action for Energy Conservation (Yes /No) *

- Yes
 No

3) Requirement of energy (in Kilowatt or Units / month)? 1 Unit = 1 kWh

Your answer _____

4) Energy generated via solar (in Kilowatt / month)? if Applicable (HINT: 3 solar panels will generate 4 KWH per day of electricity on a sunny day or 4 Units) *

Your answer _____

5) % Energy needs met by Solar Energy? Example is given below

Your answer _____

GREENERY MANAGEMENT 1) Area under green cover (in sq ft or Sq mts or in acre)? _____ HINT: Green area includes any area which has grass cover, tree cover and horticulture. *

Your answer _____

2) Availability of Nursery on Campus? (Yes / No) *

- Yes
 No

3) Plant Protection Management: availability? (Yes / No) HINT: There is a need for managing the protection of plants on the campus on a continuous basis. *

- Yes
 No

4) Number of plants/tree plantations done in the year 2021-22? *

Your answer _____

5) Extent of area (% of area) under tree cover? _____ (Usually 33% is better condition) *

Your answer _____

WASTE MANAGEMENT 1) Collection of Solid Waste (kg/day)? _____
EXAMPLE is given below *

Your answer _____

6) Availability of functional drainage system? *

- Yes
 No

2) Is segregation of Solid Waste done in the Institute? If yes approx. How many kg of waste is segregated per day? *

Your answer _____

LAND USE MANAGEMENT for Sustainability or Swachhta activities 1) Total land (area in Acre) or Sq Meter? *

Your answer _____

5) Whether there is a Land use management plan available for the campus (Yes / No)? *

- Yes
 No
 Not applicable

3) Approx. how much of solid waste is recycled every day (Kg/day)? *

Your answer _____

2) Constructed area (Approximately in Sq meters) ?Hint: Utilize the Google Map picture of your college

Your answer _____

3) Total proposed area for development / Open area (Approximately in Sq meters)? Hint: Utilize the Google Map picture of your college? *

Your answer _____

4) Approx. how much of solid waste is disposed (kg/day)? (collected by garbage collectors) *

Your answer _____

4) Total proposed area for greenery and environmental services including water harvesting and composting (approximately in Sq. meters or Sq Yards or in acre)? *

Your answer _____

Please mention Special Environmental features of your Educational Institution /College/University EXAMPLE is given below *

Your answer _____

5) Bio Medical Waste management. *

- Yes
 No
 Not applicable

<p>YOUR NAME *</p> <p>Your answer</p>	<p>Any notes or Remarks/ would like to contact us 7660802102 Team MGNCRE *</p> <p>Your answer</p>
<p>Your Designation *</p> <p>Your answer</p>	<p>PINCODE of the Institution *</p> <p>Your answer</p>
<p>Mobile preferably Whats App *</p> <p>Your answer</p>	<p><input type="checkbox"/> Send me a copy of my responses.</p>
<p>Your Email *</p> <p>Your answer</p>	<p><input type="submit" value="Submit"/></p> <p><input type="button" value="Clear form"/></p>

Annexure 2
DSM Visit Report Format – Facilitation Tool 2



महात्मा गांधी राष्ट्रीय ग्रामीण शिक्षा परिषद
Mahatma Gandhi National Council of Rural Education
 (formerly National Council of Rural Institutes)
 Department of Higher Education, Ministry of Education, Government of India



SUSTAINABLE PRACTICES IN THE CAMPUS – A REPORT
(Submitted to MGNCRE, DHE, Ministry of Education, Government of India)

1.	Date of Workshop cum Field Visit	
2.	Name of the District Sustainability Mentor (DSM)	
3.	Contact Number of DSM	

4.	E mail id of DSM	
5.	District and State	
6.	Name of Institution	
7.	Address of the Institution	
8.	University Affiliated to	
9.	District & State	
10.	Name of Principal/HoI	
11.	Contact Number (WhatsApp Number)	
12.	E Mail ID	
13.	No. of Students	
14.	No of Teaching Staff	
15.	No. of Non-Teaching Staff	

Report - 2021-22

#	AREA	TICK THE ACTIVITIES BEING DONE FROM LIST BELOW	LIST OF ADDITIONAL ACTIVITIES (Please fill in)
1.	SANITATION AND HYGIENE (CAMPUS & COMMUNITY/AD OPTED VILLAGES)	<ul style="list-style-type: none"> ● Post COVID19 Sanitation Measures and Drill ● Clean and functional toilets (365x24) ● Safe drinking water (365 x24) ● Clean surroundings ● Clean buildings/rooms ● Campus Landscaping ● Zero Littering ● Organize awareness programmes for better sanitation practices like using the toilet, hand washing, health and hygiene awareness and garbage disposal in the adopted villages ● Work with SHGs for mask making and other similar activities 	
2.	WASTE MANAGEMENT (CAMPUS & COMMUNITY/AD OPTED VILLAGES)	<ul style="list-style-type: none"> ● Campus/Dept wise waste audit ● Campus/Dept waste segregation ● Reduction in waste, month-on-month ● Recycling waste (paper, organic waste from canteens and kitchens) ● Set up compost pit for recycling waste ● Ban plastic use in the campus ● Banflexi banners (Only cloth banners to be used) ● Paperless work – use of email, WhatsApp for communication ● Recycling Farm waste ● Setting up community compost pits in villages ● Awareness camps for Clean and Green Village (Zero Littering – IEC Material) including banning single-use plastic ● Partner with local NGOs and CSR organizations in this field 	
3.	WATER MANAGEMENT (CAMPUS & COMMUNITY/AD OPTED VILLAGES)	<ul style="list-style-type: none"> ● Audit of water sources in the campus ● Audit of monthly water use in the campus ● Audit of drinking water on campus (bottled) 	

#	AREA	TICK THE ACTIVITIES BEING DONE FROM LIST BELOW	LIST OF ADDITIONAL ACTIVITIES (Please fill in)
	COMMUNITY/AD OPTED VILLAGES)	<ul style="list-style-type: none"> water) Constructing/Increasing no. of Rain Water Harvesting pits in the campus Fixing leaky taps Recycling water (grey, brown and black) Activities for recharging dry borewells Converting villages into water plus areas Partner with local NGOs and CSR organizations in this field 	
4.	ENERGY MANAGEMENT (CAMPUS & COMMUNITY/AD OPTED VILLAGES)	<ul style="list-style-type: none"> Audit of energy efficient heating, cooling, lighting and water systems in the campus Audit of building wise monthly use of electricity Incentivize reduced electricity usage by depts/buildings Create short-term and long-term plan for the use of solar energy on the campus Cycles on the campus (reducing carbon footprints) Reducing carbon footprints via intelligent Purchase Standard Operating Procedures (SOPs) Partner with local NGOs and CSR organizations in this field 	
5.	GREENERY (CAMPUS & COMMUNITY/AD OPTED VILLAGES)	<ul style="list-style-type: none"> Setting up a nursery/kitchen garden Setting up a seed bank Setting up a compost pit Researching trees that take up minimal water and are good for the ecosystem (local, resilient species) and planting them during monsoon and taking care of them (Vanamahotsav) Landscaping in the campus Use of organic manure for the plants New buildings on the campus will follow green building norms Partner with local NGOs and CSR organizations in this field Growing Miyawaki forests/Nakshatravanam on barren land/Village Greenery Programme 	

We have observed and celebrated the following Days to inculcate and internalize in our faculty, students and community, the values of Mentoring, Social Responsibility, Swachhta and Care for Environment and Resources (tick all the days you have celebrated and/or fill in any celebratory day not listed here

#	Day	Date	Insert tick mark ✓
1.	National Youth Day	Jan 12	
2.	International Mentoring Day	Jan 17	
3.	Global Community Engagement Day	Jan 28	
4.	World Wetlands Day	Feb 2	
5.	World CSR Day	Feb 18	
6.	World NGO Day	Feb 27	
7.	World Water Day	Mar 22	
8.	CSR Day India	Apr 1	
9.	Earth Day	April 22	
10.	World Environment Day	June 5	

11.	No Plastic Day	July 3	
12.	World Population Day	July 11	
13.	World Entrepreneurs Day	Aug 21	
14.	World Habitat Day	1 st Monday of October	
15.	National Mentoring Day	Oct 27	
16.	Women's Entrepreneurship Day	Nov 19	
17.	World Toilet Day	Nov 19	
18.	National Pollution Control Day	Dec 2	
19.	World Soil Day	Dec 5	
20.			
21.			
22.			
23.			
24.			

Date of Report: |

Digital Signature of DSM

Visit Report (Descriptive)

Annexure 3 Photographs of Sustainable Practices in the Campus

Insert geotagged pictures with date and time stamp in the cells below (some indicative captions are given, they may be changed or customized as required)

Rain Water Harvesting Pits	Recycling of Water
Compost Pit	Herbal Garden
Solar Panels	Covid Protocols
Workshop Photo 1	Workshop Photo 2
Workshop Photo 3	Workshop Photo 4

Annexure 2
List of Participants

S. No.	Name of the Participant	Designation	Contact Number	Email ID
1				
2				
3				
4				
5				
6				
7				
8				
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Annexure 4
District Sustainability Analysis Reports (Facilitation Tool - 3)

District Sustainability Analysis Report

Name of the DSM	
District	
Names of the 5 Institutions	
Common Sustainability Practices Across Institutions	
One or two Unique Sustainability Practices in each Institution	
Urgent Action recommended	
Any other reaction /response /activity	

Annexure 5

Letter format from DSM to Principal of HEI – Facilitation Tool



Mahatma Gandhi National Council of Rural Education

Department of Higher Education, Ministry of Education, Govt of India
S-10-174, Shaktar Bhavan, Ground Floor, Fatch Maidan Road, ~~Hyd~~ - 04, website: www.mgncre.org



Lr No 001/MGNCRE/~~MoE/GoI~~/SAP/SI 2021-22

Dt 22.02.22

To,

The Principal

<name of college>

~~District Tamil Nadu~~

Sub: - MGNCRE/~~MoE/GoI~~ - Campus Sustainability Index- Swachhta Action Plan 2021-22 - Workshop and Field Visit at College on _____ at _____ PM - Reg.

Dear Principal ji,

Greetings from Swachhta Action Plan Project in the Ministry of Education, Government of India!

At the outset, the Ministry of Education recognizes and values the association with your esteemed Institution. The Ministry is keen on ensuring Sustainable use and disposal of Resources in the Higher Education Institutions, which provides formal and informal learning opportunities to enable all students to develop the knowledge, skills, attitudes and values required to contribute to a sustainable future and the UN SDGs.

MGNCRE is the nodal agency of the Ministry for developing a Sustainable Campus. We would like to visit your institution for a two-hour Workshop and Field Visit as part of Swachhta Action Plan 2021-22, the agenda, date and timing are detailed below:

Date: _____
Time: _____
Participants: Principal, Vice-Principal, SAP Coordinator/NSS Officer, IQAC Coordinator, Administrators, Language Faculty, SESREC and REDC Members, Campus and Hostel Managers, Powerhouse Managers, Supervisors, Rotaract, ED Cell Club and any other key staff related to campus management
Agenda: Sustainability Index Form Filling, Write-Up and Photo Documentation of Sustainable Practices on Campus
Sustainability Index Proforma Link: https://forms.gle/XeXDhBmGSnN7bQ3V6

As part of the preparation, we request you to go through the above google form, gather data for the various fields and keep it handy. Our District Resource Person will help you fill in the form on the day of the visit cum workshop.

We invite you, along with faculty members (as suggested above) who will be involved in this project, to participate in this workshop cum field visit and make the best use of it.

Name of MGNCRE District Resource Person:

Contact Number:

Thanking you,

Yours sincerely,

Dr W G Prasanna Kumar
Chairman

Annexure 6
Sample District Sustainability Analysis Reports
 District Sustainability Analysis Report

Name of the DSM	Dr. Savitha A.R
District	Kanyakumari
Names of the 5 Institutions	Rohini College of Engineering Sarada Krishna Homeopathic Medical College NVKSD College of Education University College of Engineering Sree Ayyappa College for Women
Common Sustainability Practices Across Institutions	Sanitizers as part of Covid 19 Protocol Solar Panels in four institutions Rain water harvesting ponds / tanks Importance given to landscaping and greenery
One or two Unique Sustainability Practices in each Institution	Rohini College of Engineering: Alternative Energy Resources – Both Solar panels and Wind mills were installed. Sarada Krishna Homeopathic Medical College: A Well-maintained Biogas Plant and proper Waste Water Management NVKSD College of Education: 34 varieties of Jack Fruit trees preserved in the campus. University College of Engineering: Indoor Plants and Greenery in the open area within the buildings Sree Ayyappa College for Women: Four Rain water harvesting ponds out of which one is maintained as part of the sacred grove.
Urgent Action recommended	Forming of SEC and REC in the campuses (Four institutions were unaware of the activities of MGNCRE and the ways to conduct green audit)
Any other reaction /response /activity	Online Workshops were conducted in all the institutions which created a positive impact among the participants. IQAC coordinator of Sarada Krishna Homeopathic Medical College observed that they were in a saturation point regarding the Criteria Seven of NAAC Assessment and this activity therefore served as an eye opener for them with regard to the proper implementation and documentation of Sustainability Index and Best Practices.

District Sustainability Analysis Report

Name of the DSM	Prof. Dr. B. Sendilkumar
District	Salem
Names of the 5 Institutions	1. Vinayaka Missions Annapoorana College of Nursing, Salem 2. Vinayaka Mission's Homoeopathic Medical College and Hospital, Salem 3. Vinayaka Mission's College of Physiotherapy, Salem 4. Vinayaka Mission's College of Physical Education, Salem 5. Vinayaka Mission's Kirupananda Variyar Arts and Science College, Salem
Common Sustainability Practices Across Institutions	<ul style="list-style-type: none"> • Sign Board - Turn off lights before leaving, No Plastics and Save water. • Water Management - Maintaining Rain Water Harvesting Pit in good condition and regularly conducting water audits. • Waste Management – Biomedical Waste Management systems properly used for biomedical waste and the recycling of waste into organic manure. • Knowledge about Swachhata activities of Govt. of India. Regularly organizing Awareness camps for clean and Green Village (Zero Littering) • Celebration of Days like Environment Day, No Plastic Day and World Water Day etc.,
One or two Unique Sustainability Practices in each Institution	1. Vinayaka Missions Annapoorana College of Nursing <ul style="list-style-type: none"> • Energy Conservation Initiatives – Implementation of Solar Panel. • Rain water Harvesting • LED Lighting 2. Vinayaka Mission's Homoeopathic Medical College and Hospital <ul style="list-style-type: none"> • Recycling of water - Sewage Treatment Plant • Herbal Garden • Biomedical Waste Management • NABH Accreditation 3. Vinayaka Mission's College of Physiotherapy <ul style="list-style-type: none"> • Green campus • Well Established EVS Clubs • Recycling of Waste materials into arts and crafts • Compost Pit 4. Vinayaka Mission's College of Physical Education <ul style="list-style-type: none"> • Green Campus • LED Lighting • Rain Water Harvesting 5. Vinayaka Mission's Kirupananda Variyar Arts and Science College <ul style="list-style-type: none"> • Green campus • Swachhata activities • LED lighting
Urgent Action recommended	1. Vinayaka Missions Annapoorana College of Nursing <ul style="list-style-type: none"> • Energy Conservation – Suggests increasing the number of solar panels to produce more energy • Green Audit 2. Vinayaka Mission's Homoeopathic Medical College and Hospital <ul style="list-style-type: none"> • Energy Conservation – Suggesting the Implementation of Solar Panel • Green Audit

	3. Vinayaka Mission's College of Physiotherapy <ul style="list-style-type: none"> • Energy Conservation – Suggesting the Implementation of Solar Panel • Green Audit 4. Vinayaka Mission's College of Physical Education <ul style="list-style-type: none"> • Energy Conservation – Suggesting the Implementation of Solar Panel • Green Audit 5. Vinayaka Mission's Kirupananda Variyar Arts and Science College <ul style="list-style-type: none"> • Energy Conservation – Suggesting the Implementation of Solar Panel • Green Audit
Any other reaction /response /activity	As part of COVID19 Preventive measures strictly followed. All Institutions Actively participated swachhata activities under various schemes viz. Swachh Bharat Abhiyan, Unnat Bharat Abhiyan, National Service Scheme, EVS CLUB and Red Ribbon Club etc.,

Annexure 7

List of 50 Institutions Covered by 10 DSMs

Chengalpattu

1. SRM Institute of Science and Technology, Kattankulathur
2. Sri Sai Ram Institute of Technology, Tambaram
3. Vels Institute of Science, Technology & Advanced Studies, Pallavaram
4. B.S. Abdur Rahman Crescent Institute of Science and Technology, Vandalur
5. Tamil Nadu Teachers Education University, Karapakkam

Cuddalore

1. Muthiah Polytechnic College
2. Government Arts College, Mutlur
3. B.P.J College of Arts and Science, Srimushnam
4. Sree Rahavendra College of Arts and Science, Mutlur, Cuddalore
5. JP College of Education Srimushnam

Erode

1. Vellalar College for Women (Autonomous)
2. Erode Arts and Science College (Autonomous)
3. Bannari Amman Institute of Technology, Bannari
4. Kaamadhenu Arts and Science College, Sathyamangalam
5. PKR College for Women, Gobichettipalayam

Kanniyakumari

1. Rohini College of Engineering and Technology
2. N.V.K.S.D. College of Education, Attoor
3. Sarada Krishna Homoeopathic Medical College
4. University College of Engineering Nagercoil
5. Sree Ayyappa College for Women

Madurai

1. Mangayarkarasi College of Arts and Sciences for Women
2. Nagarathinam Angalammal Arts and Science College
3. Ambiga College of Arts and Science for Women
4. Madurai Gandhi NMR Subbaraman College for Women
5. PKN Arts & Science College

Perambalur

1. Eden Gardens College of Education
2. Swami Vivekananda College of Education.
3. Dhanalakshmi Srinivasan College of Arts and Science for Women (Autonomous),
4. Dhanalakshmi Srinivasan Engineering College
5. Dhanalakshmi Srinivasan Medical College

Salem

1. Vinayaka Missions Annapoorna College of Nursing
2. Vinayaka Mission's Homoeopathic Medical College and Hospital
3. Vinayaka Mission's College of Physiotherapy, VMRF (DU)
4. Vinayaka Mission's College of Physical Education, VMRF(DU)
5. Vinayaka Mission's Kirupananda Variyar Arts and Science College, VMRF (DU)

The Nilgiris

1. McGan's Ooty School of Architecture, Kotagiri.
2. Providence College for Women (Autonomous), Coonoor.
3. Government Arts and Science College, Gudalur.
4. Kaypeeeyes College Of Arts and Science, Kotagiri.
5. CSI College of Engineering, Ketti.

Tiruchirappalli

1. Swami Dayananda College of Arts & Science
2. Government Arts and Science College
3. Thiru.Vi.Ka Govt Arts and Science College, Thiruvurur
4. Rabiammal Ahammed Maideen College for women, Thiruvurur
5. MR Govt. Arts and Science College, Mannargudi

Tirvarur

1. M.I.E.T. Engineering College
2. M.A.M. College of Engineering
3. Government Arts College
4. Thanthai Periyar Government Arts and Science College (Autonomous)
5. Paavendhar College of Arts and Science

Annexure 8

Monitoring Mechanisms – Daily District Wise Update of Sustainability Index Forms fills Facilitation Tool

Sustainability Index Proforma : 7 March 2022 9 PM to 9 March 2022 ; 2 PM		
Timestamp	Name of the Institution	Institution's District
3/8/2022 0:49	N.V.K.S.D. College of Education, Attoor	Kanyakumari
3/8/2022 10:28	Sakthi Institute of Information and Management Studies	Coimbatore
3/8/2022 12:08	SRI RAM NALLAMANI YADAVA COLLEGE OF ARTS AND SCIENCE	TENKASI
3/8/2022 12:53	Nagarathinam Angalammal Arts and Science College	Madurai
3/8/2022 13:33	PKN Arts & Science College	Madurai District
3/8/2022 14:43	Vyasa Arts and Science Womens College	Tenkasi
3/8/2022 15:37	Vidyasagar College of Arts and Science	Tiruppur
3/8/2022 16:03	SHRI NEHRU MAHA VIDYALAYA COLLEGE OF ARTS AND SCIENCE	COIMBATORE
3/8/2022 16:07	Maharani Arts & Science College	Tirupur
3/8/2022 16:10	JSR COLLEGE OF EDUCATION (10316)	TIRUPPUR
3/8/2022 16:27	AMBIGA COLLEGE OF ARTS AND SCIENCE FOR WOMEN	MADURAI
3/8/2022 16:51	GOVERNMENT ARTS COLLEGE	TIRUCHIRAPPALLI
3/8/2022 17:06	KAYPEEYES COLLEGE OF ARTS AND SCIENCE	THE NILGIRIS
3/8/2022 17:54	Manonmaniam Sundaranar University	Tirunelveli
3/8/2022 19:28	Madurai Gandhi NMR Subbaraman College for Women	Madurai
3/8/2022 18:18	MUTHIAH POLYTECHNIC COLLEGE	Cuddalore
3/8/2022 22:45	Rathinam Technical Campus	Coimbatore
3/9/2022 6:05	Thanthai Periyar Government Arts and Science College (Autonomous), Tiruchirappalli - 620 023	Tiruchirappalli
3/9/2022 13:38	M.A.M. College of Engineering	Tiruchirappalli
3/9/2022 12:30	MAZHARUL ULOOM COLLEGE,AMBUR - 635802	TIRUPATTUR
3/9/2022 12:35	ROHINI COLLEGE OF ENGINEERING AND TECHNOLOGY	KANNYAKUMARI
3/9/2022 13:11	PODHIGAI COLLEGE OF ENGINEERING AND TECHNOLOGY	TIRUPATHUR

10 March 2022 @ 1.30 PM Sustainability Index Proforma Submission: TN Update (60 Institutions)

Received SIP google form submissions from all **5 institutions in Madurai, Salem, Tiruvallur, Tenkasi, Tirunelveli, Tiruppur**

Received SIP google form submissions from **4 institutions in Coimbatore, Kanyakumari, Permabalur, The Nilgiris, Tiruchirappalli**

Received SIP google form submissions from **3 institutions in Ranipet**

Received SIP google form submissions from **2 institutions in Tirupathur and Tiruvarur**

Received SIP google form submissions from **1 institution each in Pudukkottai, Erode and Cuddalore**

Sustainability Index Proforma : 9 March 2022 ; 2 PM to 10 March 2022 1.30 PM		
Timestamp	Name of the Institution	Institution's District
3/9/2022 14:19	Sarada Krishna Homoeopathic Medical College	Kanniyakumari
3/9/2022 14:25	GOVERNMENT ARTS AND SCIENCE COLLEGE	Thiruvarur
3/9/2022 15:18	C.ABDUL HAKEEM COLLEGE OF ENGINEERING AND TECHNOLOGY	Ranipet
3/9/2022 15:21	Rathinam College of Arts & Science	Coimbatore
3/9/2022 15:44	MMES women's Arts and Science college	Ranipet
3/9/2022 16:04	Manonmaniam Sundaranar University College, Naduvakurichi, Sankarankovil	Tenkasi
3/9/2022 18:40	C. Abdul Hakeem College (Autonomous)	Ranipet
3/9/2022 19:05	Maharani College of Education	Tirupur
3/9/2022 19:21	Pavendar Bharathidasan college of arts and science	Pudukkottai
3/9/2022 21:44	University College of Engineering Nagercoil	Kanyakumari
3/10/2022 12:14	R.M.D. Engineering college	Tiruvallur
3/10/2022 12:20	Kamalam College of Arts and Science	Tiruppur
3/10/2022 12:53	Vellalar College for Women (Autonomous)	Erode

Update : 60 institutions have submitted the SIP Google Form..40 more to go

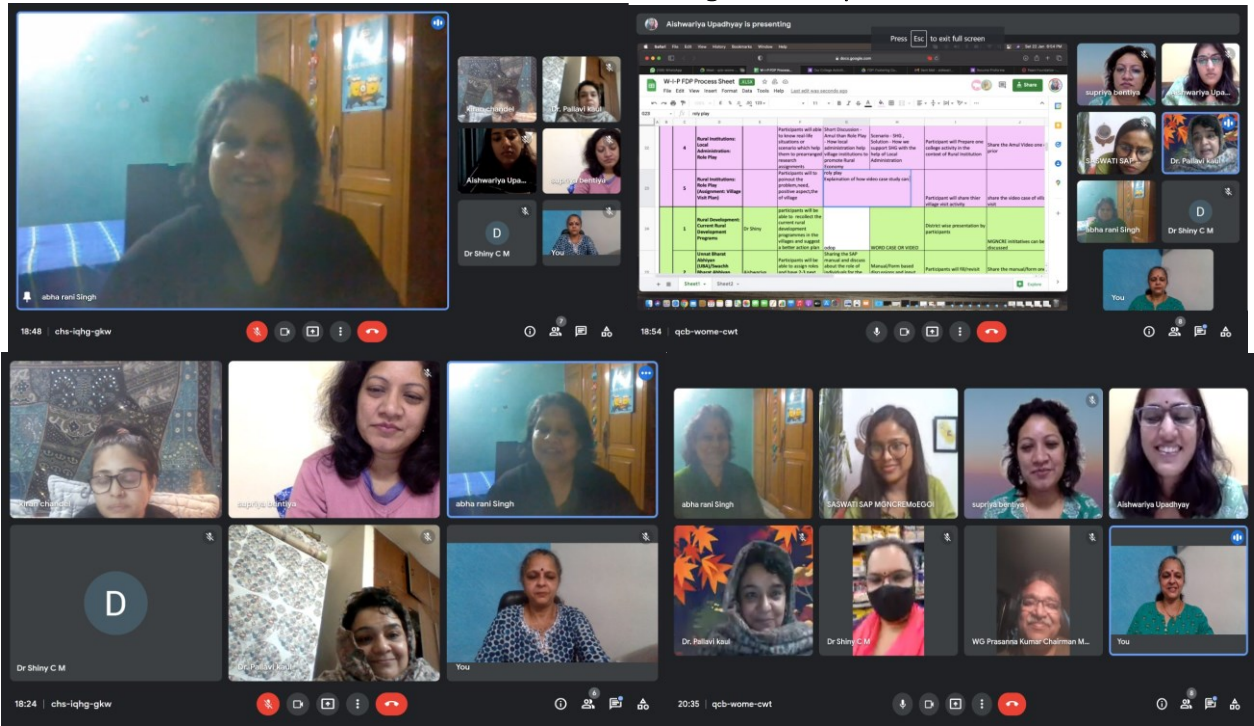
Sustainability Index Proforma : 10 March 2022 1.30 PM to 11 March 2022 1.30 PM		
Timestamp	Name of the Institution	Institution's District
3/10/2022 14:31	SREE AYYAPPA COLLEGE FOR WOMEN	Kanniya Kumari
3/10/2022 14:54	Government Art's College Chidambaram	Cuddalore
3/10/2022 15:27	ADHIPARASAKTHI COLLEGE OF ARTS AND SCIENCE	RANIPET
3/10/2022 15:07	Nallamuthu Gounder Mahalingam College (Autonomous)	Coimbatore
3/10/2022 15:16	B.S.Abdur Rahman Crescent Institute of Science and Technology	Chengalpattu
3/10/2022 16:45	ISLAMIAH COLLEGE (AUTONOMOUS)	TIRUPATTUR
3/10/2022 17:28	Shree Raghavendra Arts and Science College	Cuddalore
3/11/2022 8:41	M.R.Government Arts College,	THIRUVARUR
3/11/2022 11:59	BPJ College of Arts and Science	Cuddalore
3/11/2022 12:12	RABIAMMAL AHAMED MAIDEEN COLLEGE FOR WOMEN	THIRUVARUR

Sustainability Index Proforma : Madurai Update 9 March 2022 ; 2 PM		
Timestamp	Name of the Institution	Institution's District
6/3/2022 22:34	Mangayarkarasi College of Arts and Sciences for Women	Madurai
3/8/2022 12:53	Nagarathinam Angalammal Arts and Science College	Madurai
3/8/2022 16:27	AMBIGA COLLEGE OF ARTS AND SCIENCE FOR WOMEN	Madurai
3/8/2022 19:28	Madurai Gandhi NMR Subbaraman College for Women	Madurai
3/8/2022 13:33	PKN Arts & Science College	Madurai

Sustainability Index Proforma : Salem Update 9 March 2022 ; 2 PM		
Timestamp	Name of the Institution	Institution's District
4/3/2022 20:19	Vinayaka Missions Annapoorna College of Nursing	Salem
4/3/2022 20:30	Vinayaka Mission's Homoeopathic Medical College and Hospital	Salem
7/3/2022 14:57	Vinayaka Mission's College of Physiotherapy, VMRF (DU)	Salem
7/3/2022 15:11	Vinayaka Mission's College of Physical Education, VMRF(DU)	Salem
7/3/2022 15:25	Vinayaka Mission's Kirupananda Variyar Arts and Science College, VMRF (DU)	Salem

Annexure 9
Snapshots

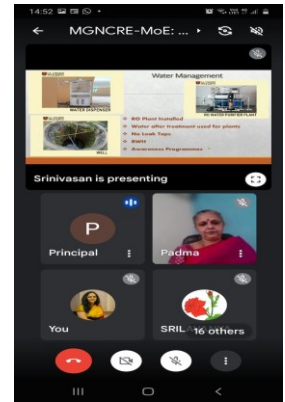
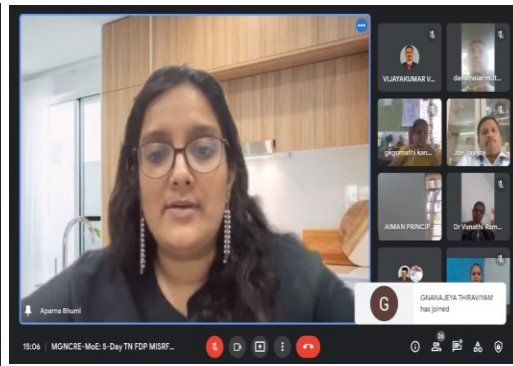
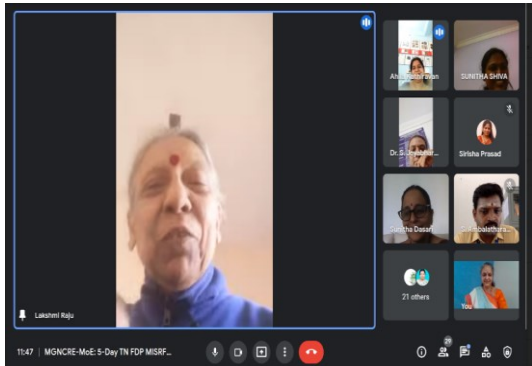
Master Trainer Mentoring Workshops



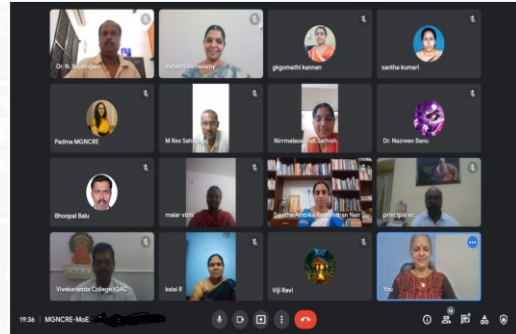
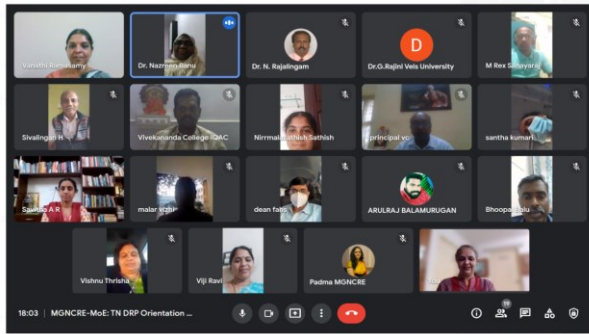
Pre-FDP Workshop



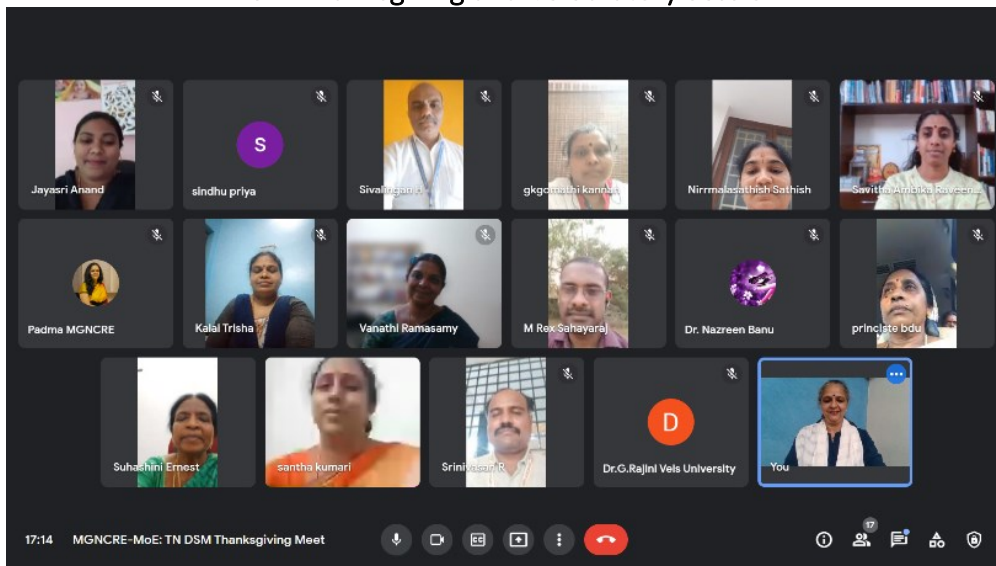
FDPs on Mentoring for Institutional Social Responsibility and Facilitation for Community Engagement



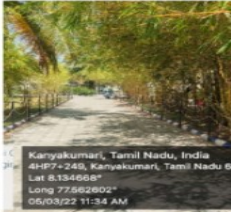
DSM Mentoring Workshops



DSM Thanksgiving and Celebratory Session



Institutional Visits Workshops



Annexure 10

Data Collection Tool – Questionnaire

Feedback about MT Mentorship Received by District Sustainability Mentor

Please spare 10 minutes to share your experience of being mentored for the DSM role

mgncre.tndsm@gmail.com [Switch account](#)

* Required

Email *

Your email _____

Your Name *

Your answer _____

Your Ten Digit Mobile Number *

Your answer _____

Your District as DSM *

- Chengalpattu
- Cuddalore
- Erode
- Kanyakumari
- Madurai
- Perambalur
- Salem
- The Nilgiris
- Thiruvavur
- Tiruchirappalli

Rate your Mentor Smt Padma Juluri. She: *

	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Applicable (situation did not arise)
Worked with you to set clear expectations of the mentoring relationship	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Aligned your expectations with her own	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Accurately estimated your level of Knowledge Skills and Attitude to enable task completion	Stimulated your creativity
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Displayed active listening skills	Acknowledged and applauded your professional contributions
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Identified and accommodated different communication methods (oral and written)	Coordinated effectively with other mentors with whom you work
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Employed strategies to improve communication with you	Considered how personal and professional differences may impact expectations
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Provided you timely, specific and constructive feedback	Showed a path to professional independence with you through goal setting
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Established a relationship based on trust with you	Helped you recognize the risks involved in certain actions during the project
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Inspired, motivated and encouraged you	Helped you gain new knowledge, skills and attitude as you worked on the project
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Built your confidence through consistent handholding	Used the WhatsApp group communication judiciously
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Modelled specific behaviors by conveying ideas and processes one-on-one, in a tutoring mode.	Was humble and polite at all times
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

What specific skills did you sharpen/learn from your mentor during the course of this project? *

Your answer _____

Any other feedback you wish to share about your mentor or about the project *

Your answer _____

Thank you for your time, effort and patience in filling out this form. Your responses help our mentors work on themselves and therefore our programs

Send me a copy of my responses.

Clear form

An Empirical Study on Mentoring and Facilitation for Sustainable Green Practices in Higher Educational Institutions in selected Districts of Tamil Nadu

An Action Research Project

Dr. R. Vanathi

Abstract

This paper aims at reviewing and understanding the quality constructs of mentoring and facilitation for sustainable green practices in Higher Education Institutions in Tamil Nadu. Educational Institutions are expected to play their role in order to save the environment for current and future generations. Drawing on theory of planned behaviour, this research aims to evaluate the mentoring skills and facilitation of HEIs green initiatives among the stakeholders. The paper is organized to highlight different quality practices which Higher Education Institutions have followed and understand to follow towards efficient green practices. The study highlights the role of Master Trainers as well District Sustainable Mentors, representatives of Mahatma Gandhi National Council of Rural Education, Ministry of Higher Education, and Government of India in mentoring and facilitating towards green practices. The process of mentoring is bringing out the qualities, abilities and channelizing a person's capabilities towards the self and professional developments. Facilitation is that it facilitates to solve the conflicts, helps to progress in learning, encourages the learners to share their ideas, provides the resources to the learners and flexible, adapts and implements the changes in learning process. Managing, monitoring and maintaining green practices through effective mentoring and facilitation in Higher Education Institutions is an important finding of the paper. Alongside this, the reasons behind the shortcoming of quality practices used in higher education system were highlighted. The findings include the opportunities for future research for imbibing green practices in HEIs. Under the philosophical assumptions of positivism and using quantitative approach, data was collected from 50 HEIs in Tamil Nadu. Results indicate that HEIs' green initiatives towards environmental concern are understood. Relationship between Master trainer and District sustainability mentor in implementation of green activities was also found positive.

Key Words: Mentoring and Facilitation, Higher Education Institutions; Green Initiatives; Attitude toward environmental concerns.

Introduction

Mentoring is that process of bringing out the qualities, abilities and channelizing a person's capabilities towards the self and professional developments. In India, Mentoring is an old concept used in both politics and spirituals. The mentoring involves guide ship, being a role model, ready to share the knowledge, bringing emotional balances and assists in the career development. The importance of Mentoring is enhancing the abilities and skills in learning process, developing the identity for the profession, helping to build the career for mentees, to make the mentees more self-reliant, encouraging the leadership, providing educational support.

The facilitation is a group of activities including create, discover and learning insights. It also includes asking questions, moderates discussions

and introduces activities and help participants to learn. The importance of facilitation is that it facilitates to solve the conflicts, helps to progress in learning, encourages the learners to share their ideas, provides the resources to the learners and flexible, adapts and implements the changes in learning process.

The various studies have highlighted the benefits of mentoring and facilitation. It is a deep relationship between the mentors, the senior and improves his own knowledge (Myunghee Kang, Young Ran Yoo & Young Park). Building the trust among the mentees and focus on personal and professional development (Jagdish R Varma). The mentoring improved the performance of mentees in all areas of personal growth, capability, high level of engagement and career. (Pratibha Bundela Gupta

and B L Gupta).

In a country like India, awareness on Sustainable development goals is much need among the major stakeholders of the nation. HEIs are one among the major stakeholder; their understanding about SDG plays a vital role in the development of the Nation. This need was well taken by MGNCRE; thus, the

Purpose of the Action Research

- The studies emphasized the importance of HEIs management to make the implementation of sustainability policies possible by planning, reporting, and assessing. In India, the smaller number of papers dedicated to the analysis of the HEIs planning documents in comparison to the ones focused on assessment can be identified as a gap in the research about HEIs initiatives towards SD conducted so far through mentoring and Facilitation. MGNCRE took the role of mentoring every state's each district through hand hold of Master trainer and District Sustainable Mentor. The fulfillment of the universities role to promote SD will only be achieved when the SDGs become part of the HEIs strategy. That is a gap in the research about sustainability in HEIs, since not so many works focused on strategic planning for sustainability have been published in comparison with the number of studies focused on reporting and assessing sustainability.
- Therefore, as this review results indicate, there is a possibility of future studies about the HEIs sustainability commitments in their strategic plans. Future research could also develop new tools to connect HEIs strategic plans to assessment tools and results in sustainability
- The Number of Higher Education Institutions in India 2020, (as per Published by Statista Research Department, Mar 11, 2022) Out of over 55 thousand Higher Education Institutions, there were 1,043 universities in 2020 listed on AISHE portal that are empowered to award degrees. Colleges are either affiliated or recognized with universities, while stand-alone institutions provide diploma certification rather than degrees.
- There is a need for master trainer who needs to mentee and facilitate the district sustainability

project Sustainable index Performa (SIP) was well-designed and implementation of them through Master trainer and District sustainability mentor. SIP, is all about the resources have to be monitored, managed and maintained. Understanding and effective mentorship each Master trainer through District sustainability mentors have reached possible districts and minimum of five institutions.

mentor to reach sufficient number of HEIS in every state.

Scope of the Action Research

MGNCRE was deputed to work on creation of various tools to help HEIs to inculcate a sense of Swachhta and Green initiatives in HEIs across the country India. This action research focusses on following objectives where the Master trainer stimulates the district sustainable mentor to reach the HEIS of various district to

1. Provide guidance to institutions on various aspects of Swachhta for a clean and green campus through a use of Standard Operating Manual (SOP).
2. Build swachhta skills in students and ensure they take ownership of maintaining Swachh campuses, Swachh campus manual and Jal shakthi.
3. Ensure Swachh campuses through use of Swachh Campus Manual and Promote healthy competition between institutions to maintain swachhta ratings.

This action research is done in 50 institutions of 10 different districts of Tamil Nadu. The study is done in the HEIS of the districts of Coimbatore, Chennai, Thiruvallur, Thirupathur, Ranipet, Pudukotai, Thiruppur, Tanjore, Tenaksi and Thirunelveli.

Objectives of the Action Research

1. To identify the various Best green initiatives adhered in HEIs of various districts in Tamil Nadu
2. To understand the need for mentoring and facilitation of HEIs of various districts of Tamil Nadu in practicing the green initiatives.
3. To highlight the quality relationship between master trainer and District sustainability mentor in Tamil Nadu towards observing green initiatives.

Review of the Literature

Sudepta Pradhan and Sunny Bose (2021) conducted the study on mentee expectations. The researchers took 28 second year MBA students were selected and deputed with a mentor. It revealed that the mentees were unable to relate to their mentors due to variation in the area of interest, specialization and lack of expertise.

Pratiba Bundela and Dr. B L Gupta (2021) reported that the faculty members acted as mentor in formal, informal and both ways during the pandemic situation. It also focused on the quality of mentoring. The study stated that due to mentorship, the highest academic performance of 74% was achieved.

Bindu Thirumalai (2020) studied about developing teachers as peer mentors while adopting ICT tools in the process of mentoring. The first phase of study gave positive feedback and teachers participated actively. The integration of ICT and online medium are highly contextual and is difficult to adopt. But the study revealed that it would become necessity.

Dr. B L Gupta and Pratiba Bundela Gupta (2021) focused on the barriers to mentoring. They identified the barriers to mentoring were inadequate time, incompetent mentors, lack of professional mentoring, inadequate rewards, the wrong use of mentoring, inadequate support by institute, lack of specialized knowledge and unclear purpose. The researcher suggested various strategies such as providing sufficient time, competent mentors, and rewards support form institution and import training with the assistance of information technology.

Siddhant Attri (2020) conducted the study in IIT and selected 120 students and 15 mentors. The mentoring was helpful for the new students as the have to prepare mentally to suit into the environment. Also, it recommended that senior faculty members could add benefits such as time management, teamwork and communication. It was found that this mentorship had an improvement in academic and personal

development. It suggested conducting a training programme for the mentors.

Margaret Fisher Msc and Rachel Stanyer (2018) developed a 20-credit degree level module and a timetable of peer mentoring fieldwork of 30 hours was implemented. They adopted this module to second year students, for building relationships by pairing and are instructed to meet frequently or conduct technical sessions. The study showed that it made an impact over developing personal as well as professional abilities of students. They observed the link between mentorship skills and professionalism. It was concluded that peer mentoring not helps the participants but also develops their profession.

Jagdish R Varma (2016) stated that the role plays were the most valuable criteria in mentoring. Experience of a Faculty Development workshop in mentoring at an Indian Medical College was conducted. This workshop was given to 28 mentors. It included SAGE (Surrendering, Accepting, Gifting, and Extending) model. This workshop was effective as it changed the mentors' view towards mentoring.

Pramod Raichurkar (2015) defines mentoring as relationship in a friendly manner. The mentors act a problem solving by guiding students and also supported by professionals of the industry. The feedback helps to improve the program. It concludes that the course jointly utilizes the industry-institute partnership, the process of mentoring and active learning led to success.

Carolina A Magaldi (2014) conducted a study with 120 students, 23 faculty members of various disciplines and Online tutors. It revealed that Assistant Supervisor, Support agent and again back from support agent to Assistant Supervisor to student. Also had supervision team to exchange their experience through discussions regarding their dissertations. The study stated that the Institution was able to prove that mentoring was a valid supervision method and alternate motivation in distance learning Master' Degree.

Rebecca S Fruge (2001) examined undergraduate students to determine which mentoring skill was helpful for protégé. The students were asked to identify the most mentoring skills among the

teacher's administrators and others who advise them. The study identified that the mentees expect absolute knowledge and proper communication among mentors.

Hypothesis

H1: HEIs of Various districts of Tamil Nadu adhere to best green initiatives

HEIs have a distinctive role to encourage sustainable development (Yanthi et al., 2019). The green initiatives of HEIs have visible social, environmental and economic impacts and these impacts can be obtained through the involvement of faculty and administration of HEIs (Ribeiro et al., 2019). HEIs provide the

opportunities to students to take part in sustainable development of environment and become a part of sustainable society. HEIs take society towards a sustainable future by bringing transformational changes in life styles and by promoting sustainable practices and can lead by example (Amaral et al., 2015).

H2: Mentoring and facilitation impacts HEIs of various districts of Tamil Nadu towards practicing the green initiative

HEIs can bring a huge change in an individual's attitude by imparting knowledge and shaping an individual's sustainable intent (Milutinović & Nikolić, 2014). It was suggested in recent research that education for sustainability should be implemented in educational sectors; otherwise environmentally sustainable practices will be

obsolete (Istiqomah, 2020). HEIs character in motivating the stake holder's attitude toward environmental concerns is of great importance. Thus, mentoring and facilitation impacts HEIs of various districts of Tamil Nadu towards practicing the green initiative.

H3: Master trainer and DSMs have positive relationship in implementing Green practices among HEIs in various districts of Tamil Nadu.

Attitude of a person will help to make an individual's intention to participate in green activities. There has been massive increase in environmental concerns and environmental awareness during the past three decades (Chen & Chai, 2010). It has been proved from previous

research that attitude positively influences the pro-environmental behavioral intentions (Abdul Rahman Butta, 2019). Master trainer mentors and facilitates DSM towards implementing green practices.

Need of the Action Research

It is evident that for implementation of any practice among a huge population a systematic and scientific approach is essential. MGNCRE's project on Swatch action plan paved way to think out and realize before ensuring about Green Initiatives Mentoring

and facilitating is most required activity. Good mentoring and facilitating nurtures Values towards green initiatives, a way forward to sustainable development goals. Thus, MGNCRE has streamlined the action plan with enough care with the activities

- Training to Master trainers
- Conduct of FDP for HEIs in Various districts
- Selection and training of DSM
- Mentoring and facilitation of the DSM by Master trainer
- Outcome was formulated in completion of filling SIP sustainability Index Performa, bringing out success stories and best practices.

Action Research

The major aspect of action research is mentoring and facilitating HEIs towards sustainable practices and educate about the sustainability index Performa.

The steps adapted were training the Master trainers through brainstorming sessions on sustainable practices and blended with mentoring and facilitating skills. The Fig. 1 and 2 exhibits the initiation and implementation process

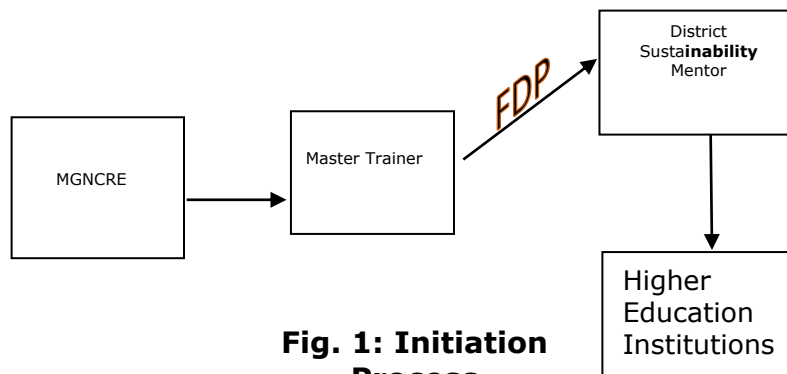


Fig. 1: Initiation Process

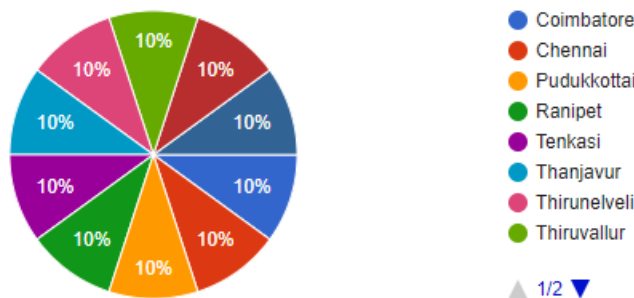


Fig. 2: Implementation Process

The master trainer conducted faculty development programs in various districts of Tamil Nadu and selected the district sustainable mentor among the participants who gave the consent to reach HEIs in mentoring and facilitating them with sustainable

index Performa and motivate to maintain, monitor and manage sustainable green practices in the campus. The above figure illustrates the 10 districts covered by the DSMs under the master mentor.

Challenges

Every action research has its own challenges. Finding out the challenges is half solved.

- Understanding the mission and vision of the project of initiating, implementation of Sustainable green practices.
- Execution of the project with the consent HEIs management and Head of the institution
- Academic assignments already in progress
- Time constraints of HEIS.

Actions Planned to Address the Challenges

- Authenticated and Authorized communication from MGNCRE
- Proper communication from Master trainer to DSM
- Handhold support to DSM
- Continuous Follow-ups
- Mutual thrust and Listening to the situations
- Problem solving
- Appreciations at all levels of progress
- Contribution of the Master trainer

Research Methodology

The research has been conducted based on positivism epistemology. This study uses the quantitative method of analysis. The nature of the study was causal. The population was the HEIs of Tamil Nadu. Data was collected from HEIs of 10 districts of Tamil Nadu. The sampling technique which was used in this research is the convenience sampling technique. In this research there were 50 HEIs. Data has been collected through an online

Google form questionnaire to answer the research questions. The questionnaire was divided into four sections, which included respondents' demographic information and variable measurement items. The scale we used was Likert scale (Strongly disagree =1, disagree 2, Neutral=3, Agree- 4, strongly agree=5). The reflections of DSM on aspects of Master trainer's skills, attitude and knowledge were measured.

Findings

The action research exhibits the best green initiatives of the 50HEIs in various districts of Tamil Nadu. Each HEIs are equally involved in contributing to the five major aspects of green

initiatives. The reports of the DSMs show the activities of Greenery management, water management, Energy management, Waste management and adopted village activities.

Sanitation and Hygiene (Campus and Community / Adopted Villages)

Every College has organized Covid 19 sanitation protocol and ensures that the toilets are cleaned on a continual basis. Drinking water facilities are made available round the clock for the benefit of the students. They are encouraged to wash hands periodically, and appropriate disposal of sanitary napkins. Besides, awareness is created on garbage disposal. HEIs has continuously involved COVID-19 awareness programs HEIs and the student team

supported the covid care centres. They have volunteered in vaccination centres as well conducted programs on awareness on vaccination. They explained the Covid care packages to the patients or their attender and maintained the Stock & Food Registers in the hospital. They have donated Masks & Grocery Items to Tribal people near their campus. Kabasura Kudi Neer (A Medicinal drink) was distributed to the people in nearby villages. Among 50 HEIs all of them involved in the above activity.

Waste Management (Campus and Community / Adopted Villages)

Plastic use has been banned in the college campus, and for any functions, use of flex banners are replaced with cloth banners. The college office maximizes the use of paperless communication,

through the use of emails and whats app to communicate important information. Awareness camps reiterate zero littering practices in the campus and ban of single use plastics.

Water Management (Campus and Community / Adopted Villages)

The college aims at enhancing the rainwater harvesting pits. Saving water through practical initiatives like fixing leaking taps in the campus and channelizing waste water to plants are done.

Recycled water answers the water requirements of the college. Compost pits are in use to create natural manure.

Energy Management (Campus and Community / Adopted Villages)

An attempt has been made to evaluate the use of solar energy on the campus to reduce the cost of electricity. Many HEIs have planned solar panels in the campus at their own budgets.

Greenery (Campus and Community / Adopted Villages)

The college campus prides a sizeable expanse of greenery. A seed bank has been set up to enable planting of samples. Setting up organic gardening

practices is a ritual in the college and students are encouraged to indulge in kitchen gardening. Apart from this, the various club activities support rural

engagement and students are involved through workshops and seminars. Every 1st of the Month is observed as No Vehicle Day to reduce pollution on campus. On the occasion of World Water Week

- Ban flexi banners (Only cloth banners to be used)
- Paperless work – use of email, WhatsApp for communication
- Solar panel was placed in the campus to reduce the usage of electricity for the need.

Poster Creation Competition on topics 'Harvest the Rain, Feed the World' was conducted for students. Ban plastic use in the campus

More than 25 solar assisted street lights were kept in campus areas. All most all institutions have implemented sufficient green practices.

Major Highlights on Mentoring and Facilitation by Master Trainers

The following are the reflections of 10DSMs, who belong to various districts of Tamil Nadu, their responses to the aspects of the mentoring by Master trainer which helped them to approach the institutions easily were

- The MGNCRE Designation and Letter to the head
- Master Trainer initiated and travelled with us throughout the project and guided in well planned manner and cleared all mentor doubts, each and every day in every step. So Mentor didn't feel it difficult to identify and approach the institutions.
- Clear guidelines from Master trainer
- Help the way of approaching the institution
- Proper and Authenticated communication
- Institutional Values and Best Practices of NAAC is also reflected through the SIP. It helped mentor to understand how important is for academic institutions with clarity on sustainability
- Efficiency of Master Trainer in knowledge Sharing.

The Following are the Specific Knowledge or Skill or Attitude Related Aspects of Mentor that Facilitated DSM for the Project Implementation

- Continuous Guidance from master trainer
- Master Trainer's expertise in conceptualizing the content of SIPS as well the green initiatives.
- Politeness and humble in responding to queries of the DSM
- Effective Communication
- Consistent follow-ups, handling the teams and higher officials
- Having a positive approach to problem solving and persistence

Building of relationships between Master trainer and DSM with learnings reflect by the DSM

The relationship between master trainer and DSM was positive, since they together reached 50 HEIs with the Sustainability index Performa and physical visits also happened. There is a development of transferable skills such as problem-solving skills; critical-thinking; creative skills; ability to

understand the social and ethical implications of their practice; communication and team working skills; interpersonal skills and empathy, listening and respect. Innovation is an important trait of growing organisations. Growing organisations need organized grooming support.

DSMs expressed that

- A trusted relationship between Master trainer is nurtured
- A meaningful commitment exists between Master trainer and them.

Facilitation Skills are "process" skills which can be used to guide and direct key parts of organizing work with groups of people such as meetings, planning sessions, and training of members and team leaders. Mentoring builds, the competencies of grooming. Grooming is not a conceptual textbook work but is

technical and practice oriented. Facilitation helps in decision making and enhancing skills and competencies among the master trainer and the district sustainability mentor. Their relationship is blended with

- Communications and follow ups
- Leading institutions with patience, clear-cut ideas and unambiguous.
- Purpose of the actions were discussed
- The way of handling everything in a perfect and consistent manner, prompt reporting, etc
- Positive and knowledge sharing
- Empathy of Master trainer
- Motivation till the end of the project.

Outcomes of the Action Research

A continuous institutionalised effort is always required for grooming the HEIS to shoulder the roles of Institutional Social Responsibility through Institutional and Systems upgradation and updating. This requires huge institutional Mentoring and Facilitation Skills blended with the fundamental elements Mentoring capabilities, Intellectual Stimulation, Inspirational Motivation, Idealized Influence, Sharing Vision, Communicating

the Vision, Building Relationship, developing a Supporting Organizational Culture, Guiding Implementation, Exhibiting Character and achieving Results. This action report expresses that mentoring and facilitation is essential for HEIs to move ahead on sustainable green practices. There is positive relationship between Master trainer and DSM that paves way forward for sustainable green practices in HEIs.

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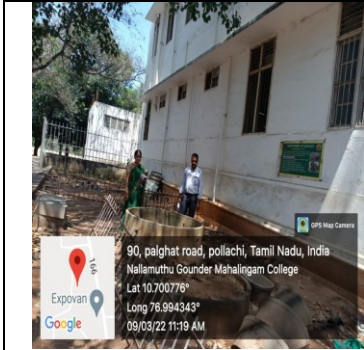

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About the Author

Dr. R. Vanathi is currently working as Assistant Professor and Head of Department of Business Management, Erode Arts and Science College (Autonomous) Erode-09. She served as NSS program officer. With keen interest in student welfare, she has organized activities oriented to Entrepreneurial Skills, Personality Development Programs and Extension activities. She has experience in UGC funded projects and guides Ph.D candidates in marketing stream. She has served as Resource Person for workshops and conferences in Tamil Nadu and is associated with Mahatma Gandhi National Council of Higher Education, Ministry of Higher Education, Government of India, Hyderabad. She is a passionate teacher, researcher looking forward to raise responsible citizens.

Annexures

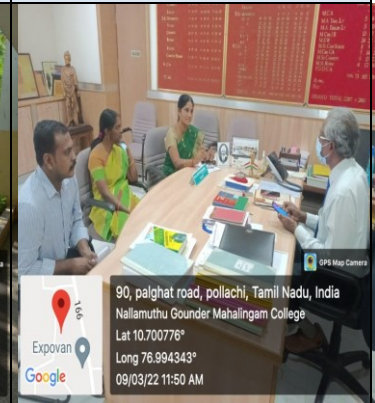
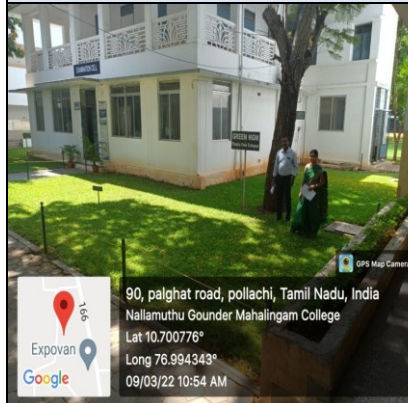
Best Practices of the HEIs in Tamil Nadu

 <p>90, palghat road, pollachi, Tamil Nadu, India Nallamuthu Gounder Mahalingam College Lat 10.700776° Long 76.994343° 09/03/22 11:26 AM</p>	 <p>90, palghat road, pollachi, Tamil Nadu, India Nallamuthu Gounder Mahalingam College Lat 10.700776° Long 76.994343° 09/03/22 11:37 AM</p>
<p>Rain Water Harvesting Pits</p>	<p>Water Tank</p>
 <p>90, palghat road, pollachi, Tamil Nadu, India Nallamuthu Gounder Mahalingam College Lat 10.700776° Long 76.994343° 09/03/22 11:19 AM</p>	 <p>90, palghat road, pollachi, Tamil Nadu, India Nallamuthu Gounder Mahalingam College Lat 10.700776° Long 76.994343° 09/03/22 11:21 AM</p>
<p>Compost Pit</p>	<p>Herbal Garden</p>



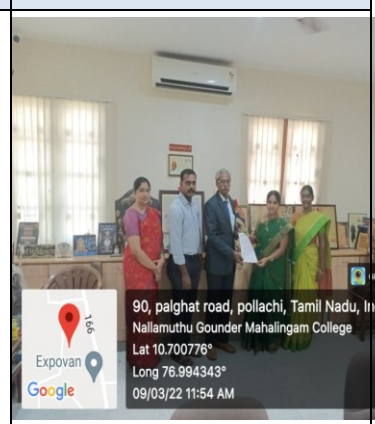
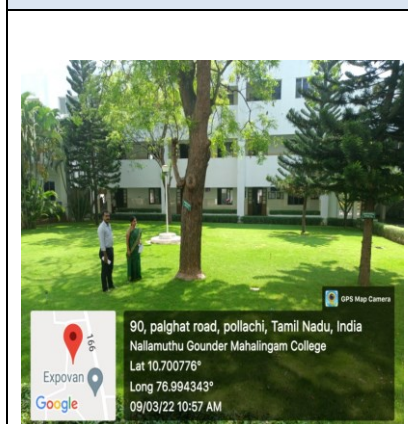
Solar Panels

Under the Green Cover in College



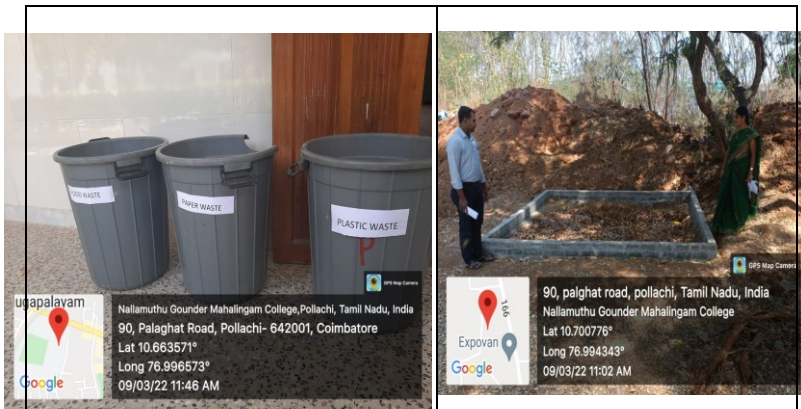
Plastic free eco campus

Workshop Photo 1



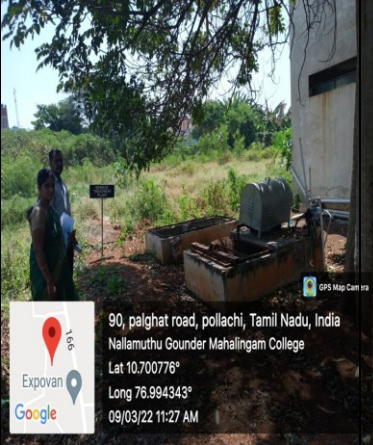
Eco-friendly green campus – with herbal Plants

Workshop Photo 2



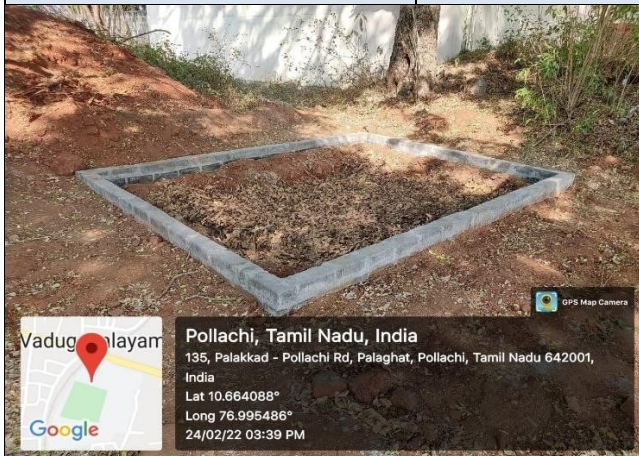
Waste Generation and Segregation

Waste Manure Recycling Pit



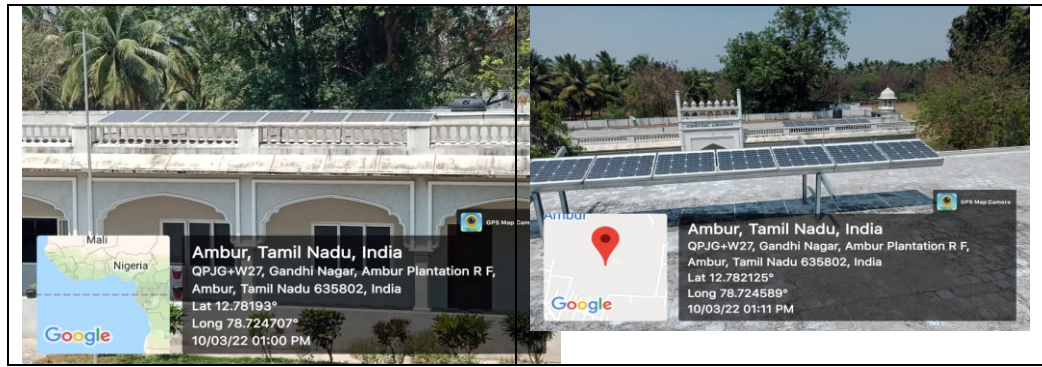
Rain Harvesting Pit

Liquid waste Management



Bio-degradable waste management

Green Nursery with samplings



SOLAR PANELS in HEIs' TERRACE

BIO MEDICAL WASTE MANAGEMENT

LAB WASTE WATER MANAGEMENT



Role of Mentoring and Facilitation Skills in Grooming Sustainability Mentors in Higher Education Institutions in the Districts of North Eastern States

An Action Research Project

Dr. Savita Mishra

Abstract

Higher Education Institutions play a critical role in long-term sustainability. They play an important role in the education of future leaders who will help the United Nations achieve its Sustainable Development Goals (SDGs). To achieve this goal mentoring the faculty of Higher Education Institutions to understand their institutional social responsibility and facilitating them for community engagement programme is very important and need of the hour. Mentoring is a process, which involves three main stages, namely Communicating, Empowering and Helping. Facilitation involves a mindset of helping others perform better by creating growth opportunities and by providing coaching that allows others to take on more ownership and control of their performance. This action research project analysed the impacts of higher education on sustainability and the challenges and barriers associated with this process. The objective of this study was to mentor and facilitate the District Sustainability mentors for collecting the sustainability index information from the colleges visited by them and to promote sustainable practices in institutions. Field survey method was used for data collection from 54 institutions from three North Eastern states. Sample selected by purposive sampling method from population. Methods of data collection were questionnaire, interview and observation. Findings of the study were that 54 sustainability reports and 54 college success stories were received by 12 DSMs.

Key Words: Mentoring, Facilitation, Sustainability, DSM, Sustainability practices.

Introduction

Higher Education Institutions play a critical role in long-term sustainability. They play an important role in the education of future leaders who will help the United Nations achieve its Sustainable Development Goals (SDGs). The geography of SDGs this implementation is very heterogeneous, but Higher Education Institutions contribute decisively to creating a mindset that facilitates the dissemination of SDGs principle. This study analyses the impacts of higher education on sustainability and the challenges and barriers associated with this process. Higher education contributes decisively to the SDGs implementation, but especially to Goal 1 (end poverty in all its forms everywhere), Goal 3 (ensure healthy lives and promote well-being for all at all ages), Goal 5 (gender equality), Goal 8 (decent work and economic growth), Goal 12 (responsible consumption and production), Goal 13 (climate change) and Goal 16 (peace, justice and strong institutions). As a transformational agent, the

higher education sector has a tremendous impact on students' habit and contribution to a prosperous society. However, to establish the required change in education, sustainability principles need to be at the heart of higher institutions strategy (e.g., curricula, modus operandi) and is key to be incorporated in the organisational culture. Only by leading by example, the external influence in the society will be possible (e.g., implementing SDGs key aspects such as gender quality, reduce waste reduction and energy consumption). For this to be a reality, different communication methods with students are needed (e.g., different student academic levels). Nevertheless, critical challenges need to be tackled in the institutions inside and outside the institution environment, such as incorporating sustainability principles.

Mentoring, as a concept, has a critical function to play in increasing individual performance as well as

organisational development and progress. In today's competitive and stressful work world, having a mentor can be a lifesaver for new employees. A mentor acts as a guide, coach, motivator, and source of emotional support. Employees in any organization are constantly exposed to challenging situations, be it at an individual level, dyadic level, and team level or at an organizational level. Mentoring is a process, which involves three main stages, namely Communicating, Empowering and Helping.

Facilitation is an important component of teaching and learning, and all faculty members can benefit greatly from honing their facilitation skills. Facilitation involves a mindset of helping others perform better by creating growth opportunities and by providing coaching that allows others to take on more ownership and control of their performance. A facilitated activity should be planned in advance, thoughtfully and efficiently set-up, and managed continuously with an appropriate level of intervention.

Table 1: Facilitation Principles

1.	Do not make assumptions.
2.	Shift ownership of the process to the participants.
3.	Establish shared expectations.
4.	Develop a strong, flexible facilitation plan.
5.	Perform continuous real-time assessment
6.	Intervene on process, not content.
7.	Shift role to consultant when the participants use the facilitator as an expert.
8.	Bring closure to each activity.
9.	Perform a summative assessment of the facilitation process.
10.	Connect with each participant.
11.	Make sure that every key finding, consensus, and valuable insight is documented.
12.	Make the process rewarding and growth-oriented for the participants.
13.	Do not compromise the means for the sake of the ends.

Table 2: Facilitation Skills

1.	Listening and rephrasing
2.	Setting criteria
3.	Parallel processing
4.	Identifying key issues
5.	Identifying assumptions
6.	Making connections
7.	Being open to feedback
8.	Being open-minded
9.	Risk-taking
10.	Managing frustration
11.	Summarizing
12.	Recognizing emotions

The Role of Higher Education Institutions in a Sustainable World

Education is the driving force of establishing sustainability since it is one of the main communication vehicles and the basis for the

“sustainability mindset”. This concept includes *“a systemic approach to understanding, one which goes beyond technical knowledge and even*

understanding the basics of a healthy ecosystem and a thriving society". By emphasising management ethics, entrepreneurship, environmental studies, systems thinking and self-awareness, the sustainability mindset encourages us to break away from traditional management disciplinary silos (Kassel et al., 2016). For instance, systems thinking are often mentioned as one of the skills necessary to better understand the meaning of sustainability. This is because sustainability integrates three equally dimensions: environmental, social and economic. According to UNESCAP (2015), "People and the nature of the society in which they live are shaped by and, in turn, shape the economies that support their livelihoods and enhance their overall quality of life. Environments provide life-giving and economically important services to economies and to people".

The geography of high education enrolment and their social, economic and environmental benefits is heterogeneous. Fehlner (2019) highlighted a positive relationship between higher education and sustainable development. Higher education contributes substantially to the graduates having a well-paid job and build stable and prosperous societies. In addition, higher education promotes the creation of new ideas, technologies that are the basis of sustainability. Despite this, Higher Education Institutions' contribution to society is likely underestimated (Fehlner, 2019). Higher Education Institutions have a decisive impact on shaping mentalities. According to Bowen (2018), the impact of higher education in adult life has an average of fifty to sixty years after graduation. In society, this effect can continue for centuries.

Table 3: Higher Education Institutions' role in the implementation of Education for Sustainability

	aching and research centres can improve sustainability by project development and incorporation of sustainability principles across the disciplines
	practice carried out by different educators can influence broader opinions through outreach activities
	institutional culture of sustainability increases the awareness of university staff, local and broader communities
	h education institutions are responsible for the formation of next-generation professionals, which will have a decisive impact on their different professional contexts and social engagements; and
	implementing sustainable campus practices (e.g., reducing greenhouse emissions, promote biodiversity, efficient use of energy and reduce the ecological footprint).

Purpose of the Action Research

A Five-day online Faculty Development Programme on Mentoring for Institutional Social Responsibility and Facilitation for Community Engagement for faculty of Universities, Colleges and Higher Education Institutions was organized by Mahatma Gandhi National Council of Rural Education Department of Higher Education Ministry of Education Government of India. This Faculty Development Program aimed to groom faculty to make innovative strides and reforms in

teaching-learning environments. Based on this Faculty Development Programme Twelve District Sustainability Mentors were selected on their performance from North Eastern states. The purpose of this Action Research was to mentor, monitor and facilitate the DSMs in collecting the Sustainability Index Information and college success stories from the colleges visited and follow up the sustainability practices in their districts.

Scope of the Action Research

The scope of the Action Research is to mentor, monitor and facilitate the twelve DSMs selected from FDPs of twelve districts (Out of 13 districts) of NE states in collecting the Sustainability Index Information and college success stories with photographs from the colleges visited by them and to promote sustainability practices in colleges. Details are given in Table 4.

Table 4: Details of States and Districts covered in FDPs

Sr. No.	States	Districts
1.	Assam (5 Districts)	Bajali, Hojoi, Biswanath, South Salmara and West Karbianglong
2.	Sikkim (3 Districts)	South Sikkim, West Sikkim and North Sikkim
3.	Tripura (5 Districts)	South Tripura, North Tripura, Sipahijala, Unakoti and Khowai
Total	3 States	13 Districts

Review of the Literature

A systematic review carried out by Figueiró and Raufflet (2015) pointed out that the effectiveness of teaching sustainability issues is high if sustainability is considered in the core courses (mandatory disciplines), not in marginal ones. In this context, it is key to ensure that university programs consider sustainability-oriented projects at their core. Several methodological frameworks have been proposed for sustainability topics knowledge transfer. A constructivist approach has been suggested by Hedden et al. (2017) to teach sustainability. Tejedor et al. (2019) identified five different learning strategies for sustainability education in Higher Education Institutions: project-oriented learning, simulation games, problem-based learning, service learning and case studies.

A considerable number of works and revisions were developed on the impacts and presence of sustainability principles in degrees, course contents (e.g., Fuertes-Camacho et al., 2019; Sanchez-Carracedo et al., 2021; Sidiropoulos, 2014), and learning methodologies (e.g., Gatti et al., 2019) in Higher Education Institutions have been published. There

is an increase in the incorporation and acceptance of sustainability issues in higher education (e.g., Sammalisto and Lindhqvist, 2008). Nevertheless, in several cases, they are not uniformly developed and unbalanced between degrees as observed by Sanchez-Carracedo et al. (2021) in Spain or fail to be fully integrated into the programs as identified by Stough et al. (2018) in Belgium. Although several courses include in their contents the learning outcomes that promote sustainability or adopt sustainable practices (Mintz and Tal, 2014). According to Mintz and Tal (2013), the learning outcomes are higher when a participatory learning method is applied compared to lecture-based courses. Regardless of the methods applied, the important is that the students perceive sustainability as a critical aspect of their education (Boarin et al., 2020). The inclusion of sustainability principles in Higher Education Institutions and academic curricula increase their knowledge, views, awareness and attitudes towards sustainability (Sidiropoulos, 2014).

Objectives of the Action Research

The objectives are as follows:

- To mentor the selected DSMs and facilitate them to visit 5 colleges in a district.
- To facilitate the DSMs, conduct round tables/ interactions/ offline workshops.
- To monitor and facilitate the DSMs in collecting the Sustainability Index Information from the colleges visited.
- To monitor the DSMs in preparing and submitting a report of 4 pages on the college success stories.

- To make the DSMs in submitting 14 photographs and newspaper clippings, if any, of the activities conducted by the institutions.

Hypothesis of the Action Research

The hypothesis are as follows:

- Selected DSMs are mentored and facilitated to visit 5 colleges in a district.
- DSMs are facilitated to conduct round tables/ interactions/ offline workshops.
- DSMs are monitored and facilitated for collecting the Sustainability Index Information from the colleges visited.
- DSMs are monitored in preparing and submitting a report of 4 pages on the college success stories.
- DSMs are prepared in submitting 14 photographs and newspaper clippings, if any, of the activities conducted by the institutions.

Need of the Action Research

Higher Education Institutions have a particular responsibility to form future professionals and implement the knowledge and ideas. Since 1970, universities have considered sustainability as part of their responsibilities. However, after the Talloires Declaration in 1990, there was an increase in universities that adopted a sustainability strategy. This declaration was followed by several others, such as the Halifax Declaration (Canada) the Copernicus Declaration of Association of European Rectors, and the Kyoto Declaration of the International Association of Universities (Corcoran et al., 2004). However, the implementation of sustainability these principles are not equal in all the world, and some regions are more advanced (e.g., Europe) than others (Bizerril et al., 2018). Irrespective of the differences, many Higher Education Institutions promoted sustainability and are deeply engaged in preparing students who are ready to understand the global

challenges and be active actors and examples in implementing sustainability principles. This can be achieved by reducing the institution's environmental footprint, engaging strongly with the communities, and having good governance (UNESCO, 2020). In recent years, a growing body of knowledge has been developed towards higher education to implement a sustainability curriculum in higher education, campus practices and outreach activities (Weiss and Barth, 2019; Menon and Suresh, 2020). Nevertheless, the high ranked universities are geographically concentrated in western countries, and it is imperative that this sustainability vision be adopted globally. This study aims to overview the impact of higher education on sustainability, especially on a) the role of high education institutions in a sustainable world; b) their relevance to achieving SDGs; and c) the challenges and barriers associated.

Challenges

- It was a big challenge to make understand DSMs about the importance of sustainability.
- To mentor and monitor DSMs and selected institutions for the given task
- To facilitate them for collection of Sustainability reports and college success stories.

Actions Planned to Address the Challenges

The following action plans were followed to address the challenges:

Pre-FDPs Orientation Workshops: Pre-FDPs orientation workshops were conducted to mentor, facilitate and monitor DSMs for completion of task. The details of pre-FDPs orientation workshops are given below in table 5.

Table 5: Details of Pre-FDPs Orientation Workshops

S. No	Date	States	Districts	Time	No. of Institutions Participated	No. of Participants	No. of SIP Submitted
1	7/2/2022	Sikkim & Tripura	South Sikkim, West Sikkim and North Sikkim,	1 PM to 2 PM	35	96	15
			South Tripura, North Tripura, Sipahijala, Unakoti and Khowai				
2	16/2 2022	Assam	Bajali, Hojai, Biswanath, South Salmara and West Karbianglong	2 PM to 3 PM	20	85	10

Faculty Development Program: FDPs were conducted phase wise to cover three NE states and thirteen districts to mentor and facilitate DSMs. Details are given in table 6 below:

Table 6: Details of FDPs

Sr. No.	Date	States	Districts	Time	No. of Institutions Participated	No. of Participants	No. of SIP Submitted
1	8/2/2022 to 12/2/2022	Sikkim & Tripura	South Sikkim, West Sikkim and North Sikkim, South Tripura, North Tripura, Sipahijala, Unakoti and Khowai	10 AM to 4 PM	35	158	30
2	18/2 2022 to 22/2/2022	Assam	Bajali, Hojai, Biswanath, South Salmara and West Karbianglong	10 AM to 4 PM	20	131	15

Orientation Sessions: Numerous orientation sessions with all 12 District Sustainability mentors (DSMs) were organized to train and guide them

properly for college visit and conducted workshops there with faculty and students. They were trained to collect sustainability reports and college success

stories from all visited institutes.

Institutions visited by DSMs: After orientation all 12 DSMs were visited 54 institutions, conducted workshops of 2 hours there and collect

sustainability reports and college success stories. The details of DSMs field visit are given in table 7 below:

Table 7: Institutional Sustainability Workshops Summary Statement

S. No	State	District	Name of the DSM	No. of Inst. Visited	Name of the Institutions Visited
1	Sikkim	South Sikkim	Dr. Panu Ongri Pazo	5	1. Loyola College of Education, 2. DIET - South, 3 NIT- Rabong, 4. CCCT - Chisopani, 5. Alpine University
2	Sikkim	East Sikkim	Pawan Kumar Ray	5	1.Harkamaya College of Education 2. Nar bahadur degree College 3.SRM university 4. Himalaya Pharmacy Institute 5. Damber Singh degree college
3	Tripura	North Tripura	Dr. Roitualiana Darlong	4	1. GDC Dharmanagar 2. GDC Kanchanpur 3. ITI, Bagbasa 4. Regional College of Physical Education
4	Tripura	Sepahijala	Rithi Majumdar	2	1. Rabindranath Thakur Mahavidyalaya 2. Kabi Nazrul Mahavidyalaya
5	Tripura	South Tripura	Indrajit Saha	3	1. Government Degree College 2. Michael Madhusudan Dutta College 3. Iswar Chandra Vidyasagar College
6	Tripura	West Tripura	Uttam Mitra	5	1. Women's College, Agartala 2. Ramthakur College, Agartala 3. Maharaja Bir Bikram College, Agartala 4. Bir Bikram Memorial College, Agartala 5. Holy Cross College
7	Tripura	Dhalai	Dr. Jekep Haram	5	1. Government Degree College, Kamalpur,

					2. ITI Kamalpur, 3. ITI Ambassa, 4. Dhalai District Polytechnic, 5. GDC, Longtra Valley
8	Assam	Bajali	Gitika Kalita	5	1.Nirmal Haloi college, Patacharkuchi 2. B.H.B college, Sarupeta 3. B.B. Kishan College, Jalah 4.North Kamrup College, Baghmara 5.Bhattadev University
9	Assam	Biswanath	Rajeswar Boro	5	1. Sootia College 2. Bihali College 3. Chaiduar College 4. Kalabari College 5. Biswanath Commerce College
10	Assam	Hojai	Dr. Ashis Saha	5	1. Maryam Ajmal Memorial College of Science and Technology. 2. Ajmal College of Arts, Commerce and Science 3. Ajmal Law College 4. Hojai Girls College 5. Haji Ajmal Ali College, Nilbagan, Hojai
11	Assam	South Salmala- Mankachar	Dr. Morsheduz Zaman	5	1. Mankachar College 2. South Salmara College 3. Hat Singimari College 4. Moulana Abul kalam Azad College 5. Hat Singimari Junior College
12	Assam	Sonitpur	Mr. Subham Roy	5	1. Tezpur College 2. Tezpur Law College 3. LGB Girls' College 4. T. H. B. College 5. Teachers Training College
Total	3 States	12 Districts		54	

Research Methodology

Research methodology followed in the Action research were field visit/ Survey method by the district sustainability Mentors for data collection from their assigned institutions. Field survey method was used for data collection from 54 institutions from 3 NE states. Sample selected by

purposive sampling method from population. Methods of data collection were questionnaire, interview and observation. Before this field visit all DSMs were mentored by Master Trainer in five days FDP by numerous methodologies given in table 8 so that DSMs will visit different institutions, conduct

workshops and collect data from their sample.

Table 8: List of Methodology

1.	Problem Solving Method
2.	Word Case Discussion Method
3.	Role Play Method
4.	Video Case Study Method
5.	Individual Exercises
6.	Group Exercises

Implementation of the Action Research Steps

Detailed Steps followed in organising and conducting FDPs:

Communicating with Colleges and Universities and talking to officials:

For organizing FDPs we talked with principals/Heads of Institutions of all institutions over phone. After getting their approval we made Pre-FDP workshops schedule with date and time of conducting workshops and joining link. For final approval we sent pre-FDP workshops schedule to Chairman Sir, MGNCRE. After getting

his approval we sent Pre-FDP and FDP time schedule with brochure and registration link to all principals' what's app and institutions' Email ID.

Whatsapp group formation for communication:

For proper communication we formed what's group of all institutions Districts and states wise and sent all information on time like joining link for pre-FDP workshops, FDP time-schedule, Brochure, registration link, feedback link, Resource materials etc.

FDPs Time schedule and contents: Details are given in table 9:

Table 9: Time Schedule of FDPs

Date	Session I 10:00 am - 11:00 am	Session II 11 am – 12 pm	Session III 12.00 pm - 1.00 pm	Session IV 2.00 pm – 3.00 pm	Session V 3.00 pm - 4.00pm
Day1	Institutional Social Responsibility	Mentoring Institutional Social Responsibility	Mentoring Institutional Social Responsibility	Facilitation for Community Engagement	Facilitation for Community Engagement
Day 2	Rural Society:	Rural Society: Rural Immersion:	Rural Infrastructure:	Rural Values:	Rural Natural Resources
Day 3	Rural Economy	Rural Economy	Rural Economy	Rural Economy	Rural Economy
Day 4	Rural Institutions	Rural Institutions	Rural Institutions	Rural Institutions	Rural Institutions: (Village Visit Plan)
Day 5	Rural Development	Unnat Bharat Abhiyan	UBA/SAP	UBA/ SAP Project Management	UBA/ SAP Project Management

Contents Covered in FDPs: Details are given in Table 10:

Table 10: List of Contents

<ul style="list-style-type: none"> • Mentoring Institutional Leaders • Facilitation of Group Processes • Village Immersion Methods and Techniques • Participative Learning and Action • Key Strategies and Strategic Leadership 	<ul style="list-style-type: none"> • Case Discussion Methods • Role Play and Team Building/Networking • Mentoring and Facilitation Skills for Academic Leaders • Group and Individual Exercise for Learning 	<ul style="list-style-type: none"> • Unnat Bharat Abhiyan and Academic Leadership • Experiential Learning in Academic Leadership • Implementing Change for Excellence • Developing Organization Aspiration • Visionary leadership in HEIs
<ul style="list-style-type: none"> • Rural Society • Rural Economy • Rural Polity • Rural Administration • Rural Development 	<ul style="list-style-type: none"> • Community Engagement Process • Administrative Leadership 	<ul style="list-style-type: none"> • Assignments for Field Learning

Implementation of the Action Research

This Action Research was done on 54 institutions from NE states to assess their present sustainability practices and to promote sustainability practices in colleges. For this action research 12 DSMs were mentored, monitored and facilitated for conducting workshops in colleges and collecting sustainability

index information and college success stories. 12 DSMs were submitted sustainability index information reports and college success stories. The findings and outcome of this research will be generalized on larger sample to promote sustainability in universities and colleges.

Findings of the Action Research

The findings of the study are as follows:

- i. Selected DSMs are mentored and facilitated to visit 5 colleges in a district.
- ii. DSMs are facilitated to conduct round tables/ interactions/ offline workshops.
- iii. DSMs are monitored and facilitated for collecting the Sustainability Index Information from the colleges visited, submitting a report of 4 pages on the college success stories and submitting 14 photographs and newspaper clippings of the activities conducted by the institutions.
- iv. 54 sustainability reports and 54 college success stories are collected and submitted by 12 DSMs.

Outcomes of the Action Research

The outcome of the action research that DSMs are trained in fundamental elements such as

Mentoring capabilities, Intellectual Stimulation, Inspirational Motivation, Idealized Influence,

Conclusion

Higher Education Institutions have a great responsibility to form future sustainability leaders and support the ambitious SDGs targets implementation. Sustainability is also an essential aspect of a university's reputation and prestige globally. Higher education establishes the mindset of adult people and is considered a "changing agents" towards sustainability development. Nevertheless, the geography of mindset change is not equal, and not all have equal access to

higher education. Despite this, it is clear that there are several indicators associated with higher education levels, such as low employment vulnerability, mortality rate under 5 and low pollution, on the one hand, and high access to clean energy, the participation of woman in higher education and external commerce. Besides, higher education contributes to high paid jobs. Higher Education Institutions need to be drivers of a culture change and develop curricula based on sustainability principles.

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About the Author

Dr. Savita Mishra is a resource person and programme coordinator of Mahatma Gandhi National Council of Rural Education Department of Higher Education Ministry of Education Government of India. She is a Principal in Vidyasagar College of Education Phansidewa Darjeeling West Bengal. She has impeccable record of eighteen years of teaching and research activities. She has written more than hundred research articles in reputed National and International journals and authored 60 books. She has also developed a psychological tool for assessing Attitude towards Science. She is the Vice-President of Council of Teacher Education (Eastern Zone); Scientist, IAEC; Member of Board of Studies, members of advisory and editorial board of national and international journals,

Founder and Secretary of Ranidanga Yashoda Educational Society and Visiting Professor of some of the Universities including Academic Staff Colleges. She has awarded Best Teacher Award from Sikkim central University, Best Principal award, Best Academician Award, Celebrity writer award, Excellent Achiever award, Women Researcher Award, Best Teacher Award (Higher Education) 2021, India Prime Top 100 Women Icon Award 2021 and Outstanding Scientist Award 2021. She has been conferred the title of 'Leading Educationists of the World' by IBC, Cambridge, London.

Annexures

Annexure 1: Google Drive File links:-

S.No	Name of File	File Link (Google Drive)
1	Google	https://forms.gle/XeXDhBmGSnN7bQ3V6
2	Drive Link	https://forms.gle/f3EmhySY2fo6QBBn8
3	for Assignments	https://forms.gle/Y34QCA4KmEf1jPv66



Annexure 2: SUSTAINABLE PRACTICES IN THE CAMPUS – A REPORT (Submitted to MGNCRE, DHE, Ministry of Education, Government of India)

1.	Date of Workshop cum Field Visit	
2.	Name of the District Resource Person (DRP)	
3.	Contact Number of DRP	

4.	E mail id of DRP	
5.	District and State	
6.	Name of Institution	
7.	Address of the Institution	
8.	University Affiliated to	
9.	District & State	
10.	Name of Principal/HoI	
11.	Contact Number (WhatsApp Number)	
12.	E Mail ID	
13.	No. of Students	
14.	No of Teaching Staff	
15.	No. of Non-Teaching Staff	

Report -2021-22

#	AREA	TICK THE ACTIVITIES BEING DONE FROM LIST BELOW	LIST OF ADDITIONAL ACTIVITIES
1.	SANITATION AND HYGIENE (CAMPUS&COMMUNITY/ADOPTED VILLAGES)	<ul style="list-style-type: none"> ● Post COVID19 Sanitation Measures and Drill ● Clean and functional toilets (365x24) ● Safe drinking water (365 x24) ● Clean surroundings ● Clean buildings/rooms ● Campus Landscaping ● Zero Littering ● Organize awareness programmes for better sanitation practices like using the toilet, hand washing, health and hygiene awareness and garbage disposal in the adopted villages ● Work with SHGs for mask making and other similar activities 	
2.	WASTE MANAGEMENT (CAMPUS&COMMUNITY/ADOPTED VILLAGES)	<ul style="list-style-type: none"> ● Campus/Dept wise waste audit ● Campus/Dept. waste segregation ● Reduction in waste, month-on-month ● Recycling waste (paper, organic waste from canteens and kitchens) ● Set up compost pit for recycling waste ● Ban plastic use in the campus ● Banflexi banners (Only cloth banners to be used) ● Paperless work – use of email, WhatsApp for communication ● Recycling Farm waste ● Setting up community compost pits in villages ● Awareness camps for Clean and Green Village (Zero Littering – IEC Material) including banning single-use plastic ● Partner with local NGOs and CSR organizations in this 	

#	AREA	TICK THE ACTIVITIES BEING DONE FROM LIST BELOW	LIST OF ADDITIONAL ACTIVITIES
		field	
3.	WATER MANAGEMENT (CAMPUS & COMMUNITY/ADOPTED VILLAGES)	<ul style="list-style-type: none"> ● Audit of water sources in the campus ● Audit of monthly water use in the campus ● Audit of drinking water on campus (bottled water) ● Constructing/Increasing no. of Rain Water Harvesting pits in the campus ● Fixing leaky taps ● Recycling water (grey, brown and black) ● Activities for recharging dry borewells ● Converting villages into water plus areas ● Partner with local NGOs and CSR organizations in this field 	
4.	ENERGY MANAGEMENT (CAMPUS&COMMUNITY/ADOPTED VILLAGES)	<ul style="list-style-type: none"> ● Audit of energy efficient heating, cooling, lighting and water systems in the campus ● Audit of building wise monthly use of electricity ● Incentivize reduced electricity usage by depts/buildings ● Create short-term and long-term plan for the use of solar energy on the campus ● Cycles on the campus (reducing carbon footprints) ● Reducing carbon footprints via intelligent Purchase Standard Operating Procedures (SOPs) ● Partner with local NGOs and CSR organizations in this field 	
5.	GREENERY (CAMPUS&COMMUNITY/ADOPTED VILLAGES)	<ul style="list-style-type: none"> ● Setting up a nursery/kitchen garden ● Setting up a seed bank ● Setting up a compost pit ● Researching trees that take up minimal water and are good for the ecosystem (local, resilient species) and planting them during monsoon and taking care of them (Vanamahotsav) ● Landscaping in the campus ● Use of organic manure for the plants ● New buildings on the campus will follow green building norms ● Partner with local NGOs and CSR organizations in this field ● Growing Miyawaki forests/Nakshatravanam on barren land/Village Greenery Programme 	

We have observed and celebrated the following Days to inculcate and internalize in our faculty, students and community, the values of Mentoring, Social Responsibility, Swachhta and Care for Environment and Resources (tick all the days you have celebrated and/or fill in any celebratory day not listed here)			
#	Day	Date	Insert tick mark✓
1.	National Youth Day	Jan 12	
2.	International Mentoring Day	Jan 17	
3.	Global Community Engagement Day	Jan 28	

4.	World Wetlands Day	Feb 2	
5.	World CSR Day	Feb 18	
6.	World NGO Day	Feb 27	
7.	World Water Day	Mar 22	
8.	CSR Day India	Apr 1	
9.	Earth Day	April 22	
10.	World Environment Day	June 5	
11.	No Plastic Day	July 3	
12.	World Population Day	July 11	
13.	World Entrepreneurs Day	Aug 21	
14.	World Habitat Day	1 st Monday of October	
15.	National Mentoring Day	Oct 27	
16.	Women's Entrepreneurship Day	Nov 19	
17.	World Toilet Day	Nov 19	
18.	National Pollution Control Day	Dec 2	
19.	World Soil Day	Dec 5	

Date of Report:

Digital Signature of DRP

Annexure 1

Photographs of Sustainable Practices in the Campus

Annexure 2

List of Participants

Annexure 3: Mahatma Gandhi National Council of Rural Education

Department of Higher Education, Ministry of Education, Government of India

Sustainable Campus Plan - 2021-22

College Success Story - Format

1. Name and Introduction of the Institution (5 lines)
2. Strength of the Institution (Full-time)

Student Strength	
Number of Teaching Staff	
Guest Faculty	
Number of Non-Teaching Strength	

3. Residential Facilities (10 lines) Include key sustainable features
4. Solid and Liquid Waste Management in Campus (15 lines), Include key sustainable features, Recycle, Re-Use, Reduce, Refuse, Composting, Collection, segregation and Disposal, Biomedical waste management, laboratory waste management, Administration of waste management
5. Hostel Kitchen Facilities (10 lines), Include key sustainable features
6. Campus Greenery (10 lines) Include key sustainable features, Area under green cover (%), nursery on campus, plant protection management, tree plantations, exotic, medicinal, local species plants
7. Land Use Management (5 lines) Include key sustainable features, Sustainable activities, constructed and non-constructed area, proposed areas for greenery development, land use management plan
8. Solar Energy Conservation (5 lines) Include key sustainable features, Solar Panel Installations, demand and supply of energy, solar energy generated (KW per month/year)
9. Water Management (15 lines) Include key sustainable features, Quantified water usage, water availability, rainwater harvesting, recycling of water from sewage treatment plant (STP), functional drainage systems
10. COVID 19 Interventions (10 lines) Include key sustainable features, Sanitation and Hygiene, Counselling, Technology and Other
11. Adopted Villages
12. Key Interventions/ Achievements in Adopted Villages (10-15 lines)-Include key sustainable features

13. Key Institutional Achievements/Outcomes (10-15 lines)-Include key sustainable features

Name of the Faculty/ Staff SUPPORTED FOR REPORT PREPARATION:

SUPPORT MOBILE NUMBER:

SUPPORT EMAIL:

NAME OF THE HEAD OF THE INSTITUTION/ PRINCIPAL :

MOBILE OF THE HEAD OF THE INSTITUTION:

EMAIL OF THE HEAD OF THE INSTITUTION/ PRINCIPAL:

Achieving Sustainable Development Goals An Emancipatory Approach to Action Research An Action Research Project

Dr. Pallavi Kaul

Abstract

A participatory action research was conducted by Mahatma Gandhi National Council of Rural Education to study the implementation of Sustainable activities in the Higher Education Institutions of districts of Jammu & Kashmir, Punjab, Rajasthan and Delhi. The action research was conducted in four stages. In the first stage planning for identification of districts of Jammu and Kashmir, Punjab, Delhi and Rajasthan was done along with planning of faculty development programme on 'Mentoring for Institutional Social Responsibility and Facilitation for Community Engagement', identification of resource persons and methodology of the FDPs were also finalized. At the second stage of Action faculty development programme on 'Mentoring for Institutional Social Responsibility and Facilitation for Community Engagement' was organized for Faculty of Higher Education Institutions of the identified districts. From the FDP participants 10 HEIs faculty were selected as District Sustainability Mentors for promoting Sustainability activities in HEIs of their districts. At the third stage of action research District Sustainability Mentor (DSM) collected data of sustainability activities organized in HEIs campuses of their districts. In the last phase reflection & Conclusion of the arrived results was done. The result showed that majority of the Higher Education Institutions are involved in sustainable development activities in their campuses however only 55% of the Higher Education Institutions have zero Littering campus and only 34% work with SHGs for mask making and other similar activities. Furthermore, recycling Farm waste is undertaken by 32% of HEIs, only 35% of the Higher Education Institutions initiate activities to convert villages into water plus areas, setting up community compost pits in villages is undertaken by 23% and only 12% partner with local NGOs and CSR organizations in this field. It was also found that only 22% of the Higher Education Institutions initiate activities to Growing Miyawaki forests/Nakshatranam on barren land/Village Greenery Programme and only 12% partner with local NGOs and CSR organizations in this field.

Keywords: Action Research; Sustainable Development; Energy Management; Greenery; Water Management; Waste Management; Higher Education Institutions.

Introduction

The achievement of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals requires all hands-on deck. It requires different sectors and actors working together in an integrated manner by pooling financial resources, knowledge and expertise. In our new development era with 17 intertwined Sustainable Development Goals and 169 associated targets as a blue-print for achieving the sustainable Future, cross sectorial and innovative multi-stakeholder partnerships will play a crucial role for getting us to where we need India by the year 2030.

“Sustainable Development Goal 17, which reads “Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development”, recognizes multi-stakeholder

partnerships as important vehicles for mobilizing and sharing knowledge, expertise, technologies and financial resources to support the achievement of the sustainable development goals in all countries, particularly developing countries. Goal 17 further seek to encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships.

Mahatma Gandhi National Council of Rural Education keeping with its mandate of engaging with Higher Education Institutions through community engagement-initiated Faculty development Programme on 'Mentoring for Institutional Social Responsibility and Facilitation for Community Engagement' with the objective to accelerate and scale up effective partnerships to

advance the SDGs. This initiative provided capacity development of relevant stakeholders to develop and implement effective partnership practices and

to advance the SDGs. The main aim of the faculty development Programme was to:

- Promote Gandhiji's ideas on Experiential Learning, Nai Talim, Work Education and Community Engagement, and mainstreaming them in education and faculty development.
- Participative Learning and action process to promote the process of community engagement of the faculty of Higher Education Institutions in India.
- Enhance integration of the three dimensions of sustainable development in a holistic and cross-sectoral manner at all levels;
- Provide a dynamic platform for regular dialogue and for stocktaking and agenda-setting to advance sustainable development;

Theoretical Frameworks

Higher Educational Institutions (HEIs) can play an imperative role to achieve the objectives of Sustainable Development Goals of New India through their dynamic community engagement. This approach will moreover contribute in advancement in quality of both teaching and research in HEIs as they will develop better understanding of issues challenging the society. HEIs can bring in social responsibility and community engagement in their vision and mission itself. It is also important that institutional mechanisms are developed to adopt a holistic and functional approach to community engagement, encompassing all the three functions of HEIs—

teaching, research and service. HEIs ought to center on progressing societal linkages and empowering students to become socially productive.

The present study incorporated the approach suggested by Stephen Kemmis and Robin McTaggart at Deakin University which stress the use of a defined cycle of research, and the use of participatory methods to produce 'emancipation'. They call their approach 'emancipatory action research', and draw on European sources, especially on the 'critical theory' of the Frankfurt school (Dick, 2010).

Purpose of the Action Research

The present action research was undertaken with the purpose to

- To mentor selected institutions in the selected District for promoting Sustainability in HEIs/Degree or PG College and villages through round tables/ interactions/ off line workshops and field visit to the HEIs.
- To monitor and facilitate the work of HEIs/Degree or PG College in selected District.
- To acquire data on each of the HEIs/Degree or PG College of the selected districts on their Environmental Performance
- To acquire evidences of the environment sustainable activities conducted by the institutions.

Scope of the Action Research

Action research is focused on immediate application, not on the development of a theory, not upon general application. It places its emphasis on a problem here and now in a local setting. The emphasis is Action Research, not on obtaining generalisable scientific knowledge about

educational problems but on obtaining knowledge concerning a specific local problem. The present action research scope was delimited to Higher Education Institutions of districts of Jammu & Kashmir, Punjab, Rajasthan and Delhi.

Objectives of the Action Research

The present action research is undertaken with the following objectives:

1. To study the activities that support sanitation and hygiene in the higher education institution (HEI) campus
2. To study the activities that support waste management in the higher education institution (HEI) campus
3. To study the activities that support water management in the higher education institution (HEI) campus
4. To study the activities that support energy management in the higher education institution (HEI) campus
5. To study the activities that support greenery in the higher education institution (HEI) campus

Research Questions

The present action research is undertaken with view of answering the following research Questions:

1. What are the activities that support sanitation and hygiene in the higher education institution (HEI) campus?
2. What are the activities that support waste management in the higher education institution (HEI) campus?
3. What are the activities that support water management in the higher education institution (HEI) campus?
4. What are the activities that support energy management in the higher education institution (HEI) campus?
5. What are the activities that support greenery in the higher education institution (HEI) campus?

Review of the Literature

Review of studies of environment sustainability in Higher Education Institutions was done and presented below:

Ssossé, Q.; Wagner, J.; Hopper, C. (2021) in their study, 'Assessing the Impact of ESD: Methods, Challenges, Results aimed to learn from real practice through acting as a facilitator for curriculum development in education for sustainability within an interdisciplinary group of academic staff members. An evidence-based model (the I3E Model) was developed with four overarching components that supported the University of Southampton in its aim to embed education for sustainability within the undergraduate curriculum. These integrated components were to inform the university community about sustainability; engage the different university stakeholders in the change process towards sustainability; empower individuals and groups to make change happen within their sphere of influence and action; and embed sustainability within existing university structures.

Murray, Goodhew and Murray (2013), in their study to demonstrate the impact of ESD approaches centered around the sustainable values and behaviors of 67 students over eight months, find that their qualitative tools have led to a greater environmental sensitivity of the exit learners

compared with the control group. Four months after the end of the final teaching modules, several students testified to an "awareness that SD represents a state of mind rather than separate tasks". It is therefore a change of global perspective that is at work.

Seeberg and Minick (2012), who examine the effectiveness of cross-cultural competency approaches in the acquisition of global skills and perspectives among a population of 23–25-year-old aspiring teachers over a four-year period, also note greater open mindedness, a reconsidering of preconceptions, a positive effect on communication skills, and increased sensitivity to others and to the power of community, all of which are SD specific competencies as defined by numerous benchmarks.

Vanessa R. Levesque, Cameron P. Wake (2021) their study Organizational change for sustainability education: a case study of one university's efforts to create and implement institution-wide sustainability competencies examined the process of creating and implementing sustainability competencies across a university illuminate dynamics of organizational change. The findings indicated Very few US universities have institutional-level sustainability competencies. At UNH, drivers of organizational change such as

overcoming disciplinary boundaries, developing a common vision and working from the bottom-up enabled the creation of institutional sustainability competencies, but the same processes were not enough to drive deeper implementation of the competencies.

Md. Arman Arefin, Md. Nurun Nabi, Saalem Sadeque, Prasad Gudimetla (2021) in their study Incorporating sustainability in engineering curriculum: a study of the Australian universities evaluated the literature published and analysed the university secondary data (information published on the university websites

and magazines and programme catalogues) to understand the current status of Australian universities regarding the integration of sustainability in engineering. The findings of the data indicate that the universities are considering sustainability seriously with both internal and external stakeholders of universities working towards embedding sustainability in engineering curricula. Most of the Australian universities have successfully implemented sustainable engineering education and the rest are focusing on integrating sustainability into their engineering education curriculum.

Need of the Action Research

The need to greatly expand society's capacity to solve complex challenges has never been more important or more urgent, with just ten years remaining to the 2030 deadline of achieving the SDGs. Higher Educational Institutions (HEIs) can play an important role to achieve the objectives sustainable development Goals by undertaking activities in the campus which promote environment sustainability. This approach will also

contribute to improvements in quality of both teaching and research in HEIs as they will develop better understanding of issues confronting the society and environment. Thus, a need was felt to study the activities undertaken by the HEIs for environment sustainability so as to find the present status of the achievement of SDGs in the HEI campuses and also to promote such activities in future in other HEIs.

Challenges

Challenges which were encountered during the course of action research like unavailability of faculty of HEIs for interaction, due to heavy snow fall in state of Jammu & Kashmir DSMs found it difficult to reach to the selected HEIs. In Delhi as

the colleges had started in the physical mode the examination was being held in most of the colleges because of which meeting with the principals and faculty to get the data was one of the barriers.

Actions Planned to Address the Challenges

As most of the challenges were environmental in nature and situational no action was planned to address the challenges.

Research Methodology

The paradigm used was emancipatory paradigm for Action Research. It was developed by Paulo Freire, and it was used to study methodology for intervention, development and change within communities and groups. This paradigm indicate that it builds on the critical pedagogy put forward by Paulo Freire as a response to the traditional formal models of education. The key ontological assumptions of emancipatory research are: a) that there are multiple realities (Groat and Wang 2001),

(Guba and Lincoln 2005) and b) that knowledge is not only created by the elite researcher or dominant group (Groat and Wang 2001). In design interventions between the Centre and the periphery, in this context, people from the periphery would be allowed equal opportunity in playing an active role in creating knowledge, research and design and not just be placed in a more passive role of receiving in the form of help or aid, knowledge that they have not played a role in

creating.

The population of the study consisted of the Higher Education Institutions of Jammu& Kashmir, Punjab, Rajasthan and Delhi. Purposive method was used for sampling. Five colleges each from four districts

of Jammu& Kashmir, one district of Punjab, one district of Rajasthan and three districts of Delhi were selected and data of environmentally sustainable practices of these colleges were collected. In total data of environmentally sustainable practices of 50 colleges was collected.

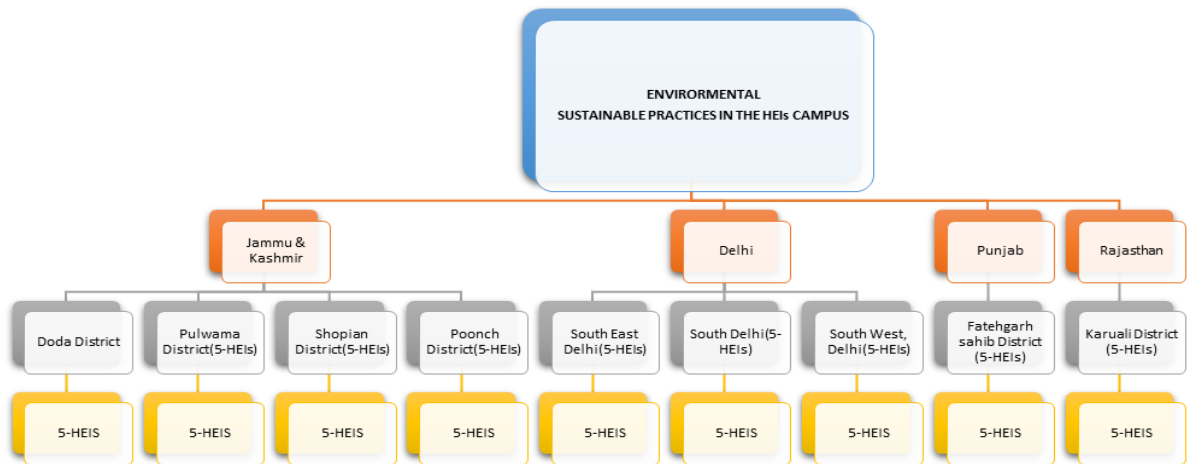


Figure 1 Details of district wise data

Implementation of the Action Research Steps

The intervention of action research was carried out in four phases which are discussed as under:

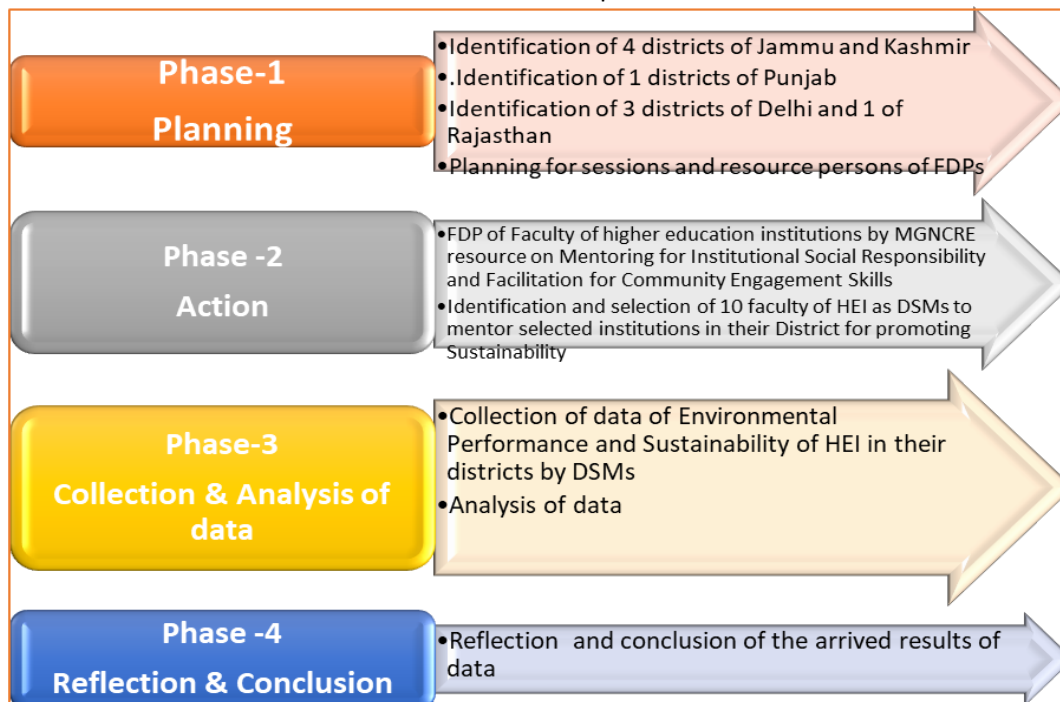


Figure 2 Phases of Action Research

In the present action research Mahatma Gandhi National Council of rural education (MGNCRE), Department of Higher Education, Government of India in the first phase i.e. planning stage undertook the following:

- **Need analysis:**

Need analysis of Higher Education Institutions (HEIs) of Jammu and Kashmir, Delhi, Rajasthan and Punjab District to understand their role in promoting environmental Sustainability activities in their campuses was undertaken. Faculty of HEIs from these states were invited for the Faculty Development Programme.

- **Planning for Faculty Development Programme:**

Planning of Faculty Development Programme on Mentoring for Institutional Social Responsibility and Facilitation for Community Engagement' was undertaken. Following sessions were introduced for the FDP:

- ❖ Project Management: For completing any task in a given time and with available budget
- ❖ Community Engagement: For addressing the felt needs of the community which are within the competence of the educational institution
- ❖ Corporate/Institutional Social Responsibility: For promoting Educational Institution Social Responsibility towards the neighbours who give space, ground water, provide services and man power, manage waste, provide roads and transport
- ❖ Facilitation: For orienting on working with the communities by building consensus and sharing of resources
- ❖ Mentoring: Orienting, continuous hand holding and guidance for community engagement of Higher Education Institutions.

- **Identification of resource persons for the FDP:**

For the finalized sessions resource persons and experts were identified and invited for conducting the session.

- **Determining the Programme Methodology:**

As Mahatma Gandhi National Council of Rural Education encourages participatory approach and experiential learning the following programme methodology were used for transaction of FDP:

- ❖ Problem Solving Method
- ❖ Word Case Discussion Method
- ❖ Role Play Method
- ❖ Video Case Study Method
- ❖ Individual Exercises

In the second phase three on-line Faculty development Programme on 'Mentoring for Institutional Social Responsibility and Facilitation for Community Engagement' were organized for their faculty of selected states and Union Territories. The main aim of FDP was to accelerate and scale up effective partnerships to advance the SDGs.

- **Identification and selection of faculty of HEI as DSMs:**

Post FDP volunteer faculty were selected as district sustainability mentors (DSM). Task assigned to the DSMs were as follows:

- ❖ To mentor selected institutions in your District for promoting Sustainability in HEIs/Degree or PG College and villages through round tables/ interactions/ off line workshops and field visit to the HEIs.
- ❖ To monitor and facilitate the work of HEIs/Degree or PG College in your District.

- ❖ To submit reports on each of the HEIs/Degree or PG College on their Environmental Performance and Sustainability Success Story.
- ❖ To submit photographs and newspaper clippings, if any, on the activities conducted by the institutions.

In the third phase of action phase DSMs collected data of Environmental Performance and Sustainability of HEI from their districts. It was followed with analysis of data. In fourth phase reflection and conclusion of the arrived results of data was undertaken.

Implementation of the Study

To address the research problem, an inquiry using a qualitative approach was undertaken by the District Sustainability Mentors to ascertain the engagement of Higher Education Institutions in the environment sustainability activities. The data was collected using Environment sustainability Performa along with the evidences in the form of

observation/certification/ Video and audio records /newspaper clippings, etc., Photographs made useful reference points for subsequent interviews and discussion of the data. Logs of focus group meetings and engagement with the community were other methods of data collection for the present research.

Findings of the Action Research

The data was analyzed and is presented below:

1. To study the activities that support sanitation and hygiene in the higher education institution (HEI) campus

The objective of the study was to find out the campus. The survey form and visual submitted by activities undertaken to support sanitation and the Higher Education Institutions were analyzed and hygiene in the higher education institution (HEI) presented in the Table 1 below:

Table 1: Activities that support sanitation and hygiene in the (HEI) campus

SANITATION AND HYGIENE	PERCENTAGE
Post COVID19 Sanitation Measures and Drill	99%
Clean and functional toilets (365x24)	58%
Safe drinking water (365 x24)	82%
Clean surroundings	67%
Clean buildings/rooms	68%
Campus Landscaping	62%
Zero Littering	55%
Organize awareness programmes for better sanitation practices like using the toilet, hand washing, health and hygiene awareness and garbage disposal in the adopted villages	79%
Work with SHGs for mask making and other similar activities	34%

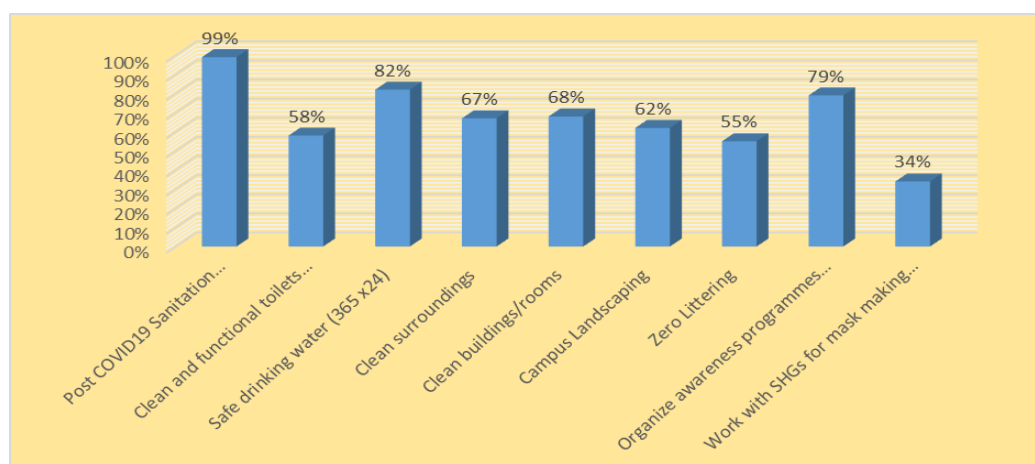


Figure 3 Activities that support sanitation and hygiene

Interpretation: From Table 1 it is interpreted that majority of the Higher Education Institutions of Rajasthan, Punjab, Delhi and Jammu & Kashmir under the study undertake activities that support sanitation and hygiene in the (HEI) campus.

However only 55% of the Higher Education Institutions have zero Littering campus and only 34% work with SHGs for mask making and other similar activities

2. To study the activities that support waste management in the higher education institution (HEI) campus

The objective of the study was to find out the activities undertaken for waste management in the higher education institution (HEI) campus. The survey form and visual submitted by the Higher Education Institutions were analyzed and presented in the Table 2 below:

Table 2: Activities that support waste management in the (HEI) campus

WASTE MANAGEMENT	PERCENTAGE
Campus/Dept wise waste audit	53%
Campus/Dept waste segregation	65%
Reduction in waste, month-on-month	76%
Recycling waste (paper, organic waste form canteens and kitchens)	82%
Set up compost pit for recycling waste	82%
Ban plastic use in the campus	99%
Banflexi banners (Only cloth banners to be used)	67%
Paperless work – use of email, WhatsApp for communication	32%
Recycling Farm waste	32%
Setting up community compost pits in villages	23%
Awareness camps for Clean and Green Village (Zero Littering – IEC Material) including banning single-use plastic	93%
Partner with local NGOs and CSR organizations in this field	12%



Figure 4 Activities that support waste management

Interpretation: From Table 2 it is interpreted that majority of the Higher Education Institutions of Rajasthan, Punjab, Delhi and Jammu & Kashmir under the study undertake activities that promote waste management in the (HEI) campus. However only 53% of the Higher Education Institutions

conduct Campus/Dept wise waste audit, Paperless work – use of email and Recycling Farm waste is done by 32% of HEIs, setting up community compost pits in villages is undertaken by 23% and only 12% partner with local NGOs and CSR organizations in this field.

3. To study the activities that support water management in the higher education institution (HEI) campus

The objective of the study was to find out the activities undertaken for water management in the higher education institution (HEI) campus. The survey form and visual submitted by the Higher Education Institutions were analyzed and presented in the Table 3 below:

Table 3: Activities that support water management in the (HEI) campus

WATER MANAGEMENT	PERCENTAGE
Audit of monthly water use in the campus	74%
Audit of drinking water on campus (bottled water)	74%
Constructing/Increasing no. of Rain Water Harvesting pits in the campus	67%
Fixing leaky taps	98%
Recycling water (grey, brown and black)	74%
Activities for recharging dry borewells	57%
Converting villages into water plus areas	35%
Partner with local NGOs and CSR organizations in this field	12%
Audit of water sources in the campus	74%

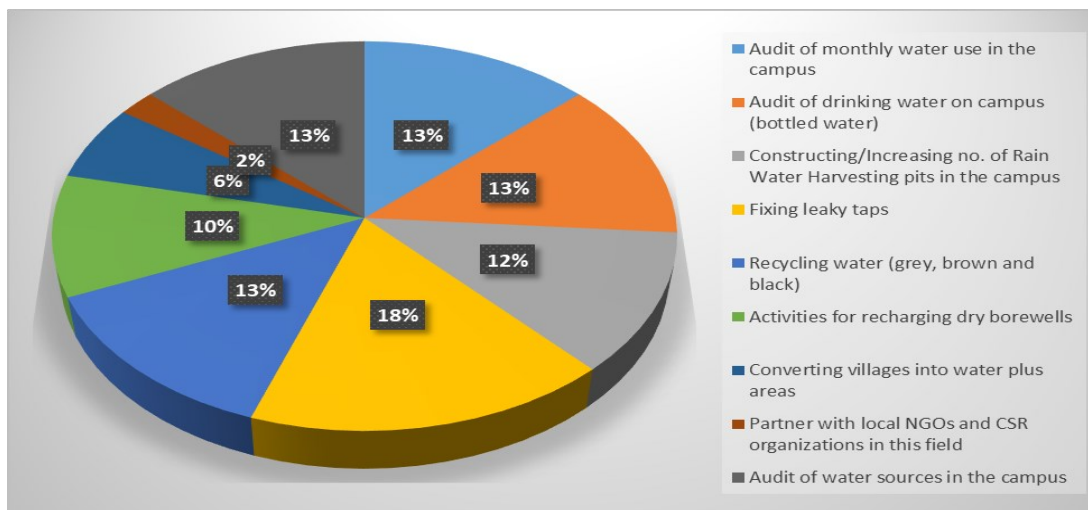


Figure 5 Activities that support water management

Interpretation: From Table 3 it is interpreted that majority of the Higher Education Institutions of Rajasthan, Punjab, Delhi and Jammu & Kashmir under the study undertake activities that promote water management in the (HEI) campus. However

only 35% of the Higher Education Institutions initiate activities to convert villages into water plus areas and only 12% partner with local NGOs and CSR organizations in this field.

4. To study the activities that support energy management in the higher education institution (HEI) campus

The objective of the study was to find out the activities undertaken for energy management in the higher education institution (HEI) campus. The survey form and visual submitted by the Higher Education Institutions were analyzed and presented in the Table 4 below:

Table 4: Activities that support energy management in the (HEI) campus

ENERGY MANAGEMENT	PERCENTAGE
Audit of energy efficient heating, cooling, lighting and water systems in the campus	73%
Audit of building wise monthly use of electricity	73%
Incentivize reduced electricity usage by depts/buildings	84%
Create short-term and long-term plan for the use of solar energy on the campus	78%
Cycles on the campus (reducing carbon footprints)	62%
Reducing carbon footprints via intelligent Purchase Standard Operating Procedures (SOPs)	56%
Partner with local NGOs and CSR organizations in this field	12%

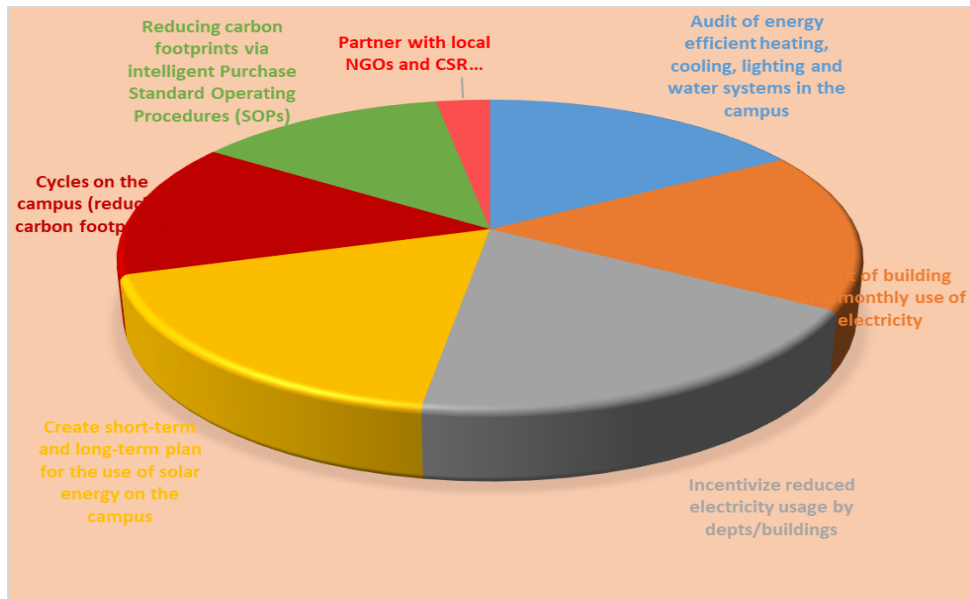


Figure 6 Activities that support energy management

Interpretation: From Table 4 it is interpreted that majority of the Higher Education Institutions of Rajasthan, Punjab, Delhi and Jammu & Kashmir under the study undertake activities that promote energy management in the (HEI) campus. However

only 35% of the Higher Education Institutions initiate activities to convert villages into water plus areas and only 12% partner with local NGOs and CSR organizations in this field.

5. To study the activities that support greenery in the higher education institution (HEI) campus

The objective of the study was to find out the activities undertaken for energy management in the higher education institution (HEI) campus. The survey form and visual submitted by the Higher Education Institutions were analyzed and presented in the Table 5 below:

Table 5: Activities that support greenery in the (HEI) campus

GREENERY	PERCENTAGE
Setting up a nursery/kitchen garden	78%
Setting up a seed bank	78%
Setting up a compost pit	67%
Researching trees that take up minimal water and are good for the ecosystem (local, resilient species) and planting them during monsoon and taking care of them (Vanamahotsav)	98%
Landscaping in the campus	62%
Use of organic manure for the plants	89%
New buildings on the campus will follow green building norms	32%
Partner with local NGOs and CSR organizations in this field	12%
Growing Miyawaki forests/Nakshatravanam on barren land/Village Greenery Programme	22%

Interpretation: From Table 5 it is interpreted that majority of the Higher Education Institutions of Rajasthan, Punjab, Delhi and Jammu & Kashmir under the study undertake activities that promote greenery in the (HEI) campus. As per the data only 32% of follow green building norms while

construction of new buildings on the campus. HEIs However only 22% of the Higher Education Institutions initiate activities to Growing Miyawaki forests/Nakshatravanam on barren land/Village Greenery Programme and only 12% partner with local NGOs and CSR organizations in this field.

Outcomes of the Action Research

Coretta Scott King stressed that "The greatness of a community is most accurately measured by the compassionate actions of its members." Mahatma Gandhi National Council of rural education gave the opportunity to the faculty of Higher Education Institutions of India to come forward and play the role of leadership and help the HEIs of their district to involve in sustainability activities that support sanitation and hygiene, waste management, water

management, energy management greenery in their campus. Thus, the present action research was successful in strengthening the multi-stakeholder partnerships for mobilizing and sharing knowledge, expertise, technologies and resources to support the achievement of the sustainable development goals in their respective HEIs campuses. The Learning Outcomes of the action research was that participants were able to:

- ❖ Mentor selected institutions in their District for promoting Sustainability in HEIs/Degree or PG College and villages through round tables/ interactions/ off line workshops and field visit to the HEIs.
- ❖ Inculcate a sense of empathy and mutual bonding with the local community
- ❖ Appreciate the contributions of local communities to Indian society and economy
- ❖ Learn to value the native knowledge and wisdom of the community
- ❖ Identify opportunities for contributing to community's socio-economic improvements
- ❖ Provide mentoring and facilitation to the HEIs in their district as district sustainability mentors (DSM)

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Dr. Pallavi Kaul is Assistant Professor with Amity University Uttar Pradesh. She has published around 3 books and 24 research articles in Journals of national and international repute. She has been resource person with Director General of Resettlement, Ministry of Defense, Government of India for the course 'Management of Academic institutions. Resource person for video lecture with SWAYAM -PRABHA DTH Channel on Teacher Education with NIOS, IGNOU and NCERT. Dr. Pallavi Kaul has also been working as evaluator with IGNOU and Himachal Pradesh University, Shimla. She is subject matter expert with Tata consultancy services and Content Evaluator in chemistry with NCERT. She is also a course expert with National Institute for Skill Training and Development, Government of India and Council for Teacher Education (CTEF). She was awarded for Meritorious paper presentation in National Science Teachers congress organised by Vikram Sarabhai Community Science Centre, Dept. of Science and Technology. Dr Pallavi Kaul is also working as resource person with Mahatma Gandhi National Council of Rural Education.

Promoting Sustainability Through Energy Management in Higher Education Institutions Across Districts of Maharashtra

An Action Research Project

Dr. Yogita Mandole

Abstract

At present, many Higher Education Institutions (HEIs) have incorporated sustainability development strategies into their study programs, research, operations, dissemination, assessment, and reporting. Higher Education Institutions (HEIs) have a huge potential to save energy as they are significantly more energy-intensive. This study aims to study and summarize some best practices and initiatives of corporations towards energy management in HEIs in Maharashtra and its role and contribution to sustainable development. This study also aims at studying the energy policies and setting goals of HEIs in order to improve the living standards of stakeholders and contribution into sustainable development. Achieving energy efficiency by management practices makes practical important strategy for any organization and sustainable development is based on four pillars social, economic, environment and energy sources management. This paper includes Energy Management study of various HEIs in Maharashtra and their role in promoting Sustainability through Energy Management.

Key Words: Higher Education Institutions, Sustainability, Energy Management

Introduction

There are several energy drainers on college campuses. Heating, cooling, ventilation, computing, water and lighting: It all adds up in expenses and carbon emissions. This is one of the most pressing issues facing higher education today. For Generation Z, the fight against climate change is their utmost priority. If universities don't take critical steps to reduce emissions, they could potentially see enrollment numbers decline. A recent survey by the Princeton Review found that 75 percent of prospective students say a school's commitment to environmental sustainability would impact their decision to attend.

More than 400 universities and colleges have committed to significantly reduce carbon emissions, but only a handful can say they have reached carbon neutrality. That is because energy consumption varies greatly depending on climate and location. It is much easier for smaller colleges in states such as Vermont, Maine and New York — all areas that benefit from below-average carbon intensity electric grids — to lower emissions, while medical schools and large universities with laboratories face an uphill battle. To help Higher Education Institutions with energy-intensive equipment reduce the environmental impact of

their energy use, automation technologies such as the Internet of Things, artificial intelligence and edge computing can use real-time data to help large campuses decrease energy consumption. Here is how these solutions and strategies can improve energy monitoring systems in higher education institutions.

In order to explain and find out the indicators for sustainable development the important factor is energy - considered a key factor in discussion of economic, social and environmental spheres in sustainable development. Higher education is the aspect of education that is acquired by students after the completion of their secondary education. Here, the persons are organized for building upon their knowledge and skills which can be applied to solve different problems in human life. Higher educational institutions have the capacity to give quick responses to different societal problems specially related to environment. At the same time sustainable development through higher education provides a pivotal role in nations building. Sustainable development remains barely a significant social, economic or environmental challenge for any country.

As promoting sustainability Energy Management is becoming an increasingly important issue for the Higher Education Institutions, the role of institutions of higher education in relation to environmental sustainability initiatives is becoming more and more prevalent. If it is the role of colleges and universities to educate members of society, then they must be actively instrumental in the sustainability movement. Every university is unique and has its own traditions, culture and geographical area. They are familiar with their surroundings. They can use their existing knowledge and trained manpower to address problems and issues concerned at the local level, as well as related to the national and global

Purpose of the Action Research

This paper aims to analyze strategies that promote sustainability in Higher education institutions to integrate the principles, values and practices of sustainable development into all aspects of education and learning." and create "a more sustainable future in terms of environment. This initiative was key to promote global education for sustainability at all levels. Several vital advances were achieved under this strategy, such as the convergence between education and sustainability agendas, the inclusion of sustainability issues in education systems, the engagement of a large number of stakeholders, the increasing of legal commitments, the inclusion of sustainability issues in the entire learning environment, the promotion of critical thinking, participatory and problem-based learning, and the integration of education for sustainability in formal education there was an increase of the research focused on education for sustainability and high recognition in the international arena that education is key to sustainability and that Maharashtra is committed to establishing a solid education for sustainable development

To establish a sustainability mindset effectively, sustainability principles need to be effectively

community. Universities can exchange the information by establishing a strong regional information network. These can promote good neighborly relations and respect for human rights.

Institutions must also model sustainable practices. Such education contributes strongly to sustainable development by training and expanding young minds in researching solutions to the environmental challenges. After graduation the students become leaders of tomorrow and get dispersed from the world of higher education into their specific career. In doing so, they take with them the green practices and approaches they were involved with at their institution

communicated. Communication is a pivotal aspect of the successful implementation of various sustainability initiatives provide three reasons why Higher Education Institutions are essential channels to communicate sustainability effectively. Despite the different inequalities, many people attend universities and colleges. The capacity of high education institutions to influence the transformation to a more sustainable society is tremendous. By considering sustainability principles in studies and research programs, university staff and the students are actively working towards a sustainable numerous challenges and barriers at different levels affect the successful contribution of higher education to creating a sustainable future. Overall, without depth and fundamental change in the academic world, there is a threat that Universities will lose their essential role in research and knowledge. Sustainable Development Goals are forcing Higher Education Institutions to change to respond to a world in crises. There is a need for a transformation in the attitude and ethical practices to solve our time's most critical challenges. Essential topics such as integration problem solving, anticipation skills and system thinking should be considered in all university curricula. An interdisciplinary approach should be the engine to develop sustainability practices

Scope of the Action Research

Energy is one of the significant resources required by every Higher education institution (HEI) for effective functioning and achievement of its goals. The increase of Higher Education Institutions (HEIs) has a great impact on educational development for the bright national future but the problem is it also increases the energy demand. Energy management is one of the environmental management issues which need to be addressed by stakeholders of HEIs, as part of their support to their organization's effectiveness and well-being. Overall energy consumption is significant in majority of higher educational institutions due to their large number of buildings. Improving the energy performance of buildings is one of the ways to address this challenge.

A strategy for achieving this is proper targeting and monitoring of energy consumptions.

HEIs have an enormous potential to save energy as they are significantly more energy-intensive in comparison with other premises. Presently, HEIs worldwide have incorporated sustainability development strategies into their study programs, research, operations, dissemination, assessment, and reporting. Also improving energy efficiency in HEIs becomes a fast and cost-effective method of achieving targets in their economic growth.

Scope of this study was limited to 12 districts of Maharashtra. Furthermore, the study was also restricted to Higher Education Institutions

Names of the districts and names of DSMs selected district wise

1. Ratnagiri – Dr. Kalpit Mhatre
2. Dhule – Dr. Mahesh Pawar
3. Washim - Dr. Atul Raut
4. Gadchiroli -Dr. Pawan Naik
5. Kolhapur - Dr. Mahesh Chougule
6. Jalna – Dr. Manoj R. Maher
7. Hingoli – Dr. Nagarkar
8. Chandrapur- Dr. Sunil Sakure
9. Aurangabad - Dr. G. L. Rokade
10. Osmanabad-Dr. Vikramsinha V. Mane
11. Palghar – Smt. Rohita Raut
12. Mumbai Suburban – Dr. Yogita Mandole

Hypothesis

The Commitment of Higher Education Institutions and the Strategy influence positively the level of implementation of effective energy management practices and promote energy savings.

Objectives of the Action Research

1. To examine the level of implementation of energy management in the HEIs to determine any areas that could be improved.
2. To achieve and maintain optimum energy procurement and utilization, throughout the HEIs in Maharashtra.
3. To study effective practices of various HEIs for reducing energy consumption motivating other HEIs for implementation.
4. To promote awareness to reduce demand, protect and replenish supplies, develop and use alternative energy sources in HEIs.

Review of the Literature

The study conducted (Walter et al 2019) in selected Higher Education Institutions across the world investigates the level of engagement in energy efficiency measures of a sample of 50 Higher Education Institutions from round the world, and identifies which types of renewable energy are being used to date. Results show that in more than half of the universities only a small portion of energy consumption comes from renewable sources (1% to 20%) and solar/photovoltaics is the most used source (70%). Investment in energy efficiency is more common in the sample, with 54% of the universities reporting higher levels of engagement, mainly in buildings (78%) and equipment/machineries (56%). Such type of studies would definitely be helpful in understanding energy management in Higher Education Institutions.

In India Centre for Science and Environment (2017) Delhi has tremendously worked on energy conservation and management for educational institutions. Energy consumption can be reduced by two techniques—conservation and efficiency measures. According to their studies, Energy conservation refers to reducing of energy consumption by using less of an energy service. Efficient-energy use refers to using less energy for a constant service. It involves a smart approach in the buildings for natural sunlight, ventilation and maintaining the ideal room temperature. Conducting an energy audit is the first step towards identifying opportunities to reduce energy and related costs.

A study on energy management in public Higher Education Institutions in Ghana has been carried out in 2016 (Sapri et al). The study investigates the implementation of energy management key practices in six public Higher Education Institutions in Ghana in order to identify the existence of potential to save energy. The study revealed that implementation of energy management key practices was generally low across all the phases. Six key practices-informing of the reasons/need for energy management, motivation, conducting economic analyses, tracking and targeting energy usage and key energy use groups, and reviewing building drawings and equipment specification-

were not implemented by any institution.

A study in Saudi Arabia has been conducted to find out the energy management in buildings of the university campus of Saudi Arabia in 2013 (Jomoah, Abdulaziz and Kumar). The study reflects the details of the installation of an energy management system in the buildings of a typical university campus in Saudi Arabia and the consequent reduction in the electrical energy consumption. The installed building energy management system (BMS) continuously monitors the electrical load demand of the air handling units (AHUs) and the room lighting in the buildings and reduces the load demand through the appropriate setting of the thermostats of the AHUs based on the work schedule in a day and the On/Off control of lights based on the occupancy in different rooms through the Ethernet from a remotely located server room. The preliminary investigations reveal that significant reduction in load demand can be achieved in any university campus in Saudi Arabia through the implementation of BMS, thus contributing to the reduction in the domestic oil consumption of the country.

Ahmad and Sadaf (2012) have made a case study on reducing electricity consumption in educational institutions of Aligarh Muslim University electrical usage scenario. In the study it is stated that we can use star rated electrical appliances, we should replace chokes and regulator of tubes and fans on regular basis, use of solar energy along with efficient heating and cooling system should also be considered as a good practice in energy management.

Mohod, Ingole and Mandaogade (2002) have worked on energy utilisation and conservation through energy audit. Energy information system based on continuous energy audit is used to detect the unwanted loss of energy, its possible location and will suggest the possible corrective measure in order to conserve the energy. The use of computer and acquiring on line data from the system will provide new opportunity to monitor the system performance

A study on monitoring energy performance in

Higher Education Institutions for sustainable campus in the Malaysia has been carried (Sapri and Shehu 2010). The study concluded that Higher Education Institutions generally own large stock of facilities for the delivery of their services. A lot of resources (human, material and financial) are devoted for the acquisition, operation and management of the facilities. It is imperative for institutions to manage their facilities by adopting good practices in various aspects of their operations. Energy management initiatives can help organizations to significantly reduce their

energy consumption and costs. This will help them to improve their financial and environmental performance, thereby becoming more sustainable. Monitoring and targeting of consumption, through the use of appropriate benchmarks, can be employed as a means of improving building energy performance in higher educational institutions. This can be aided by computer-based energy information systems which would provide timely information, thereby improving decision making process and management action.

Need of the Action Research

Sustainable energy management is a challenge for Higher Education Institutions today. As long-term strategic thinkers, energy entrepreneurs must be closely involved in these practices. They play an important role in helping their organizations make more sustainable energy choices. Energy entrepreneurs support energy consumption reduction efforts with their in-depth knowledge of energy costs. And they help steer management towards the right decisions for using renewable energy.

Sustainability aims at striking the right balance between an institute's financial considerations and its impact on people and the planet. Energy entrepreneurs can play an important part in increasing profitability while diminishing institutes environmental impact.

Energy is an important factor for the development of any country. The level of development or advancement in country depends on energy consumption or that country.

1. Energy, however is something which does not for free and humans are paying a server price for it in the form of energy management.
2. Lack of Energy Management training program in majority of colleges.
3. Incomplete knowledge of rectified power equipment.
4. To create awareness about Energy management software in the colleges
5. NAAC Energy's Energy Management System (EMS) is the best-in-class automation system for collecting, monitoring and optimizing Power and Energy.
6. Management System data to increase reliability to improve utilization and reduce costs. To inform all the students and staff of the college.
7. Informing the majority of the college about the process of comparing the electricity bill amount of the last 6 months and the amount of the current bill to increase sustainability.

Challenges and Actions Planned to Address the Challenges

Mahatma Gandhi National Council of Rural Education is implementing the a very important and useful project with respect to the sustainability development goals. This project is useful to Challenges:

improving HEIs in future and also it will be a role model to another Higher Educational Institutes. Due to these visits, we could recognize the best practices of Swachhta and Sustainability Practices in HEI.

1. Selection of District Sustainability Mentors from almost 12 districts of Maharashtra.
2. Orientation and Mentoring of the District Sustainability Mentors.
3. Selection of Colleges and permission from the colleges for the visit.
4. Unavailability of some staffs due to busy schedule.eg. NSS camp, Exam, other outdoor activities.

5. Limited time for discussion with staff and students.
6. Insufficient strength of students due to COVID effect, Bus strike and Exam schedule.

Research Methodology

Survey method was used as the process of conducting research that researchers send to survey respondents. The data collected from surveys is then statistically analyzed to draw meaningful research conclusions. The DSMs after their selection conducted surveys offline visits to track the sustainability indicators in the Higher Education Institutions. The DSMs also used a special questionnaire to know about various energy management strategies in the institutes.

Implementation of the Action Research Steps

- Step 1: - Selection of the District Sustainability Mentors
- Step 2: - Orientation of the mentors
- Step 3: - Mentoring of the DSM's.
- Step 4: - Visit to the Higher Education Institutions
- Step 5: - Challenges faced by the DSM's and strategies adopted by continuous facilitation.
- Step 6: - Report Writing

Findings of the Action Research

The Action research was specifically done with respect to energy management in various Higher Education Institutions in various districts of Maharashtra with a help of a questionnaire after the offline visit of the DSM to the college to address the sustainability index criterions.

Following are the results from the questionnaire: -

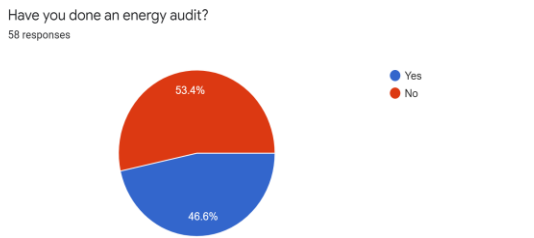


Fig.1 Energy Audit status in HEIs surveyed

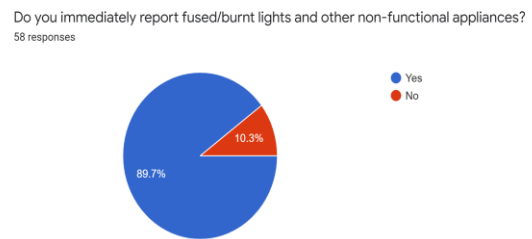


Fig. 3: Reporting of Fused/ Burnt lights in HEIs surveyed

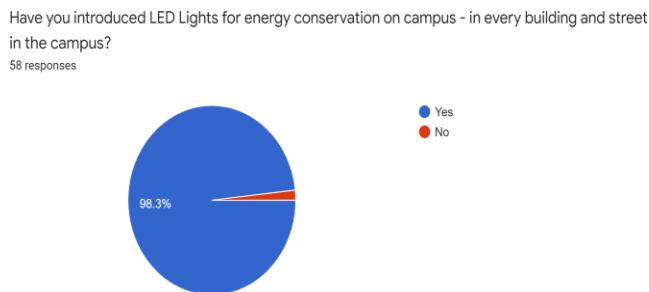


Fig 2: Use of LED bulbs in HEIs surveyed

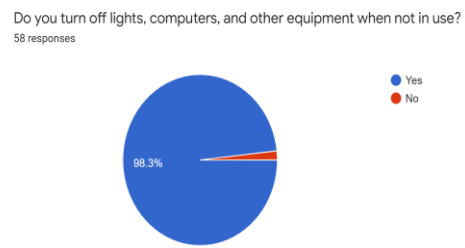


Fig 4: Awareness of Tuning of electrical appliances and equipment after usage in HEIs surveyed

Have you enabled the power management settings on your computers/monitors/all-in-one machine?
58 responses

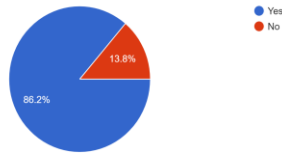


Fig 5: Power management Settings in HEIs surveyed

Have you installed Solar Panels or other forms of renewable energy in your campus?
58 responses

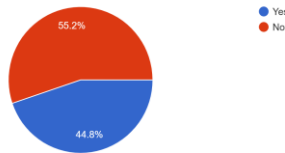


Fig 6: Solar panel installations in HEIs surveyed

Do you offer renewable energy lessons and programs /trainings?
58 responses

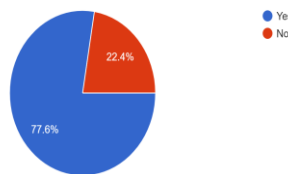


Fig 7: Conduct of renewable energy activities in

HEIs surveyed

Do you have a Policy for monitoring aspects of Energy Conservation with dedicated staff and periodic reporting system in place?
58 responses

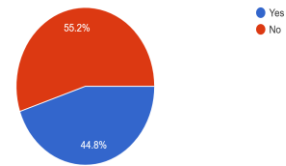


Fig 8: Policy for monitoring of energy conservation in HEIs

Have you prepared any case studies/ caselets/action research papers from your Institution on Swachhta and water conservation activities?
58 responses

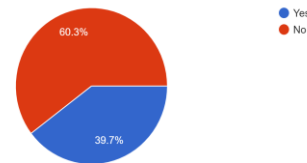


Fig 9: Swachhta plans and water conservation activities in HEIs surveyed

Action Research Data Received from HEIs Surveyed

HEIs were visited and found the following analysis. This is also represented in figure 1 to 9.

Scenario of energy audit in HEIs surveyed.

Most of the HEIs have done Energy audit. Also, HEIs tried to cut down the Electricity consumption in the daily usage. HEIs conducted energy audit to determine ways to reduce energy consumption per unit of product output or to lower operating costs. Details shown in Fig. 1



Fig 10: Greenery maintained by HEI

Introduction of LED Lights for energy conservation

HEIs surveyed are using LED bulbs in energy conservation. LED lighting for HEIs can save money while improving lighting performance and safety. Also consider germicidal lights to keep students healthy. Understanding the importance of efficient energy use many HEIs have initiated the process of replacing old incandescent bulbs to energy efficient LED bulbs. Details shown in Fig. 2

Process of reporting fused/burnt lights and other non-functional appliances

Upgrading or installing fused lights is done by the HEIs on regular basis. HEIs observe that lighting needs to be upgraded or installed when fused. Proper reporting process is maintained by the HEIs. Details shown in Fig. 3

Practice of turning off lights, computers, and other equipment when not in use

The power plants that supply electricity use fossil fuels, which are a major component of air pollution. By turning off lights when leaving a classroom, HEI can save a lot of energy and reduce electricity demand. Most of the HEIs found practicing awareness programs in students. Details shown in Fig. 4

Power management settings in HEIs on your computers/monitors/all-in- one machine

Modern power management systems also reduce energy usage by idle appliances by turning them off or putting them into a low-energy mode after a certain time. Still many HEIs are working on it. Details shown in Fig. 5

Scenario of Solar Panels or other forms of renewable energy in HEIs

Using subsidy schemes or any other projects many HEIs have installed solar panels. Using solar panels for HEI can help in reducing pollution and carbon footprint. Also, if management wish to run HEI sustainably and independently, then it is a good idea to lower dependence on non-renewable energy. Most of the HEIs installed solar panels on rooftop. Details shown in Fig. 6

Conduct of renewable energy lessons and programs /trainings in HEIs

HEIs conducting workshops, Seminars on awareness in students regarding renewable energy. Some HEIs have mandatory subjects that include lessons renewable energy. HEIs conduct competitions such as posters, journals on renewable energy. Details shown in Fig. 7

Policy for Monitoring Aspects of Energy Conservation

HEIs found taking initiative to establish guidelines and practices that will lower the HEIs energy consumption, reduce expenditures on energy. Still many HEIs are working on it. Mostly HEI have focussed on Use energy-efficient light bulb, Use smart power strips etc. Energy use is an important aspect of campus sustainability and thus it is very important for Environment audit. Energy auditing deals with the conservation and method to reduce its consumption. Understanding the importance of efficient energy Use College has initiated the process of replacing old incandescent bulbs to energy efficient bulbs. Details shown in Fig. 8

Role of Institution in Swachhta and water conservation activities

Mostly HEIs found working on Swachhta through the NSS and NCC. Some HEIs conducted competitions, on the occasion of World Ozone Day and competitions on water conservation and its management involving students of the college and also conducted programmes in adopted villages. was conducted on environmental awareness. Some institutions have conducted various innovative programmes and guest lectures. Still many HEIs have to implement Swachhata plans and water conservation activities. Details shown in Fig. 9



Fig 11. Pure water project run by HEI for students

Conclusion

HEIs in Maharashtra are doing their best to become energy sustainable through their practices. Survey conducted in HEIs shows that level of implementation of energy management in the HEIs where many areas are focused by HEIs to curtail the electrical energy usage. It is seen that many institutions have taken the lead in maintaining optimum energy procurement and utilization. Best

practices in energy management by HEIs are appreciable but still these HEIs need financial assistance to make it more effective. HEIs in Maharashtra especially in rural area need more attention in implementing energy management practices. However, the activities run by these institutions are helping in cut down the electrical bill of the institution.

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Mentoring and Facilitating District Swachhta Mentors (DSMs) in Collecting Sustainability Index Information from Higher Education Institutions in 11 Districts of Karnataka

An Action Research Project

Melwyn Noronha

Abstract

Mentoring as Institutional Social Responsibility and Facilitation for Community Engagement are two important key words in the context of this Action Research Project. Higher Education Institutions (HEIs) have an important role to play in achieving the national objective of rural socio-economic development. This research paper explores the effectiveness of District Swachhta Mentors in collecting Sustainability Index Information from the HEIs. The purpose of this Action Research is to study if the methods and efforts to mentor the DSMs and prepare them to visit 5 or more HEIs in their respective districts to assess Swachhta parameters and get a response to the Sustainability Index form. The challenges and interventions in getting the Sustainability Index Form from visiting the HEIs will be the base of the research. This study will help plan and execute the task of collecting Sustainability Index Forms from HEIs in an effective manner.

Key Words: Sustainability Index, Mentoring, Facilitation, DSMs (District Sustainability Mentors), HEIs (Higher Educational Institutions), Action research

Introduction

Mentoring in Institutional Social Responsibility and Facilitation for Community Engagement are two important key words in the context of this Action Research Project paper. Higher Education Institutions (HEI) have an important role to play to achieve the national objective of rural socio-economic development. This research paper explores the effectiveness of District Swachhta Mentors in collecting Sustainability Index Information from HEIs' Campus and Community (engagement).

Facilitation

Working with groups to support them to use their own collective resources to achieve their collective goals. Facilitation is the practice of creating an environment which inculcates leadership. As a facilitator for community engagement the role is to get others to take responsibility and to take the lead on different tasks that will result in collaborative efforts to address the issue around which the engagement is taking place.

A community engagement facilitator provides the methods and means that enable groups and individuals to craft answers to complex issues facing their community without necessarily being a subject matter expert. Facilitators need to balance time, the

degree of uncertainty of the issues and the process maturity of the organization/ group - and help them find the best possible actions to address the issue. Facilitators must use the right model/tool in the right place to get the most helpful answer, allowing groups to make decisions and reach a lasting, agreement which has commitment and buy-in. They must understand the continuum of decision making and change which identifies the best tool or technique to use depending on the seriousness/significance of the decision/ situation and the need for the stakeholders - emotionally and mentally - to commit to the decision. In other words, a Facilitator is the catalyst in creating a society which is self-Sustainable.

Mentoring

Mentoring is generally an informal relationship between two people. A mentor will do many of the same things as a coach or even someone who is a trainer, but there is no formal obligation on the part of either party. A mentoring relationship often develops gradually from a friendship or a professional association, intensifies as the mentor discovers he has valuable insight and experience to share, and as the person being mentored discovers his desire to learn from the mentor. The two people will at some point recognize the special

nature of their relationship, but may not name it. And as life circumstances change, the relationship will gradually de-intensify. It will often turn into a friendship of peers.

Mentoring and facilitation in HEIs for rural community engagement is important:

- It will help accomplishing the Swachhta activities on sanitation and hygiene, waste management, water management, energy management and promoting greenery in the campus and rural community.
- It will bridge the gap between theory and practice through rural community engagement
- Promoting rich interactions between higher educational institutions and local rural communities for problem identification and solution to the real- life issues that will benefit mutually helps in building partnerships between local rural communities and institutions of higher education so that all stakeholders can learn from local knowledge and wisdom Engaging higher institutions with local rural communities in order to make academics more relevant to achieving the SDGs
- Promoting service and active citizenship amongst students and youth alike, which would also motivate and nurture high values among them.
- Conducting community-based research with local rural community through community-based research methods (University Grants Commission, 2020)

Sustainability

Sustainable living describes a lifestyle that attempts to reduce an individual's or society's use of the Earth's natural resources, and one's personal resources. At the moment, we are producing resources, using energy and creating waste at a rate which is not sustainable.

This leads to environmental issues, such as pollution and climate change, which cause harm to the environment, wildlife and humans. By making some small changes to your lifestyle, you can reduce your

carbon footprint and help to tackle these issues. People are starting to come around to the idea that we need to become more sustainable to protect the Earth for future generations. Everything you do in your day-to-day life has an impact on the planet, from the food you eat to the car you drive.

The FDP to ARP Journey in Brief

Swachhta activities of 2021 came to a close with MGNCRE covering 20 of the 31 Districts in Karnataka. Each of the 20 Districts got a District Green Champion and the Green Champion awards for the 20 Districts was held online and the awards were handed out by District Deputy Commissioner and District Magistrate (District Collector). In some cases, the GCA winners also received their awards from the District Collector in person. Institute Success stories doubled up as Case Study references for the 2022-23 sessions to motivate Institutes to take up Swachhta activities.

The year 2022 began with socializing messages on Faculty Development Programs (FDP) on "Mentoring for Institutional Social Responsibility and Facilitation for Community Engagement" in 11 Districts of Karnataka.

The objective of the FDP was:

- To get participants to fill the online Sustainability Index Form (swachhta parameters) for respective Institutes.
- Train the participants on Mentoring and Facilitation in community engagement using word/video case study, role play.
- Identify faculty who can take up the role of District Swachhta Mentor in respective district. Criteria for short listing and selection of DSM:
 - Should have attended all sessions of FDP
 - Should have completed all assignments
 - Should not be a NSS official (meet MGNCRE objective 100% and as recommended)
 - Should be Self-motivated and sustainable

Purpose of the Action Research

The purpose of this Action Research is, to study if the methods and efforts have off to Mentor the DSM's and prepare them to visit 5 or more Higher Education Institutions) HEIs in their respective Districts to assess Swachta parameters and get a response to the Sustainability Index form.

The DSMs on completing the 5 visits should have completed the following tasks:

- Assess each of the Institutes using the DRP Report template.
- Take snapshots of the Swachta parameters
- Share the Swachta Campus Manual and ask the Swachta team to read it
- Record the participant information from each of the visits
- Share recommendation for implementation and improvement of Swachta parameters
- Get the Institute to fill up the Online Sustainability Index Form

The message the DSMs have to convey as a part of their Institutional visit and mentoring activity is:

- Increasing recycling and reducing water usage can significantly impact college campuses.

Scope of the Action Research

The MGNCRE Swachta Action Plan (SAP) implementation has been socialized through workshops and action-oriented programs:

- Social Entrepreneurship, Swachta, Rural Engagement Cells, (SESREC)
- Swachta Action Plan District Green Champion (SAP DGC)

From the reach out to the Degree colleges in the 11 Districts in Rural Karnataka it is evident many of the swachhta features are yet to be adopted / implemented in the Campus and surrounding communities.

- Colleges that invest in recycling bins and compost bins can reduce trash waste and build a more sustainable campus.
- Installing on-campus water refill stations encourages reusable water bottles and limits plastic waste.

Small changes like these which could help Campus to lessen your environmental impact.

- Change all of your light bulbs to LED
- Get an energy audit (as explained in the Swachta Manual)
- Switch to reusable water bottles
- Compost your food and yard waste
- Grow your own herbs, medicinal plants
- Plant native plants, grow plants which consume less water
- Shop at your local farmer's market
- Follow the protocols of proper recycling (dry waste segregation)
- Deny use of plastic bags

All of the above activities may lead to Institutes making an exception in responding the Sustainability Index Form and using the Swachta Manual to plan and execute Swachta Objectives in the Campus and Community.

- Issues addressed through Mentoring and Facilitation in HEIs for Rural Community Engagement

MGNCRE announced, socialized a Faculty Development Program (FDP), 'Fostering Facilitation and Mentoring in Community Engagement in HEIs in January 2022.

The HEIs from 11 uncovered (not covered for Swachta Action Plan programs in 2021) Districts in Karnataka were approached and informed about the FDP via WhatsApp and Email broadcasts.

The source of Contacts to reach out to Principal's/HOI/Dean/HOD/Faculty:

- Contacts from existing WhatsApp groups from MGNCRE program like FDP, SAP, REDC, ODOP, SESREC

- NIRF ranking list

HEI faculty engagement Strategy:

A brochure was designed and a call was given for a pre-FDP to orient the FDP participants.

Messages sent to Institutes for the FDP and Pre-FDP:

The participants who attended the Pre FDP were explained about Sustainability in Swachta in Campus and Community and were guided to fill up an Online Google form 'Sustainability Index Form' <https://forms.gle/J4MZLwuwMwreeSK7>

The information entered in this Google form will be the base of the Green activities in Campus and Community sustainability.

District Swachta Mentoring:

11 Districts which were uncovered in 2021-22

Swachta Action Plan District Green Champion activities were selected for the Mentoring activities.

Participant from the Faculty Development Program were shortlisted based on the following criteria:

- Attended all 5 days of FDP
- Were responsive and submitted all learning assignments

Those Shortlisted for the DSM task were notified and a work order along with the orientation document was sent out. The DSM Orientation Document laid out the task's pre-visit, during visit and post visit to the Institutes. the DSMs were to apply their learning from the FDP and mentor institutes they were to visit in Swachta in Campus and Community. The main objective was to get the information on Swachta Index and Parameters. One of the aims was to inculcate Sustainability in Swachta in the Campus and Community.

11 Districts: Bellary, Chikkamagaluru, Chitradurga, Hassan, Haveri, Kodagu, Ramnagara, Tumkaru, Uttara Kannda, Vijayanagara, Yadgir.

Hassan District the DSM pulled out without having completed a single HEI visit. Rest of the DSM's completed the tasks. The District and Institute information, work and interaction in each of the district has been presented separately.

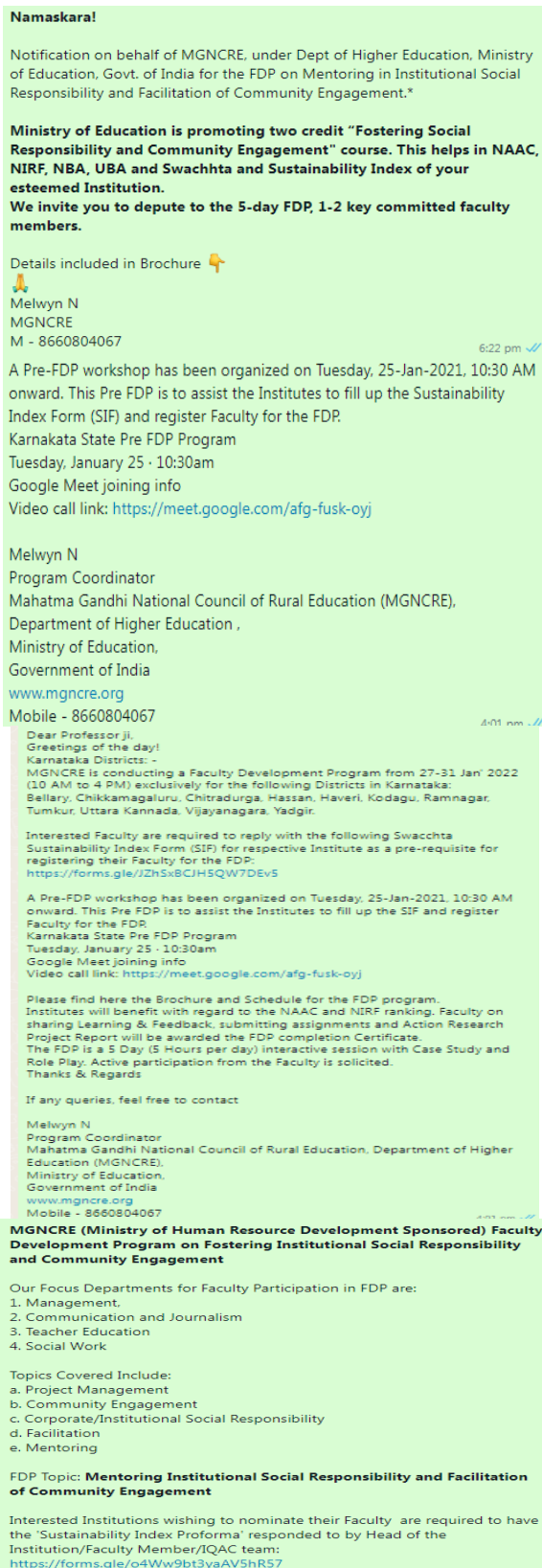


Figure 1: Messages sent to FDP participants

Districts Covered:

1. Bellary



Bellary, officially Ballari, in the eponymous Bellary district, is a major city in the state of Karnataka, India. Bellary has an urban population of 410,445 and metro population of 770,929 making it one of the most populous cities of Karnataka. It has 5 taluks and 104 villages. Mining is both a source of income as well as destruction. Swachta activities are done under Swaccha Bharat Mission and Swachta Pakhwada. Need is to control environmental destruction due to mining by planting more trees and increasing the green cover in the campus and the community

District Swachta Mentor (DSM) Details:

Prof. Arun Raikar, Sandur Polytechnic.

M- 6361257431 | E- arunraikarsdr@sanpoly.org

S. No	Name of the Institution, District and State	Date Visited
6.	Sandur Polytechnic, Ballary Karnataka	7-3-2022
7.	Sadvidya Deg.College. Ballary Karnataka	8-3-2022
8.	Govt.First Grade College. Ballary Karnataka	8-3-2022
9.	Nanavate Deg. College. Ballary Karnataka	9-3-2022
10.	Shree Medha Deg.College, Ballary Karnataka	9-3-2022

- The DSM approached the 5 colleges in Sandur Taluk following a WhatsApp notification from MT & DSM
- Prof. Arun sent up follow up messages and followed it by phone calls. Except for 1 college the DSM was meeting the HEIs for the first time.
- Prof. Arun managed his time well and could make time for the HEI visit and assess the HEIs on the Swachta parameters.
- The learning from the FDP were applied and responses from the HEIs was extracted.
- The HEIs were responsive and in many cases defensive on missing Swachta practices.
- The DSM shared the MGNCRE Swachta Manual (English and Kannada) with the HEIs to refer to for implementing Water and Energy Audits in the Campus and Community.
- The assessment highlights HEIs' awareness on Swachhta, however the initiatives and execution have to be regular and extended to the communities.
- The DSM shared the SIF Google form and persuaded the HEIs to fill it up as well as captured all the Swachta parameters in the DRP report.

2. Chikkamagaluru



Chikkamagalur, known officially as Chikkamagaluru, is a city and the headquarters of Chikkamagalur district. Chikkamagalur city has a total population of 118,401. The literacy rate is high. There are about 39 Degree colleges in Chikkamagalur. To the north is Baba Budangiri, a mountain range in the Western Ghats, with 3 large caves said to be holy. Trails through forests and grasslands lead up to Mullayanagiri Peak. The cascading Hebbe Falls lie in an area of coffee plantations. The forested Bhadra Wildlife Sanctuary, northwest of Chikkamagalur, is home to elephants, tigers and leopards. Chikkamagaluru district has declared as open defecation free on 02.10.2017, chikkamagaluru district facebook page is <https://www.facebook.com/ZPChikkamagaluru/>

DSM Details:

Dr. Sathish S K, IDSG Govt. College
M-9632103864 | E-sksathisha26@gmail.com

S. No	Name of the Institution, District and State	Date and Timing
1	MLMN College of Education Bypass Road,	07/03/2022
2	M K Sreenivasa Shetty Law College Bypass Road,	07/03/2022
3	MESMSPS First Grade College R G Road,	08/03/2022
4	St. Joseph's First Grade College K M Road,	08/03/2022
5	Adichunchanagiri Institute of Technology,	09/03/2022

- Dr Sathish K was nominated by the IDSG college Principal as the two FDP participants were reluctant to take up the DSM tasks citing time and knowledge.
- The two nominated FDP participants who backed out were Physics and Chemistry Faculty.
- The MT & DSM was unable to convince them to take this DSM task up.
- Dr Sathish was assisted by the MT & DSM and a notification was sent to several colleges regarding the Swachta Mentoring exercise.
- A couple of colleges responded back and fixed the date and time of the visit. For the rest of the HEIs the DSM followed up with phone calls and fixed the time.
- Most of the HEIs were in line with Greenery in campus considering Chikkamagalur's green cover. HEIs are up to speed with regard to Energy and Water Management however Audits are sparse and irregular.
- The DSM shared the Swachta Manual and shared a brief on the Audit activities. DSM encouraged the HEIs to organize the National and World events to sensitize and involve the students and faculty in Swachta in Campus and Community.
- The DSM shared the SIF Google form and persuaded the HEIs to fill it up as well as captured all the Swachta parameters in the DRP report.

3. Chitradurga



Chitradurga is a city and the headquarters of Chitradurga district which is located on the valley of the Vedavati River in the central part of the Indian state of Karnataka. Chitradurga had a population of 1,25,170 and the literacy rate is about 70%. There are more than a hundred colleges in Chitradurga offering courses or degrees. Chitradurga is a major tourist hub in Karnataka. The city is famous for its fort which is locally known as Kallina Kote or Stone Fortress. Swachta activities are done under Swachha Bharat Mission and Swachta Pakhwada.

DSM Details:

Dr.R . Mahesh, Government First Grade College Bharamasagara

M- 9448846698 | E- principalgfgcbsagara@gmail.com

Prof. Sangameshwara N S | M - 8123870227 | E –

S. No	Name of the Institution, District and State	Date and Timing
1.	Unity Institute of Nursing Science	04/03/2020
2.	Saraswathi law college.	07/03/2022
3.	Government Arts college (Autonomous)	08/03/2022
4.	Smt.Yashodharamma Borappa Womens First Grade College	09/03/2022
5.	Shri Venkateshwara College of Education,	11/03/2022

- MGNCRE MT & DSM sent out notifications to HEIs in Chitradurga District informing them regarding the Swachta Mentoring.
- The DSM Dr Mahesh (Principal) called and spoke to the HEIs regarding the Swachta Mentoring activity and fixed a time and date.
- Dr Mahesh appointed Prof. Sangameshwara to visit the Institutes as he had to dispense his duties as Principal of the college.
- DSM visited the Colleges and recorded responses and photographs as per the guidelines.
- HEIs were given guidance on Water and Energy audit and the importance of RWH.
- Several Institutes are interested to implement RWH and GWR and keenly made a note of the avenues for support and funding from UBA, CSR, Local MLA/MP, District Administrations.
- HEIs acknowledged the importance of Community activities and the opportunity it gave to students to interact with the people and learn about the real-life problems.
- The DSM shared the SIF Google form and persuaded the HEIs to fill it up as well as captured all the Swachta parameters in the DRP report.

4. Hassan



The Karnataka Government upgraded Hassan's city municipal council area to 66.12 km² (25.53 sq mi) by including nearby villages to the panchayat and the population increased from 133,436 to 226,520.[5]. The Karnataka Government upgraded Hassan's city municipal council area to 66.12 km² (25.53 sq mi) by including nearby villages to the panchayat and the population increased from 133,436 to 226,520.

DSM Details:

Dr Dinesh K S (Principal), Government First Grade College for Women Holenarasipura
M- 9686971684 | E- gfgcw.hnp.11@gmail.com

- Hassan District was a non starter with regard to the DSM activities. The DSM nominated for the task could not take up the activities due to prior commitments and health issues.
- An alternate DSM appointment was considered. However, the alternate nominated was not permitted by the Management.
- MGNCRE received 1 Institute success story along with SIF and DRP report from Hassan. The objective is to use this success story to motivate the other Institutes in Hassan to take up Swachta in Campus and Community.
- The Hassan Institute of Medical Sciences is Swachta Compliant and has Ms. Nichita Kumari who coordinates the Swachta activities in the Campus under the guidance of the Principal Dr Nagesha. The principals are both enthusiastic and passionate about Swachta and has offered to mentor other HEIs in Hassan online or if they visit the HIMS campus.
- MGNCRE will pursue it connect with HIMS to make Hassan HEIs and Community compliant with regard to Swachta.

5. Haveri



DSM Details:

Dr. Chandrabhabha Patgar, Govt.

First Grade College, Haveri

M - 9741239116 | E - prabhagni@gmail.com

Haveri is a town in Karnataka, India. Haveri is famous for its cardamom garlands and Byadagi red chillies. There are a number of private, aided and government schools and colleges that offer courses in PU, degree and master's degrees. Significantly, the Rural Drinking Water and Sanitation Department (RDW&SD) Karnataka has taken up initiatives to address Greywater Management (GWM) under the Swachh Bharat Mission Gramin (SBM-G) Phase II and ODF Plus initiatives.

Swachta activities are done in Haveri under the Swaccha Pakhwada, Swachh Bharat Abhiyan.

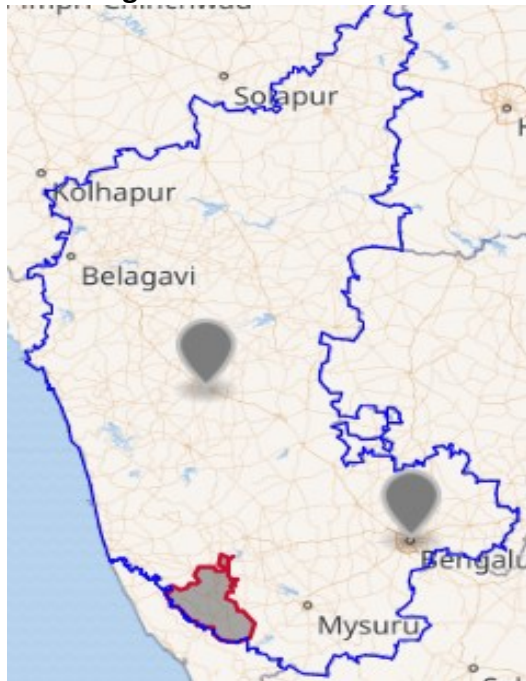
Liquid waste when managed efficiently, prevents the spread of disease while contributing to a cleaner environment. To ensure this, elected representatives and the residents of the Kodiyal Gram Panchayat (GP) in Haveri District of Karnataka adopted a nature-based technological option to treat their greywater before it joined the Tungabhadra River.

S. No	Name of the Institution, District and State	Date and Timing
1.	Govt. First Grade College, Chikkabasuru, Byadagi,	04.03.2022
2.	C. G. Bellad Govt. First Grade College, Akkialuru, Hanagal	04.03.2022
3.	Govt. First Grade College, Bankapur, Shiggaon	07.03.2022
4.	Smt.G.B. Ankalkoti Govt. First Grade College, Shiggaon	07.03.2022
5.	Govt. First Grade Womens College, Haveri	09.03.2022

- Dr. Chandrabhabha a self-motivated and Swachta enthusiast was nominated as DSM for Haveri post her participation in the 5-day FDP (14-18 Feb'2022).
- Dr. Chandrabhabha welcomed her appointment as DSM and set out on the task of selecting HEIs in Haveri.
- In her pursuit of Swachta Mentoring she travelled the length and breadth of Haveri District (over 150+ Km over 3 days) to visit HEIs and complete the assessment.
- HEIs were cooperative and demonstrated the existing Swachta activities and were open to improvements.

- The visited HEIs endorsed the MGNCRE Sustainability in Swachta and Campus. The HEIs are drawing plans for implementing missing swachhta parameters and improving those which are implemented. Key tasks include Audits and saving energy and water.
- The DSM shared the SIF Google form and persuaded the HEIs to fill it up as well as captured all the Swachta parameters in the DRP report.
- The DSM wished to attend the 21-22 March conference however unable due to personal commitments and has shared the ARP for Chitradurga District.
- Dr. Chandrabhabha is involved in several social causes in Haveri District and treats work as worship. Being one of the few computer literates in her Institute many of the documentation and online submission responsibilities are bestowed on her.

6. Kodagu



Kodagu (also known by its former name Coorg) is an administrative district in the Karnataka state of India. Coffee plantation is the major source of occupation and income. The district administration of Kodagu in Karnataka has engaged in multifarious activities to ensure ODF (open defecation free) sustainability. Among these are painting of individual household latrines (IHHL) and community sanitary complexes (CSCs) and mass awareness campaigns through various IEC activities. The entire district has adopted the Pay-and-Use model of community toilets. To ensure toilet usage and ODF sustainability, the district administration encouraged community participation through the painting of the public toilets. The exercise served to facelift the toilets. Out of 104 Gram Panchayats, 94 Gram Panchayats have taken up Solid Waste Management activities.

DSM Details:

Mr. Arjun H.R, St. Annes Degree College, Virajpet
M- 9448600644 | E – stanneskannada@gmail.com

S. No	Name of the Institution, District and State	Date and Timing
1.	Anugraha Degree College, Kushalnagar	11/03/2022
2.	Govt. First Grade College, Virajpet	10/03/2022
3.	Murnadu First Grade College, Murnadu, Virajpet,	11/03/2022
4.	Sarvodaya College of Education Virajpet	12/03/2022
5.	Sai Shankar Degree College Ponnampet Kodagu,	09/03/2022

- Kodagu did not have any FDP participants.
- Hence the MT & DSM attempted to reach out first to REDC institute FMC.
- With the REDC Institute being non responsive MT & DSM approached one of the HEIs St Anne's in Virajpet in Kodagu and explained the DSM activity to the Principal Fr Rony. He agreed to his Institute taking up the DSM activity and appointed Institute NSS officer Shri Arjun as the go to man

for this task. The Institute submitted a signed undertaking that the work done for MGNCRE will be not used for any NSS activity or publications.

- Shri Arjun was mentored by the MT & DSM and assisted by DSM from UK and Haveri to bring Shri Arun up to speed with the Institutional visit and assess the Institutions.
- Shri Arjun completed the DSM tasks under the guidance of Principal, Fr. Rony and submitted the DSM/DRP reports for the 5 Institutes.
- Shri Arjun has a special connect with the tribal's of Kodagu through social responsibility engagements and wants to work in the tribal communities for Swachta.
- The DSM shared the SIF Google form and persuaded the HEIs to fill it up as well as captured all the Swachta parameters in the DRP report.

7. Ramanagara



Ramanagara is a city in the Indian state of Karnataka. It is also the headquarters of Ramanagara district. All the habitations have schools in Ramanagara district. Total 821 lower primary schools, 565 higher primary schools and 328 high schools which include government aided and unaided institutions. Swachta activities are done Swachta Pakhwada and Swachh Bharat Mission. The district has most of its water requirement supplemented by ground water. Water for irrigation is supplied from nearby dams. RWH and GWR has to be implemented at a war footing to make the district sustainable.

DSM Details:

Dr. Amaresha, Christ University

Kengeri Campus

M - 9449603952 | E - amaresha.c@christuniversity.in

Dr. Ravindranath, Christ University Kengeri Campus

M - 8966869766 | E - Chekuri.ravindranth@christuniversity.in

S. No	Name of the Institution, District and State	Date
1.	Sampurna International Institute of Agriculture and Horti Tech	03/03/2022
2.	Sri Kuvempu Mahavidyalaya First Grade College	03/03/2022
3.	Government Engineering College Ramanagara	04/03/2022
4.	Residential Government First Grade College,	04/03/2022
5.	Government Law College, Ramanagara,	05/03/2022

- Dr. Amaresha from Christ University (Deemed) is associated with Centre of Social Activity (CSA) in campus. He was nominated the DSM as CU Faculty of Engineering is also working on a service-learning activity in Ramanagara through MGNCRE-REDC connect.
- Hence the findings of Dr. Amaresha will be inputs to the CU FoE to take up live projects to address and solve Ramanagara Swachta issues.
- The MT & DSM accompanied Dr. Amaresha to get a firsthand experience of DSM visit to HEIs. Dr. Amaresa's post-Doctoral interest in engaging with the community and making them sustainable drove him to accept the DSM task.

- Dr. Amaresa observed that in most of the institutes there was a lot of scope for Swachta activities, however some of them were bogged down by the costs involved and were expecting easy access to funding rather than finding sustainable solutions.
- The DSM explained the objective of the visits and ensured the HEIs copied his thoughts on sustainability and finding solutions for their problems on their own. In most interactions the Principals and Faculty were cooperative and appreciated the Swachta activities.
- It was disheartening to see new constructions in Govt Institutions missing Swachta parameters like RWH, GWR, Solar Panels. LED light had to be replaced the existing tube lights
- The DSM shared the SIF Google form and persuaded the HEIs to fill it up as well as captured all the Swachta parameters in the DRP report.

8. Tumkaru



Tumkur, officially renamed as Tumakuru, is a major industrial city located in the southern part of Indian state of Karnataka. To make certain that no one is left behind, the district administration of Tumkur in Karnataka, had organized a door-to-door survey to identify households without toilets in the latter part of 2019. The exercise was intended to fill gaps in sanitation coverage if any and to ensure that all people, regardless of caste or creed have access to safe sanitation. Tumkur District consists 2085 Govt. Primary schools, 63 aided Primary schools, 267 unaided Primary schools and 2 kendriya vidyalaya, and totally 2417 primary schools, there are 147 Govt. High schools, 205 aided High schools, 123 unaided High schools, and 2 Central Govt. High Schools.

DSM Details:

Dr. Padmini S.V.

University College of Arts,

Tumkur University.

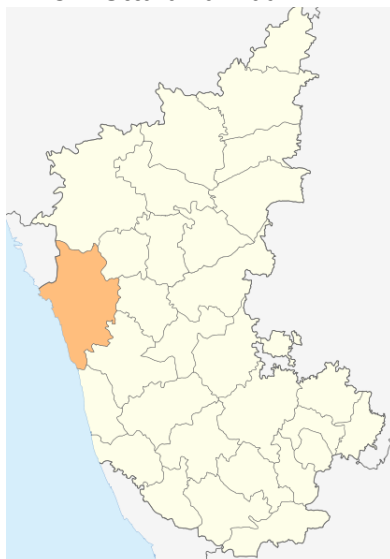
M - 8431090742 | E -sugoomuth@gmail.com

S.No	Name of the Institution, District and State	Date and Timing
1	Government First Grade College, Tumkur,	04-03-2022
2	Government First Grade College for Women, Tumkur	05-03-2022
3	Vidyavahini Degree College, Tumkur,	05-03-2022
4	Siddaganga Arts, Science and Commerce College, Tumkur	07-03-2022
5	Siddaganga Arts, Science and Commerce College for Women, Tumkur,	07-03-2022

- Dr. Padmini attended the FDP in Jan 2022 and Feb 2022. She was appointed DSM for Tumkur.
- She found it tough to get appointments from HEIs in Tumkur. The MT & DSM assisted by writing introduction letters and sent it on Whatsapp to the Heads of the HEIs.

- Following that, the DSM called, followed up and visited HEIs. The DSM approached institutes who were a little hostile as in most of the cases as she was meeting them for the first time.
- In some cases, the DSM called the MT & DSM to explain the purpose and the DSM was then allowed to meet the HOI and assess for Swachta.
- Once in the DSM succeeded in getting required responses and snapshots.
- The DSM is challenged due to lack of expertise in using the computer systems and had to resubmit the reports several times for content, formatting. The DSM submitted it was a learning curve and this experience had made her a better mentor.
- The DSM shared the SIF Google form and persuaded the HEIs to fill it up as well as captured all the Swachta parameters in the DRP report.

9. Uttara Kannda



Uttara Kannada, formerly known as North Canara, is a district in the Indian state of Karnataka. The main traditional occupations are Agriculture, Fisheries, Animal Husbandry, Sericulture, Horticulture, Beekeeping and Leather Works etc. The main tribes of the district are Sidhi, Kunabi, Halakki Vokkaliga, Gonda and Gouli. Swachta activities are organized under the Swacha Bharat Mission. Development projects have the potential to destroy the unique landscape of the Uttara Kannada district.

DSM Details:

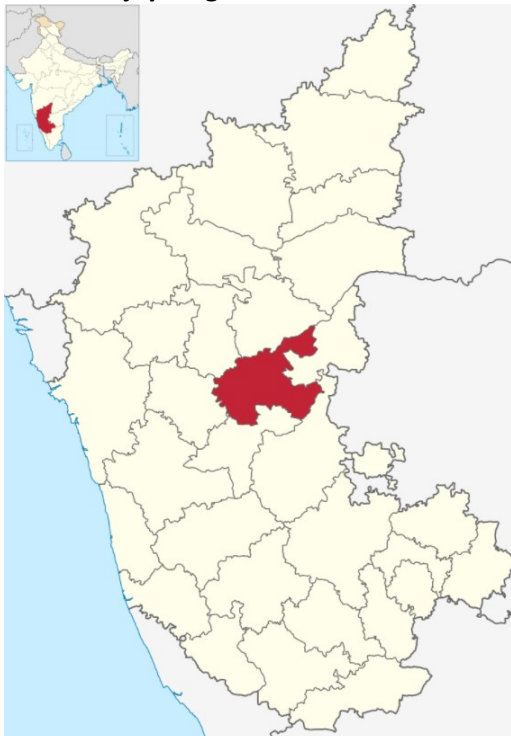
Dr Preeti P Bhandarkar, Kamala Baliga College of Education
M - 9980888721 | E - preetibhandarkar2@gmail.com

S. No	Name of the Institution, District and State	Date and Timing
1.	Govt. First Grade College, Kumta (UK)	04.03.2022
2.	Dr. A.V. Baliga college of Commerce, Kumta (UK)	05.03.2022
3.	KLE's Society's College of Education, Ankola (UK)	07.03.2022
4.	M.P.E. Society's SDM College of Arts, Sc and Com, Honavar	07.03.2022
5.	Shree Guru Sudhindra Degree College, Bhatkal (UK)	08.03.2022

- Dr. Preethi Bhandarkar, Principal- Kamala Baliga College of Education is one of the Star mentors of the Karnataka DSM team.
- Following her participation in FDP Dr. Preethi has participated as Guest Speaker in the subsequent FDP as well as in mentoring sessions for DSM's.
- Dr. Preethi is outspoken and is interested in Community Engagement.
- Dr. Preethi's DSM tasks took her across Uttara Kannada HEIs where she commanded due respect and courtesy.
- Dr Preethi submitted post her visits the Institutes had the required infrastructure to carry out swachhta activities with unconventional modes to achieve sustainability. The visits made Dr. Preethi to further know about their future plan of action.

- Dr. Preethi did not leave any stone unturned in her HEI assessment and even visited Gents wash room to check for sanitation and hygiene.
- The institutes the DSM approached for this audit responded enthusiastically to DSM request. They were eager to know more about the scope of improvement in their respective institutions.
- DSM was humbled by the welcome received and the courtesy extended by the principal, staff and students. The principal also spoke to her in-depth about their future endeavours and their plan to increase their rural engagement.
- The DSM inaugurated a pink room for Ladies and Girl students in one of the Institutes.
- The DSM shared the SIF Google form and persuaded the HEIs to fill it up as well as captured all the Swachta parameters in the DRP report.

10. Vijayanagara



Vijayanagara district is a district in the Indian state of Karnataka, located in the Kalyana Karnataka region. Some famous temples exemplifying the Vijayanagar style include the Virupaksha Temple at Hampi and the Hazara Rama temple of Deva Raya I. Virupaksha Temple, Hampi: This temple has a particularly fine example of the tall, ornate rayagopuram popularized by Vijayanagar architecture. The Tungabhadra Dam also known as Pampa Sagar is constructed across the Tungabhadra River, a tributary of the Krishna River. Kannada University, a research-oriented public university in Hampi, founded with the aim to develop the Kannada language and to promote its literature and traditions.

DSM Details:

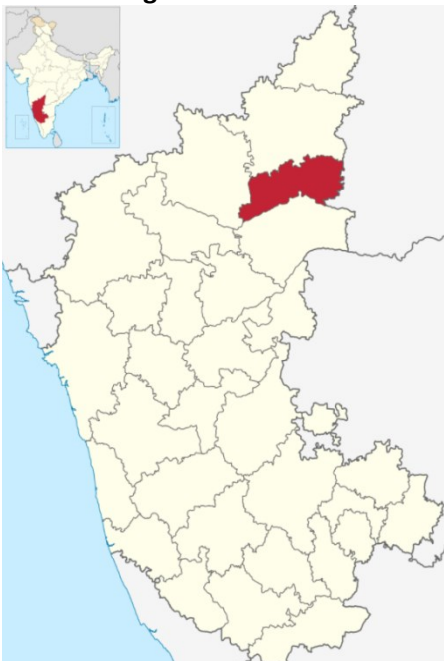
MUTTESHA N, HPS Arts & Commerce College
M- 9972434175 | E- muttesha@gmail.com

S. No	Name of the Institution, District and State	Date Visited
1.	TMAE'S College of education. Harapanahalli	04/03/2022
2.	Government First Grade College	05/03/2022
3.	ADB First Grade College Harapanahalli	07/03/2022
4.	GBR Degree College. Hoovinahadagali	07/03/2022
5.	Kottureshwara College. Kottur	10/03/2022

- Prof. Muttesha is the Principal of HPS college and has attended MGNCRE FDP as a participant as well as a guest speaker.
- Prof. Muttesha was appointed DSM and assigned the task of mentoring 5 Institutes in Vijayanagara.
- Prof. Muttesha was self-motivated and organized to connect to the HEIs after the MT & DSM sent an Introductory note.

- Meetings with Faculty and Students in the presence of the principal was well organized. There were some teething issues with capturing the photos from the locations as Dr Muttesha was the lone ranger.
- However, the DSM got around getting the snapshots for the DSM/DRP reports. With regard to Swachta Vijayanagara HEIs, most of them in Rural areas, have scope for implementation of RWH, GWR, Greenery management.
- HEIs need help with regard to Energy Management and sustainable suggestions like CSR, UBA need to be implemented for support and execution.
- The DSM shared the SIF Google form and persuaded the HEIs to fill it up as well as captured all the Swachta parameters in the DRP report.

11. Yadgir



Yadgir is a city and the administrative The area is also renowned for its vast stretch of fertile black soil which is the main reason for bumper harvests especially of red gram, hence the district is also referred to as the “Daal Bowl” of the state. Yadgiri also has a cluster of cement industries and a distinct stone popularly known as “Malakheda Stone”.

Total Government Educational Institutions:
Primary: 464, Upper Primary: 523,
Secondary: 152

Total Private Aided+UnAided Educational Institutions:

Primary: 2+167, Upper Primary: 35+146,
Secondary: 17+74headquarters of Yadgir.

Under NSS and Swachta Pakhwara activities are ongoing.

DSM Details:

Dr Jagadish Kumar, Government First
Grade College Hunasagi

M - 9731378503 | E - jagadishkumar58128@gmail.com

S. No	Name of the Institution, District and state	Date and Timing
1.	Govt, First Grade College Kembavi Yadgir- Karnataka	07/03/2022
2.	Govt, First Grade College Yadgiri Yadgir- Karnataka	08/03/2020
3.	Govt, First Grade College Shapur Yadgir –Karnataka	09/03/2022
4.	Govt, First Grade College Shorapur Yadgir – Karnataka	10/03/2022
5.	Govt, First Grade Womens College Yadgir	10/03/2022

- Dr Jagadish Kumar, Government First Grade College Hunasagi participated in the MGNCRE FDP in Jan'2022 and was subsequently appointed DSM for Yadgir.
- The DSM contacted the HEIs in Yadgir and fixed a date and time for the swachta mentoring sessions.
- The DSM found it challenging to complete the Institutional visits along with the regular responsibilities at the Institute.
- The required objectives from the visit of assessing and mentoring the Institutes were met.

- The Institutes visited had low Swachta awareness and most of the activities were done for mandatory compliances or to meet NAAC/NIRF commitments.
- Dr Jagadish will be working with the HEIs to change their mindset from compulsion to that of sustainability. The CSR and UBA have a big role to play with regard to the Yadgir HEIs becoming sustainable with regard to Swachta.
- The DSM shared the SIF Google form and persuaded the HEIs to fill it up as well as captured all the Swachta parameters in the DRP report.

Objectives of the Action Research

The main Objectives in efforts in our respective districts are:

- to ensure the DSMs succeed in meeting the selected HEIs, and
- getting the Swachta Parameters assessed, and
- getting the Sustainability Index forms filled up

One of the aims of the Action Research is to convey the message of Sustainability which is meeting our own needs without compromising the ability of future generations to meet their own needs.

1. To ensure the DSMs connects with the HEIs to conduct mentoring sessions and

2. The connect with HEIs is to publicize the Swachta Manual adoption and Sustainability Index form response.
3. To study and analyse:
 - the HEIs' response to the DSM's and
 - the challenges the DSM face in achieving the objectives.
 - the institute success stories if and best practices
4. To initiate and continue with sustainable Objectives in the HEIs through regular interaction, events.

Review of the Literature

1. Fostering Social Responsibility & Community Engagement in Higher Educational Institutions in India, National Curriculum Framework & Guidelines, January, 2020. This report lists out the important role of the faculty in being a catalyst to link students and the community by adopting contemporary teaching methodologies. An important point made in the report is that of facilitating the connection between classroom theory and field realities for students.

2. Swachh Bharat Mission (Rural) implementation in Karnataka:

Karnataka has been the forerunner in putting forth concerted efforts to implement total sanitation in the rural parts of the State. The State has been implementing a number of sanitation programmes right from 1985, with the assistance of Central Government and external agencies like Danida, Royal Netherlands, World Bank, UNICEF and other development partners. With a view to give special emphasis to rural sanitation, "Nirmal Grama Yojane"

has become operational in 1995 and was implemented for 8 years. Afterwards the Centrally sponsored scheme of "Total Sanitation Campaign" was in operation from 2005 to 2012 and this scheme was renamed as Nirmal Bharat Abhiyan from 1st April 2012 and it was again rechristened as "Swachh Bharat Mission" with effect from 2nd October 2014.

3. MGNCRE Swachhta Manual

This is a must and excellent read for all HEIs' HOI/Principal, Faculty and Students. The content is concise and specific with regard to Water, Waste and Energy Audit and Management. Once read it gives a step-by-step direction on how HEIs can go about organizing Swachta teams, assigning tasks, conducting audits, recording parameters and laying out the road map for improvements. For a start DSM and MT will need to explore how to present the Swachta Manual in a form which will be interesting and will catch the span of attention of the stake holders.

Hypothesis

Sustainability in Swachta in Campus and Community and regular improvements in Swachta parameters is a possibility. For a start the Sustainability Index information has to be captured as is from the various Institutes. During the DSM visit the HEIs have to be given the Swachta Manual and the HEIs have to be persuaded to respond to the SIF form.

In this approach, DSM apply their knowledge and skills in a chosen HEI to improve the Swachta parameters in the Campus through Assessment, getting the Sustainability Index Form Filled. The

success of the DSMs in accurately assessing existing swachta parameters and getting the SIF form filled. This is the first small step towards making the Campus Sustainable followed by the community adopted by the HEI and eventually the entire District becoming Sustainable in Swachta.

Ho - There is no significant difference amongst the HEIs in their understanding of the Swachta parameters and sustainability index.

Need for Action Research

Higher educational institutions (HEIs) can play an important role to achieve the objectives of socio-economic development of various Districts in Karnataka state and of India through their active community engagement. This approach will also contribute to improvements in quality of both teaching and research in HEIs as they will develop better understanding of issues confronting the society. It is apt for HEIs to bring in social responsibility and community in their vision and mission itself. It is also important that institutional mechanisms are developed to adopt a holistic and functional approach to community engagement, encompassing all the three functions of HEIs—teaching, research and service. In the context of the DSM tasks the Action Research is focused to assess the MT & DSM interaction and the interventions to achieve the aim and objective.

The DSM move from their comfort zone of their campus and visit other HEIs to assess Sustainability Index in Campus and Community. In some cases, HEIs may cooperate and in many they may not. How the DSM deals with the HEIs and conducts oneself matters.

The DSMs in most of the cases have connected to acquaintances in respective Districts and in some cases have chosen Institutes where the distance of travel may be short.

In some cases, the DSM have taken up travel (length and breadth) across the district.

There may be instances of DSM sourcing the DRP report remotely without the physical visit, however except for a few HEIs most of the DSM visits are authentic and have taken place.

Also post assessment making the Institutes read and implement the Swachta Manual and get the HEIs to respond to the SIF form is a challenge which the DSM's need to put themselves to test.

Need for the action research:

- develop a common understanding of the root causes of the problem
- frame the problem in the context of the community
- develop shared goals and objectives that will address the problem
- put together and implement projects that will achieve the objectives
- evaluate the effectiveness of the projects and engagement process
- make the community sustainable

Challenges

No	District	Challenge	Resolved	Work Around / Solution
1	Bellary	DSM unwilling to start HEI visits due to academic commitment	Yes	DSM was spoken to by DRP & MT and convinced to take up visits as it was a mandatory activity post FDP. DSM was made aware of the possible rewards from this CE activity with regard to any aspirations for PhD or post-Doctoral Fellowship's
2	Bellary	The Diploma practical dates announced, which starts from 18 mar up to 30th March & I have to go as examiner to conduct practical exams at different institutions, so it is not possible to go for the conference. since there's no excuse for remaining absent for that wok, it is mandatory	No	MT was unable to persuade the DSM to take some time off to work on the Action Research for Bellary and submit it at the 21-22 March Conference. The DSM was clear about his priorities of the full-time job and the present commitments and did not wish to over commit. Institutional visits were completed and the ARP report for Bellary is pending and the next steps post HEI visits have to be negotiated with the DSM.
3	Chikkamagaluru	Nominated DSMs refusing to start with the task citing Commitments and lack of knowledge to dispense DSM task. Delay in involving the principal and getting an alternative nominated	Yes	Prof in Chemistry was offered the DSM work order. He appreciated the opportunity however took time to respond and involve the principal. In the meanwhile, Prof. in Physics got in touch for FDP certificate. She was persuaded for the DSM task with no luck. Finally, the College Principal was looped in and he nominated Dr Satish as DSM and the 5 Institutes were covered
4	Chikkamagaluru	Not attending the DSM offline meeting post HEI visit	No	DSM unable to travel due to academic and personal commitments. ARP plan for follow up with the Institutes made and post HEI visit follow ups will be executed

5	Hassan	DSM failed to take up HEI visits	No	DSM was late to response and held onto the response on accepting the DSM role. Alternative DSM from Hassan could not be appointed. MT decided to write to HEIs directly to share the DRP Report and fill the SIF. One such reach out resulted in Dr Nagesha the Principal of Hassan Institute of Medical Sciences responding and showing keen interest in mentoring in Swachta. A work order was released, however HIMS HOI did not permit. Dr. Nagesha organized for the DRP report and SIF to be filled.
6	Kodagu	Difficulty in finding and appointing DSM	Yes	With the REDC Institute being non responsive MT & DSM approached one of the HEIs St Anne's in Virajpet in Kodagu and explained the DSM activity to the Principal Fr Rony Fr Rony agreed to his Institute taking up the DSM activity and appointed Institute NSS officer Shri Arjun as the go to man for this task. The Institute submitted a signed undertaking that the work done for MGNCRE will be not used for any NSS activity or publications.
7	Ramanagara	Not attending the DSM offline meeting post HEI visit	Yes	An alternative was found to replace the DSM in the conference
8	Tumkaru	Institute appointments	Yes	MT sent messages to the HEIs DSM wanted to visit and called and spoke to them explaining the tasks on DSM behalf
9	Tumkaru	Reports formatting and submission	Yes	Took several rounds of report formatting to get it right. DSM has challenges using the computer and interpreting instructions in English on WhatsApp. DSM is enthusiastic and honest and always willing to learn and correct
10	Vijayanagara	Institutional visits and report content	Yes	Explained with examples of DRP reports. DSM comprehended and reworked on reports. MT facilitated DSM visits with WA messages to the HEIs

11	Yadgir	Report content	Yes	Took several rounds to get report content right. DSM has challenges interpreting instructions in English on WhatsApp.
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Table 1: Karnataka 11 Districts Challenges and Interventions

- MT Shared the DSM Orientation Document along with the Instructions for DSM to fulfill their duties during the visits.
- As many were visiting Institutes for the first time it was a little difficult to remember all the tasks
- MT reminded DSM regularly on the tasks during the visits

Actions Planned to Address the Challenges

In light of the global and national approaches currently prevalent, the following key principles shall guide community engagement of HEIs:

Mutual learning and respect: Mutually agreed interests and needs of both rural communities and HEIs should be articulated and respected. Without ensuring mutual benefit, community engagement does not serve the purpose of social responsibility of HEIs. While community learns from students and faculty engaging with them, students and teachers should also learn from community knowledge and experiences

Community engagement should not be limited to a few social science disciplines alone. It should be practiced across all disciplines and faculties of HEIs. Faculties of natural sciences and engineering can also promote community engagement in teaching and research. This will help educate local communities about new technological innovations as well as inform students and faculty about ways to harness local technology and knowledge. MGNCRE-

REDC in collaboration with PMFME-ODOP has created a connect between Christ University Faculty of Engineering, Kengeri Campus and Ramanagara District. This connect has conducted Service-Learning activities to enable students from all Engineering and Management branches to explore meeting village folks and finding Technological solutions to the daily life problems of the villagers.

Linkages with local institutions: The objective is to sustain regular community engagement programmes by developing organic and long-term linkages with local institutions around them. These include local governments, district administration, local entrepreneurs, business and local NGOs.

Mentor the Institute to adopt Swachta activities in the Campus and communities surrounding the Institute

HEIs can also explore opportunities to adopt other HEIs and implement swachhta parameters as student projects and knowledge sharing programs.

The **goals** of ‘fostering social responsibility and community engagement in HEIs’ comprise of

- Improving the quality of teaching/learning in HEIs, by bridging the gap between theory and practice through community engagement;
- Promoting deeper interactions between higher educational institutions and local communities for identification and solution of real-life problems faced by the communities in a spirit of mutual benefit;
- Facilitating partnerships between local communities and institutions of higher education so that students and teachers can learn from local knowledge and wisdom;
- Engaging higher institutions with local communities in order to make curriculum, courses and pedagogies more appropriate to achieving the goals of national development;
- Catalysing acquisition of values of public service and active citizenship amongst students and youth alike, which would also encourage, nurture and harness the natural idealism of youth;

- Undertaking research projects in partnership with local community through community-based research methods

Research Methodology

1. **Research methodology used:** Observational & Survey

2. **Research area:**

Benefits of outcome to the Nation and benefits to the Faculty and Students from Sustainability activities related to Swachta in Campus and Community. Making HEIs socially responsible over and above their primary objective.

3. **Research aim, objectives, questions, Hypothesis:**

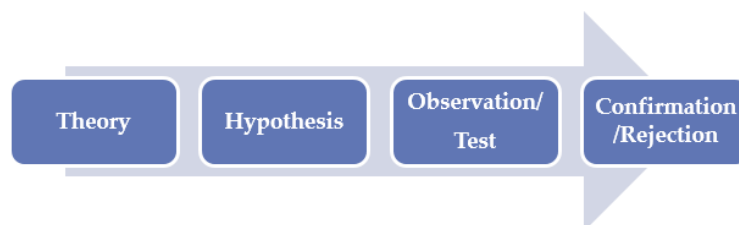
Objective:

HEIs can play an important role to achieve the objective of improving Swachta Parameters through their activities in the Campus and Community Engagement.

The above approach will contribute to improvements in quality of Teaching and Research in HEIs through better understanding of issues confronting the society. The model of 'service-learning' (a globally accepted best practice), providing engagement opportunities to students from various disciplines and courses to apply their knowledge to address the challenges of a specific community.

Aims:

- by bridging the gap between theory and practice through community engagement
- identification and solution of real-life problems faced by the communities
- students and teachers can learn from local knowledge and wisdom
- make curriculum, courses and pedagogies more appropriate to achieve National goals
- impart values of public service and active citizenship amongst students
- undertaking research projects in partnership with local community



Deductive process in research approach

Figure 2: Research Methodology Process

Review of the Literature

Considering we need to capture high level detail with less time available the following are the primary sources of literature:

Primary: Reports (DSM DRP reports, ARP papers), Field visit information, Conference proceedings, Some government publications.

Secondary: books, newspapers, magazines, journals, online articles, Articles by professional associations, Statistical data from government

websites

4. Data Collection methods:

Survey questions on (closed ended questions) Swachta in HEIs in the DRP reports. Responses are a measure of the Swachta parameters in the Institute. The sample size of minimum 5 to 10 Institutes.

5. Collecting primary data:

Data was collected from DSMs to assess District wise visit information through Google forms and excel sheets. The metrics shared in the report are

information shared by DSM from their visits.

6. Data Analysis:

Data is collated and analyzed using Tables and 2-D Column Charts

7. Conclusion:

The level of Swachta achievement in District HEIs and the next steps. Here we can ascertain if the aims and objectives listed above have been / can be achieved.

- The activities were carried out with the following limitations:
- The MT & DSRP trusts the DSM to carry out the HEI visit and conduct the Mentoring activity diligently. Else the information received if incorrect may derail the aims and objective.
- Some of the nominated DSM's were not from the FDP participants. Hence the mentoring and facilitation may not be as desired.
- The Sample (HEIs visited) may not be illustrative of the district.

8. Research completion:

The research is the start of subsequent tasks in the research. The output of this research will be the input for the next task of making the Campus and Community sustainable.

Implementation of Action Research Steps

- Detailed Steps followed in organising the institutional visit / Methodology followed in organizing the Institutional visit
 - Communicating with Institutes, talking to officials, Strategy followed to get buy in
 - Whatsapp group formation, communication
 - Visit schedule
 - Content used
 - Data and Documents

Implementation Strategy

Certain key steps are required for effective implementation of this framework on 'fostering social responsibility and community

engagement 'in HEIs in the selected Districts

1. A professional development course for preparing faculty of participating HEIs can be organised to build professional competencies amongst facilitators of community engagement in participating universities. Such Master Trainers can then support further professional capacity development in community engagement through teaching and research.
2. Building competencies in community engagement amongst nominated DSM's is critical. Such capacity building has several components. First, short orientation programmes PRE-FDP for Principals/HOI/Faculty of HEIs hosted to explain the context of Faculty Development Program and get the Sustainability Index Form (as is Swachta Parameters) filled. This is followed by the 5 Day FDP program to train the Faculty on Mentoring and Facilitation.
3. DSM nominated from Districts are oriented on the DSM tasks and requested to visit Institutes in HEI' s in respective Districts.

Faculty Development Program (FDP):

The Faculty Development Program aimed to groom faculty to make innovative strides and reforms in teaching-learning environments. Mentoring of faculty will go a long way in achieving institutional and organizational goals. Higher education is responsible for creating knowledge for welfare of mankind. But this aspect has been changed in last two decades when knowledge has been transformed into knowledge economy and higher education in almost all the countries is being driven by this concept. HEIs need to fulfill their fundamental duty of social responsibility by mobilization of their intellectual resources for the better cause of society and mankind as a whole through research, innovation and knowledge economy. Contribution of knowledge economy for which the HEI stands, as part of its objectives towards

social responsibility, may be considered superior over any other mode of contribution, particularly at a time when there is crisis of global dimension. Further, meaningful and gainful engagement of student community for the betterment of society itself is a social responsibility of an HEI because society as a whole view the HEIs as a source of bright future for their children.

During the 5-day FDP the participants were trained on Mentoring and Facilitation in the

Community using methods like: Lecture, Video and Word Case Study, Role Play.

Following the FDP 11 DSMs were selected from 11 Districts and nominated District Swachta Mentors. Each DSM was required to visit 5 Institutions in respective districts and carry out a Swachta Audit and Mentoring activity. A pre formatted report with a Survey questionnaire was compiled for DSM to get a response to from the Institute.

Outcome of the Pre-FDP and FDP programs

Participant information:

	17-21 Jan'22	27-31 Jan'22	14-18 Feb'22	1-15 Mar'22
Pre-FDP Participants	350	150	100	-
Pre-FDP Institutes	150*	65	45	-
Pre-FDP SIF filled	280	10	2	-
FDP Participants	85	49	29	-
FDP Institutes	40	22	14	-
FDP SIF Filled	10	05	05	-
DSM Visit Institutes	-	-	-	52
DSM Visit Participants	-	-	-	300
DSM Visit SIF Filled	-	-	-	36

Table 2: FDP Outcome

(Pre-FDP Institutions* - Includes previously covered and un covered Districts)

Learning and Feedback from the FDP from the participants:

- There is a need for formal and informal interactions between students and teachers. Usually, the interaction is based on what happens inside class during the teaching time. Whereas there is a need for teachers to have an informal approach with students where they can be trusted and sought out for. The students must not feel fear or intimidation to approach a teacher for help or guidance.
- When the faculty work with students with specific goals in mind, they lay the frame work for the students themselves to set goals and work towards them.
- When people see their counterparts in the urbanized world earning money with less than half of the physical toll, it causes a serious temptation.
- As India is an agrarian country with the majority living in villages and towns, this kind of imbalance leads to a genuine loss of strength in the societal fabric.
- We also see older populations in villages, while the youth and working-age populations migrate to towns and cities to make a livelihood.
- The senior citizens raise the youngest generation while their parents are out working in different towns. This has become the arrangement in many villages out of economic desperation.
- We also should spend time thinking of Sustainable solutions for our problems.
- Through the session, the conversations with the other presenters simply showed us that we should find solutions after properly studying and understanding the specific community.
- Mentoring, we should develop a different heart set. There is a lot of interest and goodwill, now we have to form the correct heart set to continue our mission.
- The attendees have a wonderful outlook towards the rural communities. Although we

should not compare their life to ours, and our material comforts in urban areas.

- Gadag shared that his district is dependent on rain fed crops, and there are not enough check dams to conserve the rain water. Health wise, there is fluoride content in the water. This is showing up through ailments in the residents. There is seasonal migration to Goa and Mangalore in the summer and there are various programmes to control that through MGNREGA and RUDSETI.
- There are several organizations working from Chikkaballapura. It works to reduce afforestation, improving water table and maintenance of the saplings through the year.
- Our roles as facilitators can be exploited to connect with people/ students/ communities. If we are already dedicated to our craft, we have a greater incentive to dedicate whole hearted effort to the cause we believe in.
- Our role in Rural Development, to elevate the life of those who are disadvantaged. We have the greatest opportunity to groom our students and communities to a world centric point of view.
- Take away from the FDP session was how to engage students and youth when it comes to topics that were discussed today. Any work done must be replicated by the next generation and this can be achieved through correct guidance and training.
- We have to look for the real in life. Look for the reality of any situation and not the mental projection based on our learning and understanding.
- The greatest success is when our students are doing something fantastic for the unfortunate sections of the society.
- As mentors we must be able to gauge the effect we have on our students and communities through the students. As teachers we must be inspirational to students who will go into the world and help others.
- There is a lot of influence that the towns and urban areas have on villages. The profit-oriented state of mind from the urban societies has leached into the village communities. The economic disparity and the cultural system in place make it very hard for the community members to continue living with less
- As an educator, our main motive along with educating students is to make them the best

they can be for the community and country as a whole

- We observe that in rural areas, the institutions there can assess the issues in the community like Infrastructure issue, hygiene and sanitation issues, farm waste management, the efficiency of the civil bodies, water conservation and drinking water issues, open defecation etc. use of renewable energy etc.
- Guidance and counseling (Upabodha and Apta Samalochane) at three levels, Individual, educational and professional will use different techniques
- The focus of NEP in reducing the stress from Academics to students, parents and faculty members was discussed with illustrations from the participants. It helps in identifying different types of talents (latent and hidden)
- Process followed will talk about the 'who I am' makes a difference. Understanding the students/faculty members situation while facilitation is necessary for it to be effective
- The importance of Swachatta/ Sustainability index form is to capture the avenues of community engagement in terms of water management, waste management etc. from the campus to the surrounding community through initiatives and students.
- The issues in rural communities pertaining to sustainability and access. Open defecation, bad roads, farm waste hygiene etc. the GP office will need to be the model of behaviour.
- The institutions could set up rainwater harvesting. With separate restrooms for men and women with appropriate plumbing and maintenance. Focusing on electricity and possible renewable power sources like solar and wind energy harnessing plants in the campus and the community around.
- The easiest empowerment strategies come when social workers use their expertise to meet needs by play an active role in case management with some involvement of the rural society.
- There is a cost involved by NGO's in providing benefits to the rural society for rural projects. The ultimate benefit that reaches the rural society is only a percentage of the total outlay after taking out these costs.
- Do not differentiate between the mainstream (urban) and the downstream (rural) as it creates a divide and affects the objective of the

social responsibility initiatives. Such Categorization is unnecessary.

- We need to let the rural society discover their own strengths, remain there for them if there is a critical moment that they require support. That extra mile we travel creates more self-respecting people that will eventually appreciate our interventions.
 - PRA mostly focuses on the empowerment of people through participation
 - It is a process to involve the community in planning and decision making.
 - Community develops their own skills needed to address issues, analyze options and carry out activities.
 - Participatory decision making reflects respect for human dignity and creating the opportunity for individuals to fulfill their responsibility to exercise the right.
 - The rewards of the rural value system are belonging, emotional support, security and predictability. One major contrast between rural and urban living is the type of emotional connections and bonds rural people have with their friends and neighbours. Another is the sense of community and community participation
 - We can work to improve rural economy. This balance can be brought in by various means. Education, public health and sanitation, women empowerment, providing better electricity and irrigation, facilities for agriculture extension, and research besides loans and such credit availability, along with skill development for employment
 - Wastewater management programs in rural areas aim at treating and managing sewage and water used for non-potable purposes.
 - In rural semi-arid areas, access to a sustainable and adequate supply of clean water is critical in the fight against poverty and for human welfare. Additionally, water is crucial to a wide range of economically important activities – from brick-making to market gardening and livestock production
 - The Priority Grid provides a rational and structured approach to derive the group's priorities, whilst facilitating much negotiation and consensus
 - Agricultural field mapping is an increasingly important way to both monitor your land and manage future activities. It helps you understand and map different types of information including data regarding soil health and nutrition, slopes, water and irrigation systems
 - resource mapping requires the application of other tools, in particular transects which allow in-depth analysis of individual resources
 - Consider PEST factors that are impacting the rural space under study. The first step is to research and gather as much information about your organization's external influences as possible. Identify opportunities. , Identify threats, Act on your findings.
 - The technological interventions under the UBA cover different subjects broadly categorized as: Sustainable agriculture, Water resource management, Artisans, industries and livelihood, Basic infrastructure & services and rural energy system
 - UBA is a flagship programme of the Ministry of HRD, which aims to link the Higher Education Institutions with a set of at least 5 villages so that these institutions can contribute to the economic and social betterment of these village communities using their knowledge base.
 - UBA is a significant initiative where all Higher Learning Institutes have been involved for participation in development activities, particularly in rural areas.
 - UBA also aims to create a virtuous cycle between the society and an inclusive university system, with the latter providing knowledge base; practices for emerging livelihoods and to upgrade the capabilities of both the public and private sectors.
 - Currently under the scheme UBA, 13072 villages have been adopted by 2474 Institutes.
 - Unnat Bharat Abhiyan 2.0: Unnat Bharat Abhiyan 2.0 is the upgraded version of Unnat Bharat Abhiyan 1.0. The scheme is extended to all educational institutes; however, under UBA 2.0 Participating institutes are selected based on the fulfilment of certain criteria.
- The Author has shared the above feedback and learning in minute detail indicating that when the DSM's list was finalized, their inputs and learning from the FDP sessions were considered. MGNCRE when pursuing the HEIs engagement need Faculty

to be active learners, speakers and report writers. Gathering thoughts to share when engaging peers from HEIs, one not only needs to know what to speak, however how to render the thoughts as well. The interaction has to be both purposeful, impactful and implementable.

Links referring to Participating Institute information.

➤ Institutional success story:
<https://docs.google.com/spreadsheets/d/1KRkioNt sEOg6YHu1eISJOYjgEFm7cF3XpLhgxaPwt-U/edit?usp=sharing>

Implementation of the Study

It is important that the classroom theory is linked to the realities of the local field areas. Existing courses can be adapted, both in content and pedagogy, for community engagement to facilitate learning from the field. Institutes should encourage students to take up live and real-life problems from the Communities/Villages as academic projects. This way the students meet academic fulfillment as well as simplify and resolve problems.

For instance:

- Management curriculum may include aspects of micro-financing in rural context
- Packing, Branding, (digital) Marketing strategies/IT platforms
- Chemistry syllabus can have a component of conducting water and soil analysis in surrounding field areas
- Political science syllabus could include mapping of local rural governance institutions and their functioning.

Within existing courses being taught at HEIs, community engagement may provide better quality service-learning opportunities for students, while also contributing to service to local community.

Keeping local realities in view, HEIs can develop new contents in existing courses which make

- Institute SIF responses:-
 - January 2022 Pre FDP:
https://docs.google.com/spreadsheets/d/1cxFVEdWABm1-RnuYthPtuSFiH3MD38P_/edit?usp=sharing&oid=14198614473702273825&rtpof=true&sd=true
 - February 2022 Pre FDP & DSM Visits:
https://docs.google.com/spreadsheets/d/1dXB-PEImex1tPAOCNP_wJDegpEBfO6-jy8thQZ7co6w/edit?usp=sharing

them more relevant to students from the local areas and also be useful to local community. This will not only enrich the curriculum of existing courses through locally- appropriate subject matter, but will also create new, locally appropriate course content that is useful to local community.

HEIs need to design and introduce new courses at undergraduate and post-graduate levels which foster social responsibility and enable community engagement.

If a mutually beneficial partnership with local communities and institutions—business, government, civil society--- is built, community university research partnerships may become supportive of new knowledge and its use. Many students and faculty undertake research in the field. However, such research is currently carried out only to advance the research interests of the students and faculty. Research questions can be framed in partnership with local community so that new knowledge thus produced can provide solutions to local challenges.

In order to promote the practice of sustainability in the infrastructure and functioning of HEIs, it can undertake research in partnership with local communities to reduce energy and carbon consumption. Such

partnership research can also help recycle water and waste in ways that are locally useful by communities around them.

When HEIs undertake research in partnership with local communities and other institutions, they can improve the relevance and quality of their research. Local governments, district

administration, local business and NGOs can all benefit from research undertaken by students and faculty of HEIs, if it is undertaken in partnership with them. Students thus gain a sense of satisfaction about their research making a useful contribution to society through community engagement.

Findings of Action Research

The findings from the Action research are listed as below:

- DSMs taking up the tasks and dispensing it diligently depends on the following factors
 - How self motivated and genuine they are
 - How much are they interested in the task and the objective of the task
 - How the DSM can manage their time to do their regular tasks and DSM task
 - DSM connect with the HEIs and the respect they command (visible in case of Uttara Kannada, Haveri and Chikkamagaluru)
 - DSM ability to use Technology (Computer, Smart Phone)
 - DSM ability to consume information and present it to the HEIs
- The DSM Objective of taking up the task
 - API's and credits
 - Money / Remuneration
 - PhD and Post Doctoral Major and Minor Projects
- Challenges in achieving the DSM task Objective
 - Institutes adopting the Swachta Manual (Kannada/English) to implement Swachta
 - The Swachta Manual is comprehensive and gives step by step details on how to measure Swachta parameters using Audits
 - The Volume / no of pages and the text format is one of the reasons HEIs drop the ball and do not pursue it
 - The Workshops, DSM visits objectives gets diluted due to the HEI academic schedule
 - Institutes responding to the Google Sustainability Index Form accurately
 - Institutes in rural areas are challenged with knowledge and resources to respond to the Google form. They do not come up front with the reason.
 - Language is a barrier as those confronted with responding to Google forms are unable to comprehend the question and instructions

Outcomes of the Action Research

- **First Level Institutional visit outcome is recommendation for improvements**
 - Most of the HEIs received the DSM recommendations well and shared accurate information
 - DSM were requested to assist with Swachta Implementation and invited for Mentoring talks to Faculty and Students
 - DSM were asked to inaugurate pink room in a HEI

- DSM succeeded in getting SIF filled up and DRP report with information and photos of the Institute Swachta Facilities
- **Second Level outcome is review of the recommendations implemented and rewards and recognition**
 - DSM Recommendations
 - Work with NGOs and SHGs for more innovative Activities in campus.
 - Expand the solar panels in campus for recyclable energy resources.
 - Rain Water Harvesting system and Ground Water Recharge.
 - Water Recycling system implementation
 - Green campus implementation.
 - Green House norms for upcoming buildings in campus
 - **Sanitation and Hygiene:**
 - The campus has lot of green landscape and with the existing practices the institution can do well in keeping the college premise clean and prohibiting littering.
 - Also, use of some more dust bins in the campus can help reducing the littering.
 - Forming student club for sanitation and hygiene. Orienting them to create awareness among students.
 - Also, institution can adopt a policy on students keeping the surroundings clean and collecting fine for littering.
 - For new batches of students conducting an induction on campus policies where emphasis given on cleanliness and hygiene of self and surroundings. This should be made as regular practice.
 - **Waste Management:**
 - The institution has lot of scope for managing waste. Especially setting up compost pits and using dry leaves for compost.
 - It would be good to go for waste auditing. This will help in terms of recycling dry and wet waste
- Placing separate dustbins for wet and dry waste
- Again, here also forming student clubs to sensitize all the students on the importance of waste segregation and reduction/ban of plastic usage.
- The wet waste can be used for Vermi-compost.
- The dry waste such as plastic bottles and wrappers can be used for bricks. The paper waste can be used for up cycling or re-cycled into note books. For further assistance please visit Parivarthana Unit of Centre for Social Action, CHRIST (Deemed to be University) Bengaluru.
- Also, the student club can be engaged in creating awareness programmes in the community in association with NGOs and local governance such as panchayats. Since the new NEP promotes Service learning it is important to have policy in the institution or have co-curricular or extra-curricular activities of service learning for all the 5 areas Swacchta.
- **Water Management:**
 - Water auditing and management as per the Jal Shakti Campus and Jal Shakti Gram
 - Where there are no rain water harvesting pits/ponds, there is scope for setting them up in the campus. Also the grey water can be used for existing plants to save the water.
 - Planting indigenous variety of plants and less water requiring plants.
 - Campus can have some more fruit bearing trees with the existing ones if possible. It is better to grow wild varieties in order preserve the seeds of wild varieties. Wild

varieties are strong and disease resistant.

- Trees like coconut do not occupy much space and do not need much ground water.
- Organizing water conservation workshops for the students and faculty
- The contour trenches, artificial ponds and roof top water harvesting structures could be introduced appropriately in the campus.
- Plant native plants that require only the amount of water that falls as rain
- Water management is required for the each and every household of the local villages. Hence, the student clubs can be engaged in sensitizing the community especially the local panchayats and SHG groups.

➤ **Energy Management:**

- There is scope for activities related to all the areas of energy management.
- Conduct energy audit of the campus
- Replace CFL lamps with LED lamps in a phased manner
- There are a few solar panels in the campus and there is a scope for more panels in a phased manner.
- Sensitize the staff and students on judicious use of electric usage and conservation.
- Monitor the campus regularly for water and thermal leaks, lighting efficiency (new and retrofit), and

equipment selection, maintenance and use.

- Energy management and conservation is required in the community as well. Hence, the student clubs can be engaged in sensitizing the community especially the local panchayats and SHG groups on the same.

➤ **Greenery:**

- The campus is having lot of green space. It is also important to encourage students to the greenery with nurturing them in the campus and its neighbourhood villages (especially the planting trees).
- Planting them during monsoon will help them grow better with low maintenance.
- More local species that are resilient, fruit-bearing, useful as well as representative of the local natural vegetation.
- Forming clubs such as green army will help. Empowering such student clubs to organize the regular programs inside and outside the campus would be great. Hence, for all five areas student clubs play a major role.
- Also partnering with the NGOs working with this area will complement the initiatives.

Data Analysis and Interpretation

How many institutions have been covered?

50+ Institute's were covered by 10 District Swachta Mentors in 11 Karnataka Districts from 1-March-2022 to 15-March-2022.

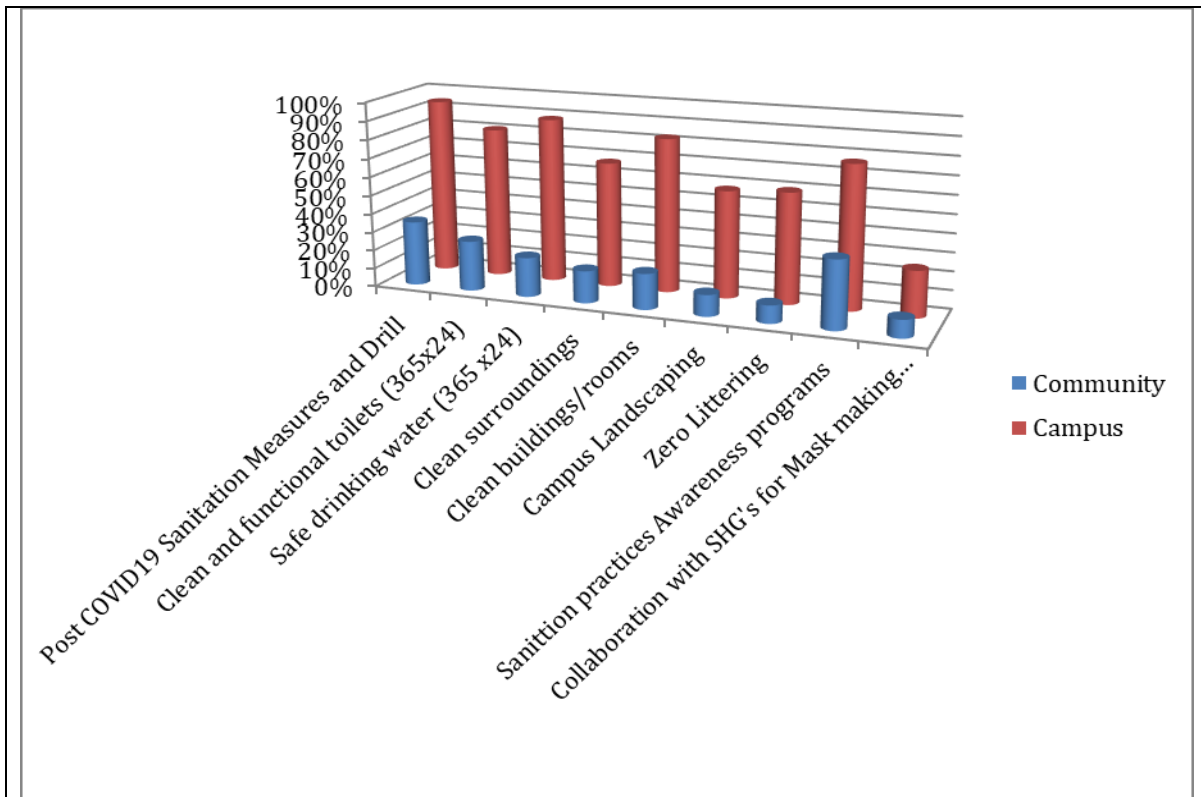
Impact of the Institutional visits

From the DSM visits the Ground reality was known and interventions can be planned to implement swachhta effectively in the 11 Districts. The following graphs indicate the activities related to the Swachta Parameters in practice and those which need to be adopted.

Table & Graphs - Response received from DRP report. Include overall graphs and interpretation.

- **Analysis of the Findings**

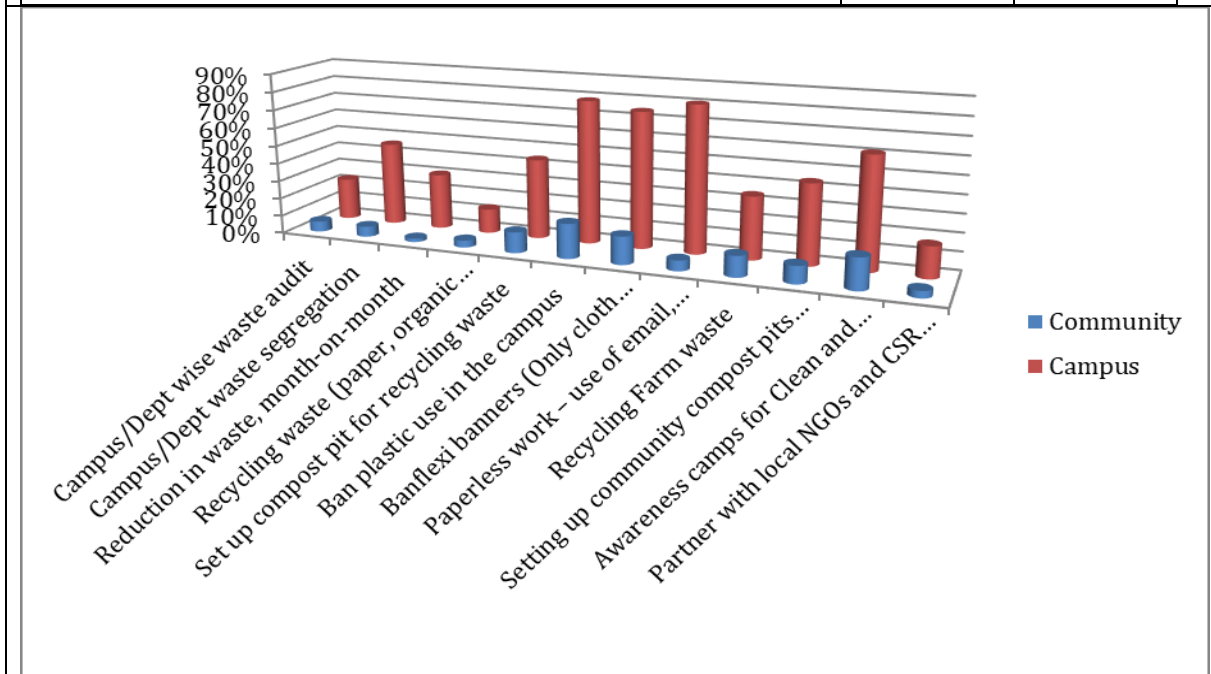
Figure 3. SANITATION AND HYGIENE (CAMPUS&COMMUNITY/ADOPTED VILLAGES)	Community	Campus
Post COVID19 Sanitation Measures and Drill	35%	94%
Clean and functional toilets (365x24)	27%	81%
Safe drinking water (365 x24)	21%	88%
Clean surroundings	17%	67%
Clean buildings/rooms	19%	83%
Campus Landscaping	12%	58%
Zero Littering	10%	60%
Sanitation practices Awareness programs	37%	77%
Collaboration with SHG's for Mask making and similar activities	10%	25%



- Post Covid Sanitation measures and drills implemented in campus, however the HEIs need to also expand and improve community engagement activities.
- Collaboration with SHG and CSR needs interventions for Campus and Community activities.
- Implementation of Clean drinking water in communities funded through UBA and CSR
- HEIs need to encourage students to take out service-learning tours of neighboring Communities and villages to take up the Sanitation and Hygiene activities
- 100% Plastic Ban and zero tolerance to littering

Figure 4. WASTE MANAGEMENT (CAMPUS&COMMUNITY/ADOPTED VILLAGES)	Community	Campus
Campus/Dept wise waste audit	6%	23%
Campus/Dept waste segregation	6%	46%
Reduction in waste, month-on-month	2%	31%
Recycling waste (paper, organic waste form canteens and kitchens)	4%	13%
Set up compost pit for recycling waste	12%	44%
Ban plastic use in the campus	19%	79%
Banflexi banners (Only cloth banners to be used)	15%	75%

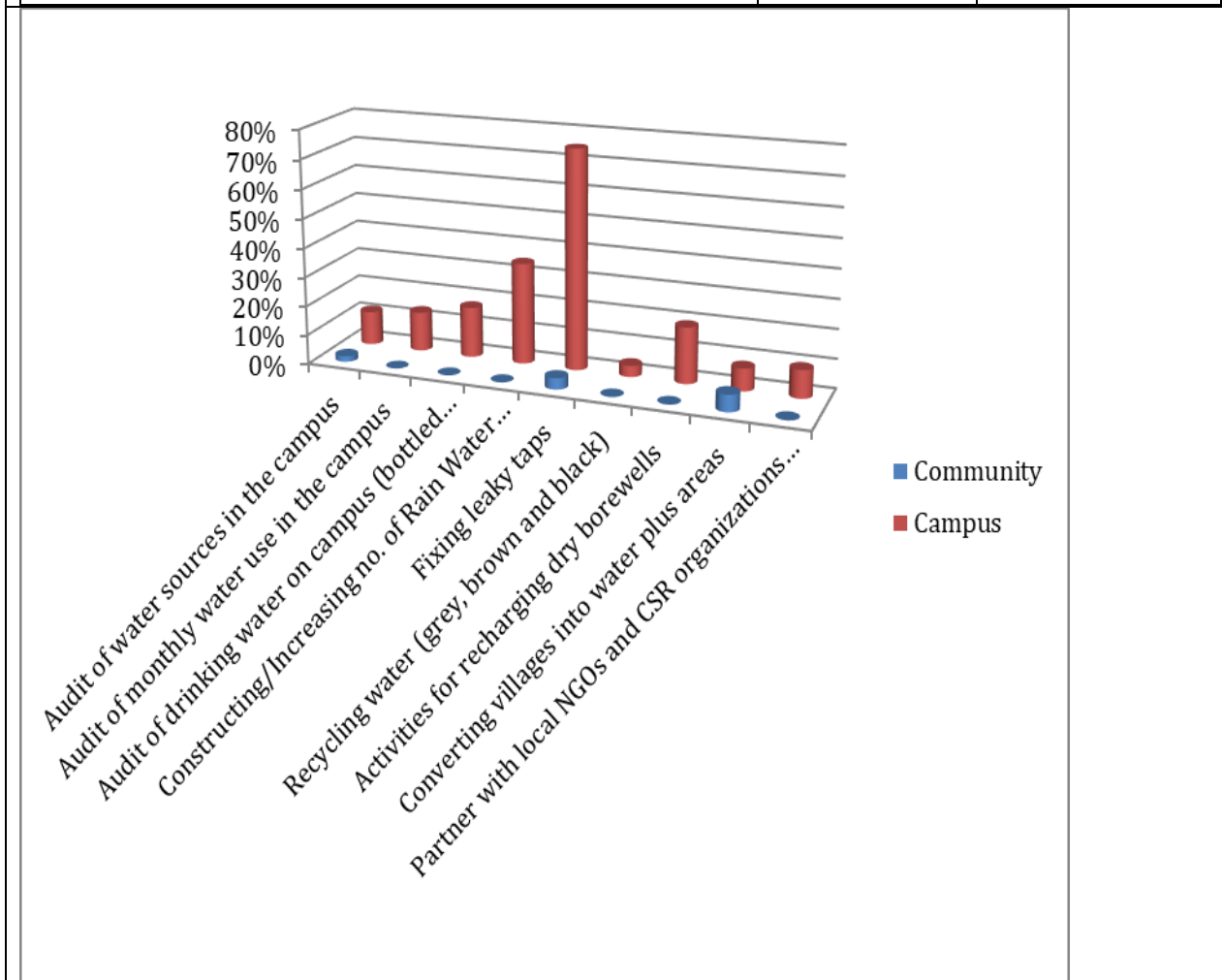
Paperless work – use of email, WhatsApp for communication	6%	81%
Recycling Farm waste	12%	35%
Setting up community compost pits in villages	10%	44%
Awareness camps for Clean and Green Village (Zero Littering – IEC Material) including banning single-use plastic	17%	62%
Partner with local NGOs and CSR organizations in this field	4%	17%



- Regular Waste Audits to check for waste segregation in Campus and Community
- Professional colleges to implement recycling units as final year projects for students
- Implementing recycling of Food and Kitchen waste through composting pits
- HEIs to partner with Companies and implement the above as a part of CSR

Figure 5. WATER MANAGEMENT (CAMPUS&COMMUNITY/ADOPTED VILLAGES)	Community	Campus
Audit of water sources in the campus	2%	12%
Audit of monthly water use in the campus	0%	13%
Audit of drinking water on campus (bottled water)	0%	17%
Constructing/Increasing no. of Rain Water Harvesting pits in the campus	0%	35%
Fixing leaky taps	4%	75%

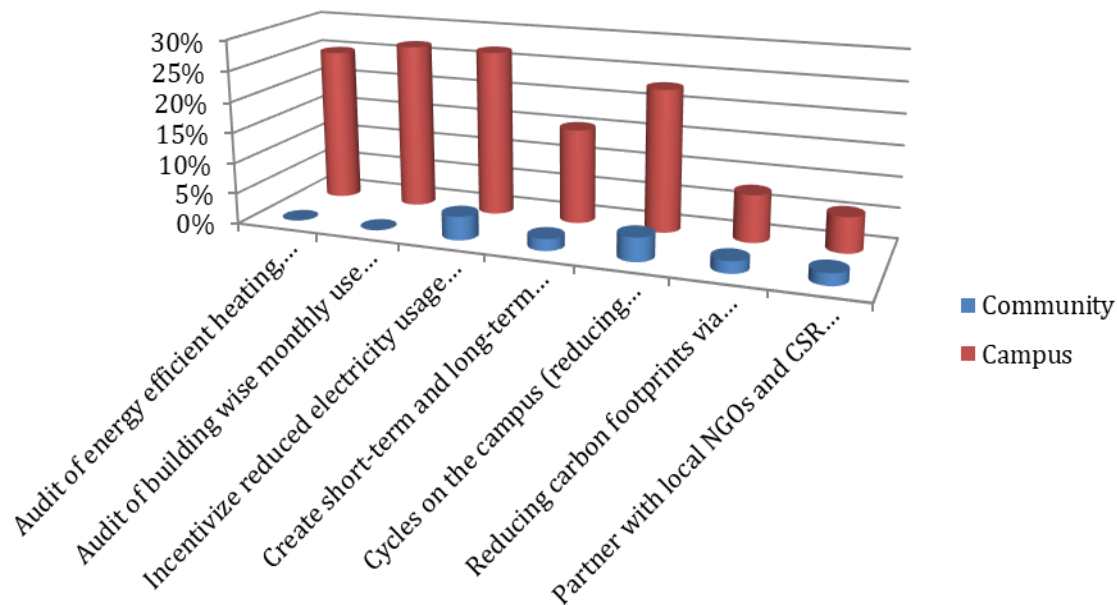
Recycling water (grey, brown and black)	0%	4%
Activities for recharging dry borewells	0%	19%
Converting villages into water plus areas	6%	8%
Partner with local NGOs and CSR organizations in this field	0%	10%



- Rainwater harvesting to be made compulsory for any new constructions or renovation
- Restoration of water bodies; improving groundwater situation
- Watershed development; participatory irrigation practices
- Use of Grey water

Figure 6. ENERGY MANAGEMENT (CAMPUS&COMMUNITY/ADOPTED VILAGES)	Community	Campus
Audit of energy efficient heating, cooling, lighting and water systems in the campus	0%	25%
Audit of building wise monthly use of electricity	0%	27%
Incentivize reduced electricity usage by depts/buildings	4%	27%

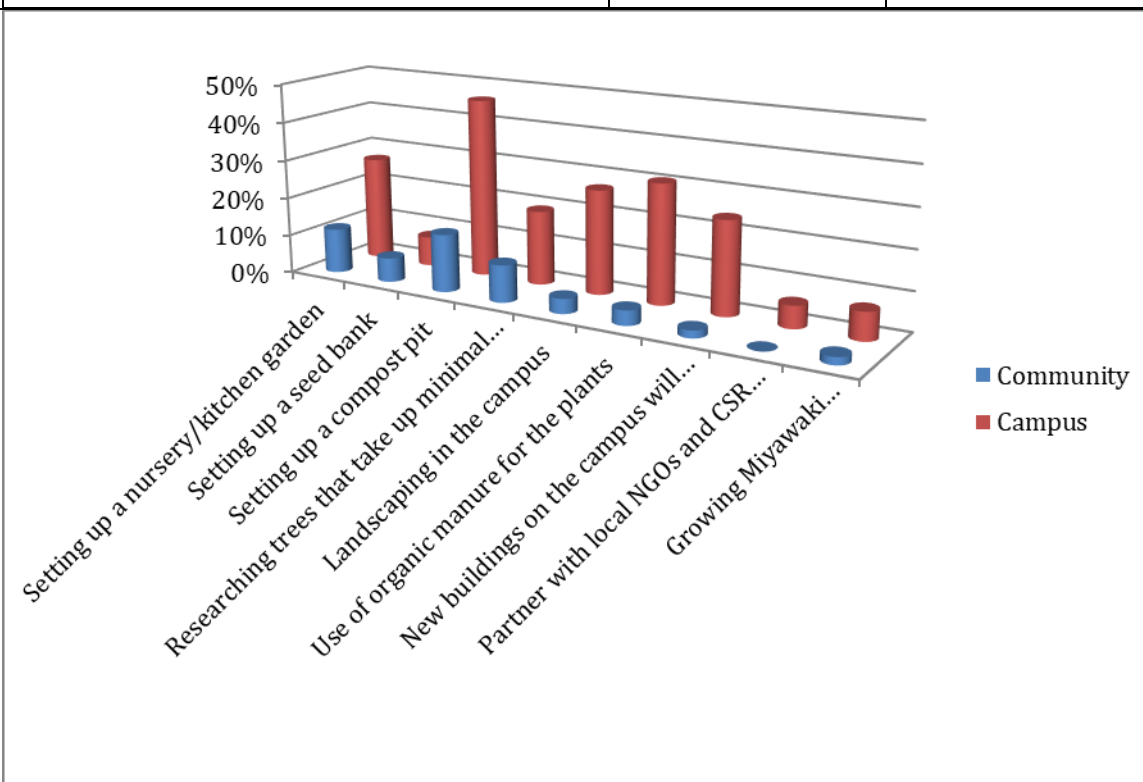
Create short-term and long-term plan for the use of solar energy on the campus	2%	15%
Cycles on the campus (reducing carbon footprints)	4%	23%
Reducing carbon footprints via intelligent Purchase Standard Operating Procedures (SOPs)	2%	8%
Partner with local NGOs and CSR organizations in this field	2%	6%



- Regular and compulsory Energy Audits in Campus and in the Community
- Replace all bulbs and tube lights with LED Bulbs
- Reduce fuel usage
- Recycle, Reuse
- Improve energy efficiency in commercial and residential spaces
- Evaluate and recommend energy solutions that will result in greater efficiency, energy cost savings, and lower environmental impact

Figure 7. GREENERY (CAMPUS&COMMUNITY/ADOPTED VILLAGES	Community	Campus
Setting up a nursery/kitchen garden	12%	27%
Setting up a seed bank	6%	8%

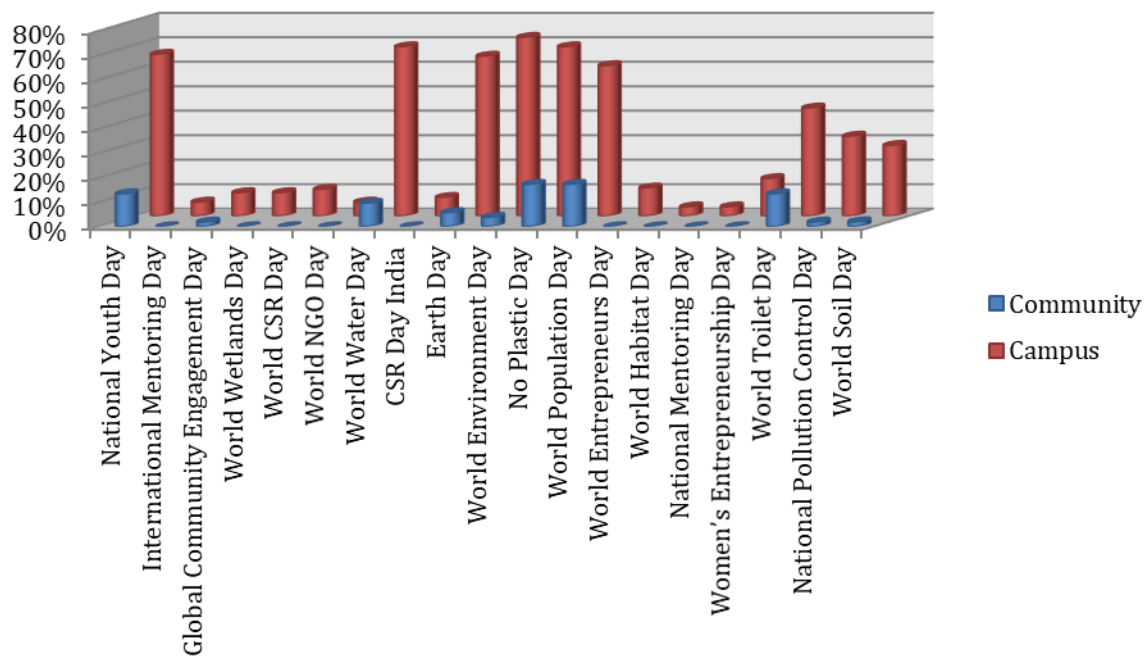
Setting up a compost pit	15%	46%
Researching trees that take up minimal water and are good for the ecosystem (local, resilient species) and planting them during monsoon and taking care of them (Vanamahotsav)	10%	19%
Landscaping in the campus	4%	27%
Use of organic manure for the plants	4%	31%
New buildings on the campus will follow green building norms	2%	24%
Partner with local NGOs and CSR organizations in this field	0%	6%
Growing Miyawaki forests/Nakshatravanam on barren land/Village Greenery Programme	2%	7%



Organize special campaigns highlighting importance of increasing the green cover
 Every Campus to rethink landscaping within the campus and in the community
 Share messages and information on events on social media
 Form anti pollution ambassadors and squads

Figure 8. Day/Events Organized	Community	Campus
National Youth Day	13%	66%

International Mentoring Day	0%	6%
Global Community Engagement Day	2%	10%
World Wetlands Day	0%	10%
World CSR Day	0%	11%
World NGO Day	0%	6%
World Water Day	10%	69%
CSR Day India	0%	8%
Earth Day	6%	65%
World Environment Day	4%	73%
No Plastic Day	17%	69%
World Population Day	17%	62%
World Entrepreneurs Day	0%	12%
World Habitat Day	0%	4%
National Mentoring Day	0%	4%
Women's Entrepreneurship Day	0%	15%
World Toilet Day	13%	44%
National Pollution Control Day	2%	33%
World Soil Day	2%	29%



- Significance of the above days to be a part of student orientation
- Encourage events and participation from Students and Faculty
- Awards and Rewards for special initiatives on the above days

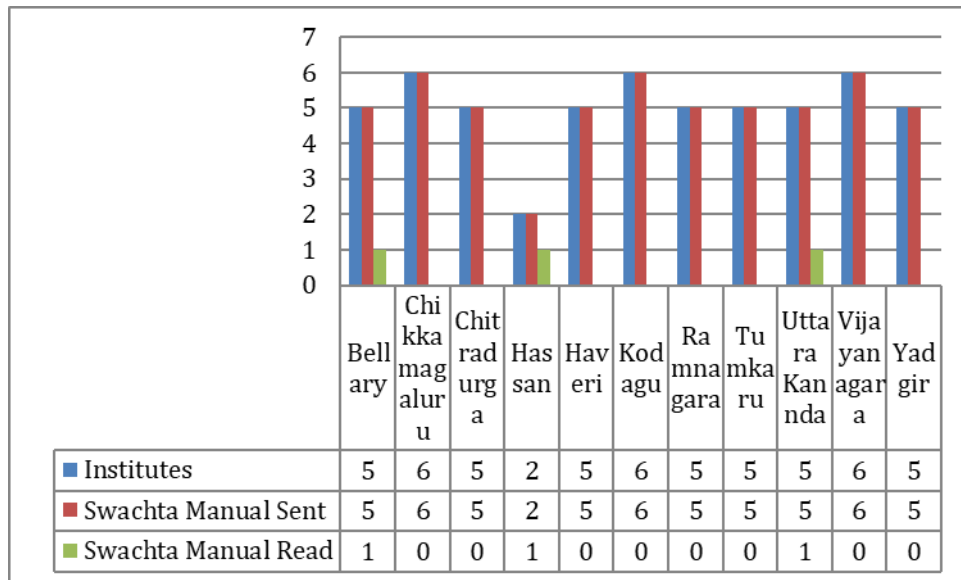


Figure 9a. Adoption of Swachta Manual

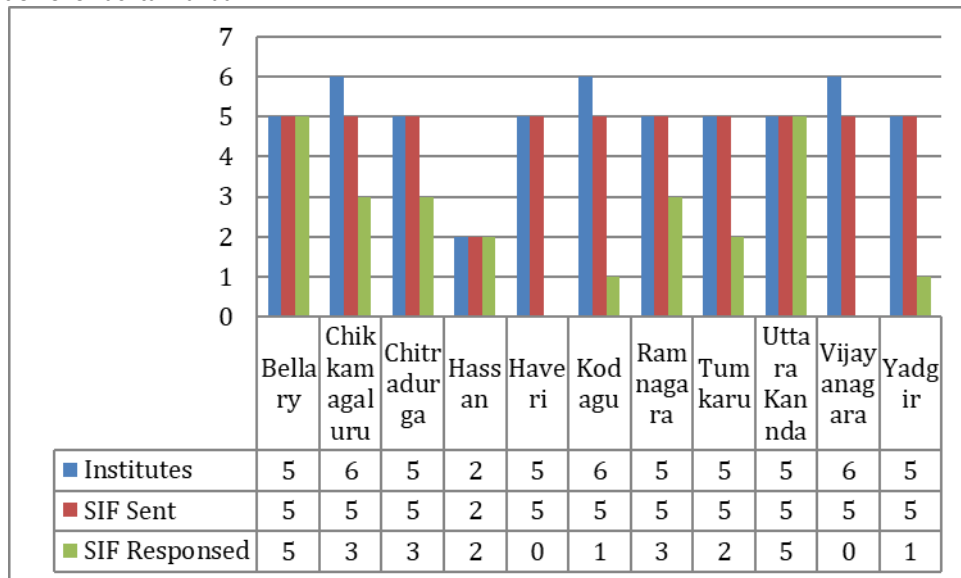


Figure 9b. Response to SIF Google Form

- Institutes adopting the Swachta Manual (Kannada/English) to implement Swachta
 - The Swachta Manual is comprehensive and gives step by step details on how to measure Swachta parameters using Audits
 - The Volume / no of pages and the text format is one of the reasons HEIs drop the ball and do not pursue it
 - The Workshops, DSM visits objectives gets diluted due to the HEI academic schedule
- Institutes responding to the Google Sustainability Index Form accurately
 - Institutes in rural areas are challenged with knowledge and resources to respond to the Google form. They do not come up front with the reason.
 - Language is a barrier as those confronted with responding to Google forms are unable to comprehend the question and instructions

Reflections and Implications

- DSM Reflections on the Institutional visit
Most of the institutes visited were well equipped with basic facilities and had a reliable system of management. The principal's and IQAC Coordinator of colleges met with the DSM's and supported them through the mentoring activity. Sanitation methods and sustainable practices were most discussed during the visits. The infrastructures of all the colleges in most cases were sufficient enough to carry on and study, research and implementation of the objective with unconventional modes of sustainability. Those Institutions close to the city or developed Towns had scarcity of space and hence the full-fledged implementation of Swachta parameters was a challenge. Water and energy management activities and plans were in place, however there is scope for better implementation. Colleges in rural areas had larger campuses however maintenance and swachhta implementation was lagging. In State run institutions the main barrier was the approvals from respective departments. Frequent transfer of HOI's created challenges in pursuing such initiatives consistently. With regard to the Swachta parameters they have a lot of scope for improvement in Institutes. In some cases, administration was not very keen implement Swachta activities as they see funding as a barrier. The smaller campuses were clean and well maintained compared to the larger campuses. Motivating the Faculty other than NSS office bearers to take up Swachta initiatives is challenging, not impossible. They need continuous support in the form of mentoring and motivation to carry out the activities. In some instances, Institutes have some new construction and renovations happening. However not many were implementing Rain Water Harvesting and Ground Water Recharge as a part of their plans. In Government Institutes the PWD, the authority for works was the barrier.

There is scope for Institutes adopting Communities and Villages under the Unnat Bharat Abhiyan to implement Swachta projects under the UBA Sustainability in Swachta is the urgent need of the hour and regular training and mentoring activities need to be planned.

- Reflections on the Institute response
Most of the institutes approached for this audit responded enthusiastically to DSM requests. Some of them were eager to know more about the scope of improvement in their respective institutions. The principal, staff and students were courteous and responded to the queries. Some of the DSM's got me a guided tour of the campus and the methods adopted by them to improve the sustainability of their college Swachta activities. Some of the Principal's also spoke to DSMs in detail about their future endeavors and their plan to increase their rural community engagement. They were also open to DSM's suggestions to improve their management and practices. In some instances, the Management requested for additional time to implement the recommended Swachta activities.

The College Management and Students conveyed that they would like to be part of the Swachta activities. And their students will be involved in implementing those parameters. Some of them were keen to know about any short-term Certificate courses which will enable Faculty and Students to better understand how to take up these activities resulting in sustainability. The Management shared that they will try to follow all the recommended indicators of Swachta in their campus. Most of the Principal's were very receptive and cooperative for Swachta activities.

In some instances, the involvement of the Teaching staff in Swachta activities was minimal.

Also, college administration appeared to be lethargic. Some took a defensive stance during the auditing.

However overall, the HEIs are on the lookout for collaborations and MoU with other organizations, Universities & Institutes to work on Swachta implementation.

- Implications
When the DSM's visited these colleges most of them (particular in rural areas) received an overwhelming response from all the staff members

and students. In some cases, the colleges conducted a seminar coinciding with the DSM visit and DSM as a resource person where they gave speeches about Women empowerment, human values in the contemporary education and society need for sustainability in campuses etc. The gratitude and appreciation of the DSM's was heartening. One of the DSM during her visit to an institute in Uttara Kannada on 8-March-22, inaugurated the pink room (Ladies rest room) which the DSM cites as a memory me she will cherish for a long time.

It was heartening to see this is a Nursing college, which has adopted the practice of discharging Biomedical waste safely as per the norms of pollution control board and the faculty and management were open to improvements.

DSM found it heartening to see efforts of some colleges who have gone out of their way to achieve their goal of sustainability in swachhta. Some HEIs have come up with in house methods like segregation of dry and wet waste and compost pits for an organised waste management. Some of colleges have got solar panels installed in their premises through CSR funding. Water audit and management is one of the challenges that all institutions face. RWH & GWR needs special attention though some colleges have incorporated rain water harvesting systems, water recycling is still a challenge. Best practices need to be shared through in person and online engagements.

Steps to Attain Sustainability

The DSMs have to analyze the responses from the HEIs visited and carry out the following tasks:

- Those HEIs who have not responded to the SIF have to be persuaded to do so by resending the message shared when the HEIs were visited.
- The DRP reports have to be formatted and DSM recommendation added and the report sent to the HEIs to review
- DSMs to conduct an online follow up with the HEIs as well as conduct sessions for the HEI students on Mentoring them for Swachta activities in the Campus
- DSM has to pursue to make HEIs sustainable and eventually mentor other HEIs
- DSM to constantly update MT on the progress made and ask for interventions in case of any barriers
- After their first visit to the institutions, DSMs would have developed an efficient mode of regular communication through social media platforms for further planning and to implement the already discussed improvements.

Promoting innovation and cultivating the culture of sanitation and hygiene at institution level will encourage greater participation of students in community activities. Sustainable practices require planning and implementation at the local level. Local problems have to be addressed at the local level by involving local people.

Organizing Events in HEIs on National / International days to reflect on Swachta parameters and assess progress.

Kodagu is a suitable place to implement rain water management as there is good downpour in the vicinity; most of the colleges have failed to implement rain water management. Kodage DSM has pledged he will be driving the initiative to mentor the HEIs through NGO/CSR/UBA.

A workshop / session to simplify and help the HEIs understand the recommendations of the Swachta Manual with regard to Water, Energy, Waste - Audit and Management. Only 1 or 2 DSM's have read the Swachta Manual and rest have not. The DSM shared the Swachta Manual is the best Guide for HEIs to follow for Audit and Management. However, it is a challenge to expect the HEIs to be self motivated and read the manual and implement the recommendations.

- Our next step will be to develop infrastructure for compost pits, solar panels and rain water harvesting plants.
- DSM have suggested colleges to involve students to achieve Swachta objectives. For the rural connectivity we will collectively collaborate with NGOs and Self-Help Groups to encourage women empowerment and spread awareness in rural areas.
- Local campaigns and workshops will be required to be regularly conducted in these areas throughout the year by college communities like MGNCRE, NCC, NSS, Red Cross, Red Ribbon etc.
- Colleges will need to conduct seminars and guest speaker sessions to educate students about our vision.
- Staff members will need actively participate and devise time for student's involvement in campus sustainability and rural connectivity.

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About the Author

Melwyn Noronha is a Business Operations professional, B.E. (Computer Science) and M.B.A. (Marketing and Operations). He is self employed and works under the umbrella Touch Stone Services whose objective is to touch lives of people (youth) and assay their precious talent. He has 25+ years of Industry experience and has been working with MGNCRE on various assignments since September 2020. Melwyn has conducted several Workshops (at University, District, Institutional Level) and Faculty Development programs on Rural Entrepreneurship (REDC), Swachta (SAP), PMFE ODOP. He is passionate about implementation Aatmanirbhartha and Sustainability through the HEIs and advocates it in his workshops and programs. Melwyn aspires to be a good story teller and thanks the Chairman of MGNCRE for this wonderful opportunity to serve the nation.

Annexures

1. Bellary



Participants



RO plant



Vaccination Camp



Blood Donation Camp



Recycling of Water



Rain Water Harvesting Pits

2. Chikkamagaluru



Rain Water Harvesting Pits



Recycling of Water



Ground Water Recharge



Campus with Garden



Workshop Photo 3



Dustbins & Solar Panel

3.Chitradurga



Rain Harvesting Pits



Covid Protocol



Ladies Toilet



Gents Toilet

4. Hassan



Rain Water Harvesting Pits



Recycling of Water



Compost



Pit Herbal Garden



Solar Panels

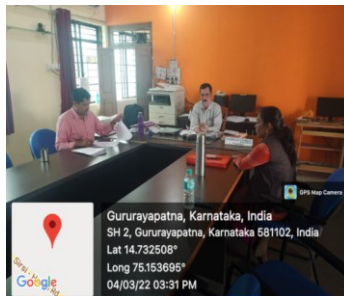


Oath taken on COVID Protocols

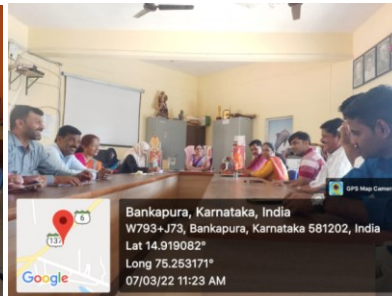
5. Haveri



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6.Kodagu



Covid19 Swab test



Covid Protocols



DSM meeting



Ladies Toilet Education



Gents Toilet



MLMN College of Education

7.Ramnagara



Covid Protocols



Workshop Photo 2



RO Plant



Rain Water Harvesting Pits



Solar Panels

8.Tumkaru



Interview with the Principal of the GFGC, Tumkur



Awareness to the Students of the college



Recycling of Water



Filtered Drinking Water unit



Compost Pit

9.Uttara Kannda



Toilets



Compost Pit

10.Vijayanagara



RO Plant



Drinking Water



Compost Pit



Herbal Garden

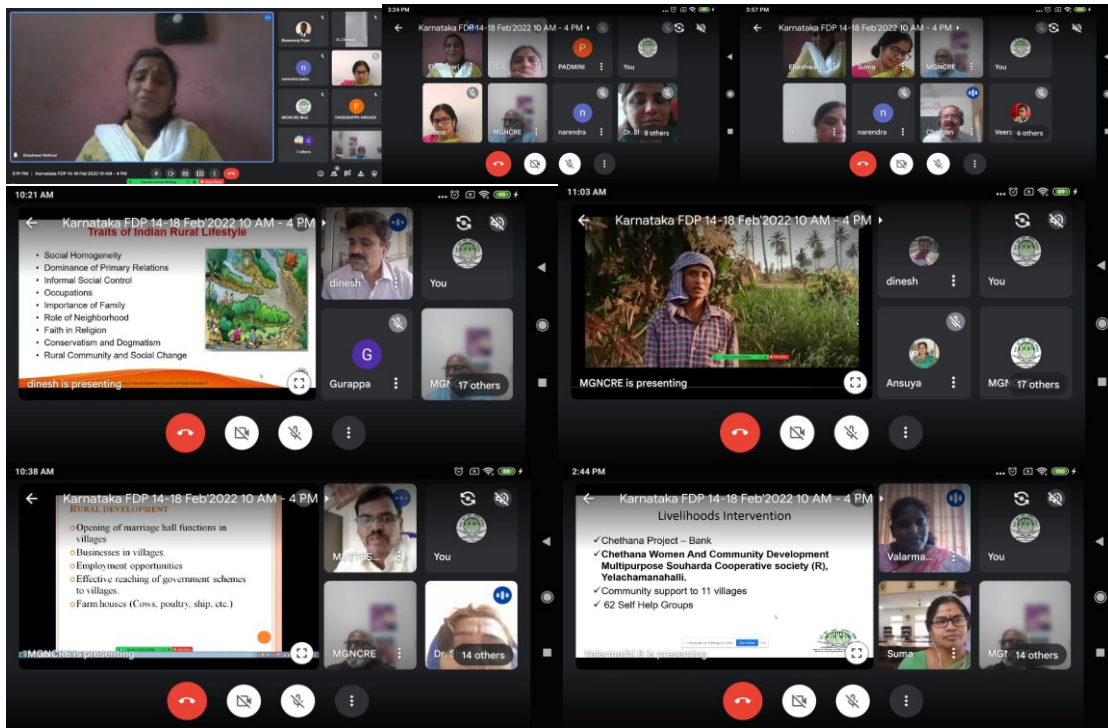
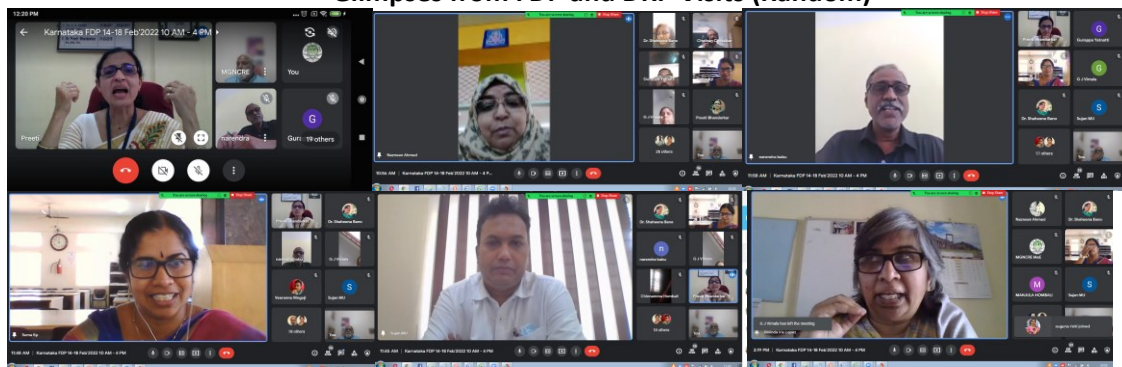


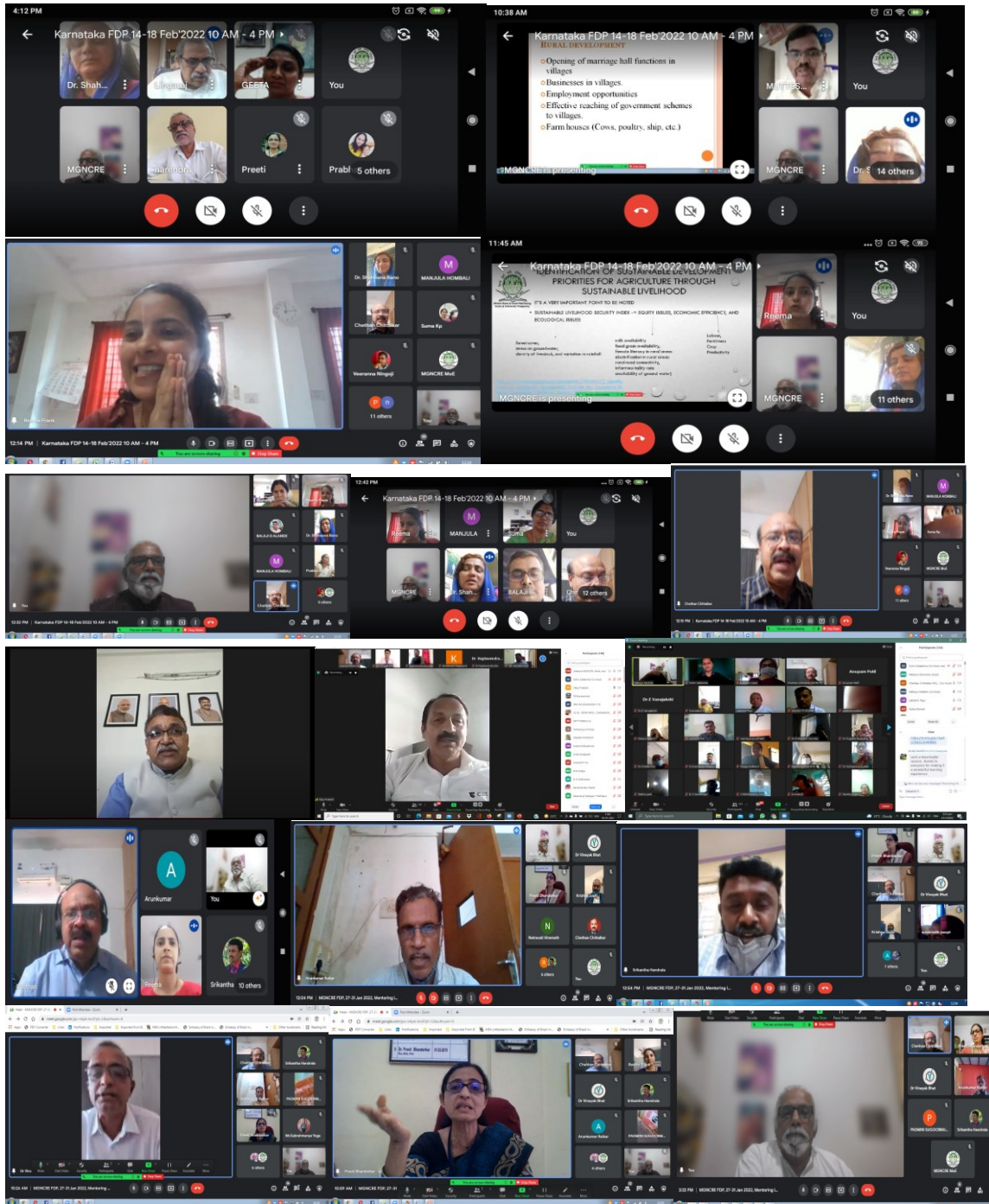
Workshop Photo 1



Workshop Photo 2

Glimpses from FDP and DRP Visits (Random)







Ramanagara DSM Dr. Amaresha and MT Melwyn share the most exciting part of Ramanagara Institute visit. Hitching a ride on shared auto hatch back. Got some good tan as well.



Uttara Kannada DSM Dr Preethi B gave a speech on women empowerment to a HEI and inaugurated Pink Room for Ladies on



Haveri DSM Dr Chandrabha conducting role play on Swachta

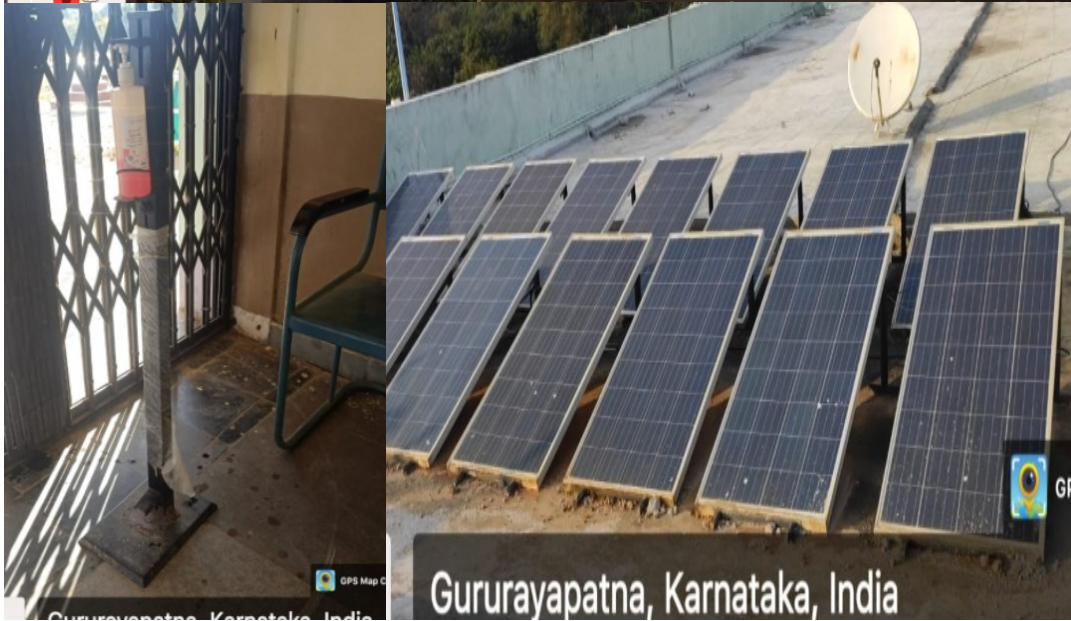
Haveri, Karnataka, India
RC4F+6Q5, Yattinahalli, Haveri, Karnataka 581110, India

Haveri, Karnataka, India



Shiggaon, Karnataka, India





Role of Mentoring and Facilitation of District Sustainability Mentors in the Effective Implementation of Sustainability Study in HEIs in Kerala

An Action Research Project

Dr. Shiny C M

Abstract

The purpose of this paper is to report the result of the study on the role of mentoring and facilitation given to the District Sustainability Mentors on the effective implementation of field study on various sustainability practices followed by Higher Educational Institutions in Kerala. Universities and higher educational institutions are major players and actors in many countries with respect to sustainable development. But there is a shortage of research work carried out specifically to understand the level of contribution made by the local players such as HEIs in various states and districts. It is important to create awareness among the HEIs and a proper progressive development in the activities related to sustainable development in institutions. The paper investigates various measures taken by the trainer to enhance the process of sustainability study and field visit more effective and easier for the DSMs. An action research approach was adopted by the trainer to plan, design and implement the field work effectively without any hindrances for the field workers. The whole process of action research was seemed to be a learning exercise for the trainer too. Initially the inquiry was designed to involve representatives of stakeholders of the HEIs that are planned to visit by the DSMs. During the journey of field visit DSMs had been through different sorts of experiences based on the nature of the institution, leadership of the institution and work culture of the institution. Frequent interactions and timely interventions with the DSMs made it easy to understand and redesign the approach in a fruitful manner. Feedback was collected from each DSM personally to give suggestions on how to reach their goal smoothly. The trainer used a multidisciplinary approach till the end of the programme.

Key Words: Mentoring, Facilitation, DSMs (District Sustainability Mentors), HEIs (Higher Educational Institutions), Action research

Introduction

The study was conducted in the context of growing adversities due to global warming, climate change, sanitation and hygiene, water and energy security that is evidenced by the escalating cases reported in the environment. Sustainability is a broad policy concept in the global public discourse and is often conceived of in terms of three "dimensions" or "pillars": environmental, economic and social.

The original semantic meaning of "sustainability" and "to sustain" refers to the ability to continue over a long period of time. These pillars are increasingly proving to shape the world in future. Given that a large population of India is dependent upon agrarian economy, and lives in vast coastal areas and Himalayan regions, India is highly vulnerable to adverse effects of Climate change. However, India also has 30% of its population under poverty; 20% living without proper housing; 25% living without electricity and

is a growing economy, thus economic and infrastructural development is critical too.

The need of action research has been based on the most often quoted definition comes from the UN World Commission on Environment and Development: "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." It is high time to create awareness and adopt certain controlling measures to protect all environmental resources. Famous quote by Mahatma Gandhi: *Earth provides everything to satisfy every man's needs, but not every man's greed* is highly relevant in this scenario. It is our responsibility to give more insights to the future generation on the relevant principles of sustainability and best practices which can be learned and adopted by them.

For the first time, the doctrine of "Sustainable Development" was discussed in the Stockholm Declaration of 1972. Thereafter, in 1987, the World Commission on Environment and Development submitted its report, which is also known as Brundtland Commission Report wherein an effort was made to link economic development and environment protection. In 1992, Rio Declaration on Environment and Development codified the principle of Sustainable Development. Simply put, the principle of Sustainable Development attempts to maintain a balance between development and the environment. It promotes inter-generational equity, i.e., better quality of life for present and future generations. The benefit from development ought to be equated with the impact on the environment for such development. While development is important or in fact necessary, the impact on the environment ought to be studied before undertaking such development. The basic concept of sustainable development aims to maintain a balance between economic advancement while protecting the environment in order to meet the needs of the present as well the future generations.

First of all, we need to understand the need of balancing environment and economic development and think of how to measure and evaluate the best practices followed in the HEIs. Huge lot of resources are available in the education sector, where they

Purpose of the Action Research

The major goal of the action research is to create simple, practical, repeatable process of iterative learning, evaluation and improvement that leads to increasingly better results for the stakeholders. Through the action research we can understand what is happening in a specific area and to

can contribute much better than any other resource person. But there is a need for training, support and information through which approach can be designed and individuals can be transformed to influencers. How a mentor-mentee relationship can be transformational for individuals and communities, and support sustainable development in various educational institutions. We all continually learn and develop across our lifespan in slightly different ways. Some people learn and grow by reading, others by doing, and still others by observation. Throughout our life journey, we are touched by individuals who facilitate our learning and development. Family members, peers, coaches and teachers all play their roles. In those roles, many of these individuals take on an even more influential presence by becoming mentors. Mentoring facilitates access to resources and information and is an important way we learn and develop our knowledge. Mentors help others gain perspective on matters great and small, global and local. The sustainability goals are achievable if all the global citizens put their effort together. Let us accept the fact that global resources are shrinking. Hence it is the major concern of all citizens to find solutions for sustainable living in the earth.

Definitely, this practice will show us a way to enhance the role of HEIs in pursuing initiatives to protect the environment.

determine what might improve in the existing scenario. This will improve the learning of researcher and redirect their thoughts and actions. The action research will lead to more clarity on various aspects and deeper understanding of the process through experiential learning.

Goals of this action research are:

- Mentoring and facilitation for community engagement and field visit
- Development of DSMs to visit colleges and conduct workshop on sustainability
- To help DSMs to study best practices followed by HEIs on sustainability
- Transformation of DSMs as mentees to follow best professional practices
- To study the challenges faced by DSMs while conducting the workshop
- To give suggestions to the DSMs to implement their plan as per their requirements and situation
- To Build and sustain relationships and networks

- Deeper understanding on the sustainability through experiential learning

Scope of the Action Research

Kerala known to be the God's own country has 14 districts with 23 universities imparting knowledge to huge number of students under various colleges/institutions.



Figure 1.1 Districts in Kerala (Source: contestchacha.com)

Kerala has retained the top rank in Niti Aayog's Sustainable Development Goals (SDG) India Index 2020-21 for the third consecutive year, a recognition of its social, economic and environmental progress. Kerala bagged 75 points, an improvement from 70 and 69 in the previous years. Since its launch in December 2018, Kerala has been topping the index, which has become the primary tool for monitoring progress on the SDGs in the country. And Kerala is known to be the top eco-friendly destinations in India.

Climate change poses an emerging challenge to sustainability of social and economic development, livelihoods, and environmental management across the globe. It is a hard fact that Kerala is too vulnerable to climatic changes. A one-degree rise in temperature could trigger an increase in 7% rainfall. Chances of landslides and floods are also high here, especially because of land use changes, mining and encroachment in river are rampant. Creating an

awareness to the community well in advance is the best solution to be prepared to face the challenges.

HEIs can play very big role in creating an exponential transformation in the society. Now a days majority of the institutions on their way ahead to accreditation process follow best practices to differentiate themselves from other institutions. Through NSS and IQAC institution conduct various programmes keeping in mind the need of sustainability of the institution and the community. Few colleges have adopted minimum 5 villages to extend their community development activities.

Sustainability activities and its impact on the society is case to case. To evaluate current and existing practices, the following action plan has been formulated by MGNCRE. Steps in the action plan are the following:

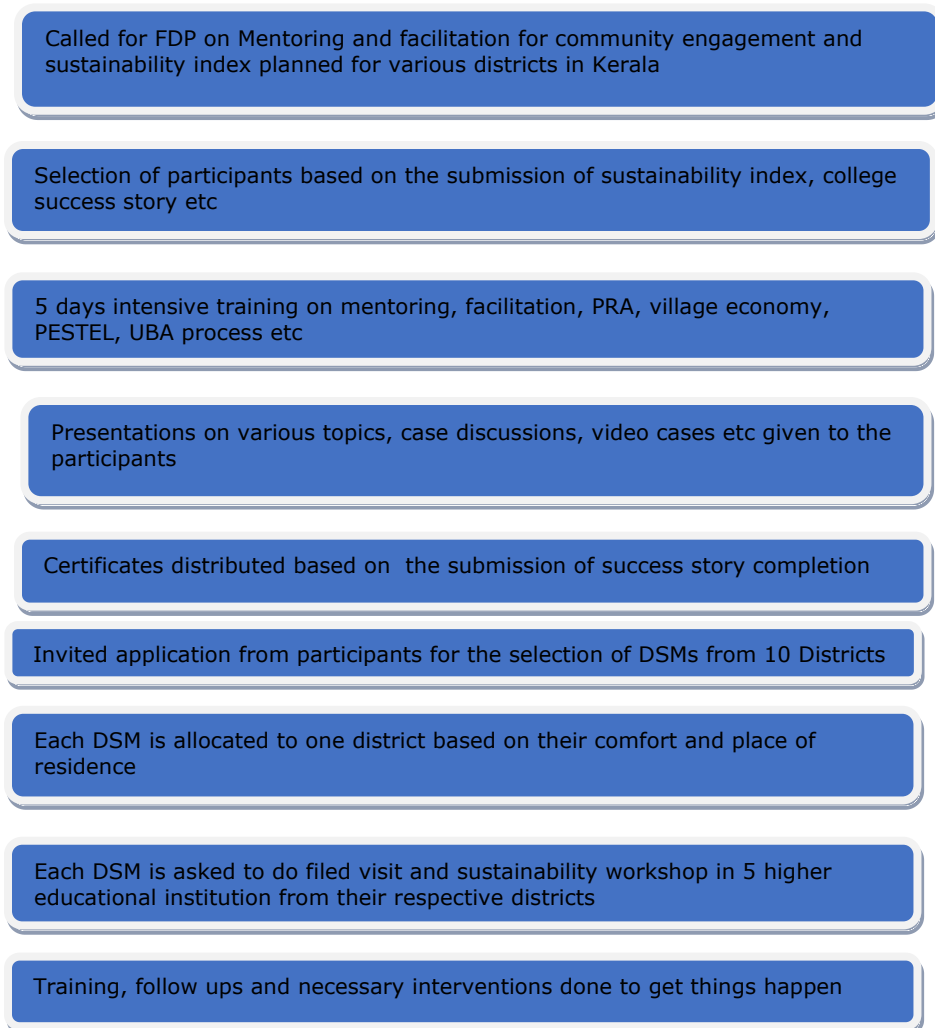


Fig 1.2 Action Plan

Table 1. 1 Institutional Sustainability Workshops Summary

S. No	State	District	Name of the DSM	Number of Institutions Visited	Name of the Institutions Visited
1	Kerala	Thiruvananthapuram	Dr. Subha R Nair	5	1.Mar Ivanios College 2. All Saints College 3. Christ Nagar College 4. MMS Government College 5. SCT Engineering College
2	Kerala	Pathanamthitta	Dr. Mini Samuel	5	1.Mar Chrysostem College of Arts & Science, Paranthal 2.Mater Dei College, Enathu 3.VNS College, Konnappara 4.St Mary's College, Thiruvalla 5.St. Thomas College, Thavalappara
3	Kerala	Kottayam	ShinuThomas P	5	1.Alphonsa College PALA 2.St. Stephen's College, Uzhavur 3.St. Mary's College Manarcaud 4.Sree Sabareesa College Mundakkayam 5.S N College Kumarakom
4	Kerala	Idukki	Sherly T	5	1.Sanjo college of Management and Advanced Studies. 2.NSS College Rajakkad. 3.SSM College Rajakkad. 4.Govt. Arts and Science College, Santhampara. 5.Munnar Catering College, Suryanelli
5	Kerala	Alappuzha	Dr. Jose Mathew	5	1.St. Joseph's College for Women, Alappuzha 2.NSS College, Cherthala 3.St. Michael's College, Cherthala 4.Bishop Moore College, Mavelikkara 5.St. Aloysius College, Edathua

6	Kerala	Ernakulam	Santhosh Thannikkat	5	1.Sree Sankara College, Kalady, 2.Sree Sankara Vidyapeetham, Airapuram, 3.St Teresa's College, Park Avenue 4.Maharaja's College, Ernakulam 5.MES College, Marampilly,
7	Kerala	Palakkad	Dr. Naseema P K	5	1. Ideal College, Cherpulassery 2. SNGS Govt College Pattambi 3. NSS College, Ottappalam 4. Nehru Academy of Law, Lakkidi 5. MES College, Cherpulassery
8	Kerala	Thrissur	A S Priyanka	5	1. Mar Dionysius College, Pazhanji 2. St. Aloysius College, Elthuruth 3. St. Joseph's College, Irinjalakkuda 4. Christ College, Irinjalakuda 5. MES Asmabi College, Vemballur
9	Kerala	Thrissur	Noorjahan Majeed	5	1.St. Mary's College, Thrissur 2.St. Thomas College, Thrissur 3.Little Flower College Guruvayur 4.Sree Kerala Varma College Thrissur 5.Sree Krishna College Guruvayur
10	Kerala	Malappuram	Dr. Bushra M V	5	1.Government College, Malappuram 2.MES Keveeyam College, Valanchery 3.EMEA College of Arts &Science, Kondotty 4.MES College of Engineering, Kuttippuram 5.Thunchan Memorial Government College, Tirur

11	Kerala	Kozhikode	Dr. Shiny C M	5	1.St. Xavier's College, Kozhikode 2.Holy Cross College, Kozhikode 3.MAMO College Manassery Kozhikode 4.Donbosco College, Kozhikode 5.Alphonsa College Thiruvambady, Kozhikode
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The DSMs were expected to visit the colleges and conduct workshops on sustainability. Interactions with the head of the institution, faculty members, students and various other stakeholders have to be done to collect information on practices done in the campus and in the adopted villages under the following heads:

1. Sanitation and hygiene
2. Waste management
3. Water management
4. Energy management
5. Greenery

They were asked to put tick marks against the statements given against each of the above points and write extra activities carried out in the campus they visit. Few days also have been given in the data sheet to get information on the days celebrated in the colleges to create a sense of social responsibility and commitment by the

students, faculty members and other stakeholders.

Based on the data collected DSMs were asked to submit a success story with the photos of activities carried out by the institution under 5 heads such as sanitation and hygiene, waste management, water management, energy management and greenery.

Objectives of the Action Research

Objectives of the action research are stipulated to mentoring and facilitation of DSMs for effective implementation of the filed visit to study sustainability practices in higher educational institutions.

Major Objective

To study the role of mentoring and facilitation of DSMs for the effective implementation of field visit to study the sustainability practices in higher educational institutions.

Sub Objectives

To study the challenges faced by the DSMs while doing their filed visit and workshop on sustainability in the campus

To intervene wherever necessary to put forward suggestions to improve the process

Review of the Literature

According to S.M. Corey, "Action research is the research a person conducts in order to enable him to achieve his purpose more effectively. Good defined that "action research is the research used by teachers, supervisors and administrators to improve the quality of their decisions and actions."

Action research generates knowledge around inquiry in practical educational contexts. Action

research allows educators to learn through their actions with the purpose of developing personally or professionally. Due to its participatory nature, the process of action research is also distinct in educational research.

Action research is helpful in improving the performance of teachers and staff those who are

associated to a work system. It is a systematic process of improving present situation through maintaining a philosophy. It will eradicate the traditional rigid approaches and change the attitude of mentees. This will give more insights to the mentees on developing an effective learning process and to design the training programmes better. The mentees will be able to take appropriate decisions in critical situations. They will understand how to get involved with the learning process more deeply and will be able to give fine solutions to the stakeholders.

The action research will improve the confidence level of mentees or trainees. For the effective implementation of the action research the trainer has to design a plan and method which are suitable for a particular situation. All the experts accept the need and importance of action research in the present Indian circumstances so that the teacher may keep to as pace with the progress occurring in education. Action research is essential to improve and modernise the traditional systems of teaching learning process. The mentees or the trainees will be able to face problems more easily once the action research is done properly and in systematic manner.

Sustainability is a never-ending process, there is no end to it. Sustainability is a broad policy concept in the global public discourse and is often conceived of in terms of three "dimensions" or "pillars": environmental, economic and social. The United Nations defined sustainable development in the Brundtland Report as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It assumes that resources are finite, and so should be used conservatively and carefully to ensure that there is enough for future generations, without decreasing present quality of life. A sustainable society must be socially responsible, focussing on environmental protection and dynamic equilibrium in human and natural systems.

The concept of sustainability is composed of three pillars: environmental, social and economic—also known informally as profits, planet, and people.

These are relevant to all sectors of the economy.

Environmental protection is concerned with the reduction of carbon footprints, water usage, non-decomposable packaging, and wasteful processes as part of a supply chain. **Social development** is about treating employees fairly and ensuring responsible, ethical, and sustainable treatment of employees, stakeholders, and the community in which a business operates. **Economic development** is probably the simplest form of sustainability. To be economically sustainable, a business must be profitable and produce enough revenues to be continued into the future. Sustainable development is a societal challenge, not simply an environmental one - improvements of education and healthcare are therefore required to achieve higher income and better environmental decisions

Walter Leil Elho et al pointed out that Our country is facing lot of sustainability challenges. The contribution of higher educational institutions is very important in this aspect.

Hypothesis

H1: Mentoring and facilitation have positive influence on the effective implementation of field visit and workshop on sustainability carried out by the DSMs

H0: Mentoring and facilitation do not have positive influence on the effective implementation of field visit and workshop on sustainability carried out by the DSMs

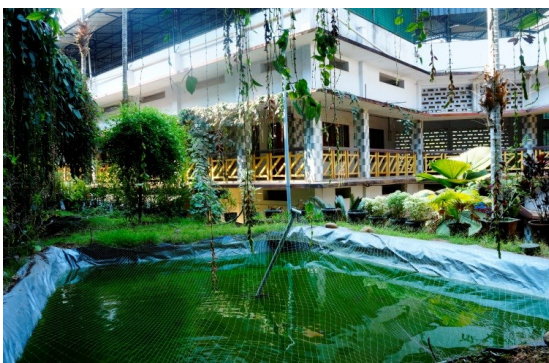
Sustainability practices may include initiatives in water management, waste management, energy conservation, greenery, sanitation and hygiene which may have a huge impact on the world. Choosing a college with sustainability practices can make a huge difference and competition among the higher educational institutions in India.

There are novel ideas for sustainability that are practiced in the institutions.



Nature Friendly class
Water treatment plant

Campus nursery
Rain water harvesting



Waste segregation

Rain water harvesting



Vegetable cultivation



Water to birds



Solar Panels



Waste management

A mentor may share with a mentee (or protege) information about his or her own career path, as well as provide guidance, motivation, emotional support, and role modelling. A mentor may help with exploring careers, setting goals, developing contacts, and identifying resources. The purpose of mentoring is to connect an individual who has a lot

of knowledge and experience with someone who hasn't gained the same knowledge or experience. Facilitation is a technique used by trainers to help learners acquire, retain, and apply knowledge and skills. Participants are introduced to content and then ask questions while the trainer fosters the discussion, takes steps to enhance the experience for the learners, and gives suggestions.

Nocola Cronin (2019) has explained various benefits of mentoring to mentors and mentees.

Benefits of mentoring for mentors:

- Increased self-confidence
- Increased self-awareness
- Leadership skill development
- Strong communication skills
- Art of delivering feedback
- Art of asking questions
- Becoming a good listener
- Exposure to new and different perspectives
- Growing a personal network
- Increased chance of promotion
- Increased job satisfaction
- Supporting another person
- Paying it forward
- Learning from someone else

Benefits of mentoring for Mentees:

- Increased self-awareness
- Increased self confidence
- Develop strong communication skills
- Growing a personal network within the business
- Exposure to new and different perspectives
- Learn to self-reflect
- Improve goal-setting
- Learn from other's experiences
- Learn to ask good questions
- Being supported by someone
- Being advocated for
- Increased chance of promotion

- Increased job satisfaction

One of the most important sets of skills for leaders and members are facilitation skills. These are the "process" skills we use to guide and direct key parts of our organizing work with groups of people such as meetings, planning sessions, and training of our members and leaders. Facilitation is defined as the act of making something easier or making something happen.

The major advantages of facilitation method are:

- It will boost the group dynamics
- It will improve creative thinking and problem-solving skills
- It is a stress reduction activity
- Get things happen more easily
- Get more involvement

Hence these two methods are used in education and corporate to improve the quality of performance standards of the participants. The level of confidence of the mentees will be increased to handle various hurdles faced on their job front.

Need of the Action Research

Action research generates knowledge around inquiry process of action research is distinct. The action in practical educational contexts. Action research cycle consists of steps such as propose a research allows educators to learn through their change, engage in action, observe results and reflect actions with the purpose of developing personally or on action.



Figure 1.3 Action Research Cycle

(Source: Center for the Advancement of Digital Scholarship)

Hence the action research will be a guiding light for the mentees while they do their actual work. This will engage the mentees in action with full confidence level, can observe results on the spot and reflect on the work performed by the mentees.

Challenges

There were 10 districts and 55 institutions selected by the DSMs. Most of the colleges were cooperative and shown interest in organizing a workshop in their institutions.

Major challenges faced by the DSMs are listed out below:

- Lack of time due to work load in the college
- To get the date finalized to conduct field visit
- To finalise institutions
- Lack of time to discuss in an elaborative way due to the NAAC accreditation related activities and

exams in the college

- Few institutions were reluctant to share photos of activities carried out in the institution
- Colleges towards south Kerala do not even know about sustainability practices compare to north Kerala
- Few aided and government colleges were not interested to know about the activities under sustainability
- Negative response from the colleges approached
- High stress level
- Report writing

Actions Planned to Address the Challenges

Initially training was given to the DSMs on how, what, where, when and why of the sustainability workshop and field visit. Doubts were clarified during the training session. Materials were shown and discussed in detail. Motivation and encouragement sessions were conducted which had increased the confidence level of DSMs. Most of them visited colleges which are known to them; hence they didn't find big difficulty in getting an entry. But collection of data was slightly difficult because it was time consuming. In few districts it was difficult to get appointment. In such cases mentor has provided contacts and references to the mentees.

DSMs were asked to check the comfortability level of the teachers and students and to fix the time for workshop and campus visit. Hence, they have conducted mostly during afternoons. One faculty was identified by the institutions to help the DSMs. Most of the institutions were conducting programmes related to swachhta in the campus and community. When it was difficult to get the details, they were asked to give the forms to get the details filled well in advance. Institutions that are not conducting the programmes were given an

Research Methodology

Action research itself is a methodology used in education research worldwide. It may include various activities such as empowerment of participants (learner and practitioner), collaboration through participation, acquisition of knowledge and social change. The four main types of action research design are individual research, collaborative research, school-wide research and

orientation on how and why sustainability activities are to be carried out in the campus. Some of the institutions were conducting various programmes under this head, but were not aware that it was sustainability activity that they were doing. In such cases DSMs have given orientation and awareness to faculty and staff. Since it was a process of knowledge sharing and giving deeper knowledge into sustainability, colleges have ensured the continuity of such programmes in future too.

Report writing was not a big issue, but still, some of them didn't know how to write the reports and college success story. And high stress level due to lack of time, anxiety on whether they could complete the work on time. Each stage DSMs were in touch with the MT (Master Trainer) personally and in group. Continuous interactions were required and helpful in effectively complete the process of workshop and campus visit. Doubts were clarified on the spot, even when they are in the college campuses before and after meeting the faculty and students. Interactions have got huge impact on the effectiveness of the programme. Most of them were excited, and found this activity thrilling and a high level of learning exercise.

district-wide research. Action research is a research strategy which combines research with action and participation in the field. Only secondary data have been used in the study. Focus group interview has been done to collect the information from the DSMs. Qualitative research has been used to analyse the study.

Implementation of the Action Research Steps

5 days intensive training has been given on mentoring and facilitation skills to the participants applied for the programme. The programme included sessions on mentoring, facilitation, PRA, village economy, PESTEL analysis etc. selection of the DSMs has been done based on their willingness to do field visit/campus visit to the colleges physically. 11 DSMs were selected to work in 5 colleges per district. Case discussion and video cases were used as tools to strengthen the concepts.

Training has been given to disseminate the

knowledge on the workshop and to distribute necessary materials. Time period also was communicated within which each DSM has to complete their task of visiting colleges from their own districts. Mentoring was done frequently to improve their performance and to reduce their stress and anxiety level. Doubts were clarified in between for the smooth running of the programme. They were asked to collect data and write a success story based on the data and interaction. Sufficient time was given with feedback to complete the reports on time.

Implementation of the Study

11 DSMs prepared the list of institutions to visit and they prepared the schedule of visit to these institutions. Workshops have been given to the faculty members and in few cases round table and traditional way of interactions have been carried out with students. Sustainability report which consists of details of the institution, DSM, MT and sustainability index factors such as sanitation and

hygiene, water management measures, waste management measures, greenery and energy management measures has been used to collect data while interacting with the faculty members and students. A success story also was written based on the data collected. Workshop on sustainability has been conducted.

Findings of the Action Research

We have to reject the null hypothesis and accept the alternative hypothesis that mentoring and facilitation has huge impact on the successful implementation of the programme. DSMs had been through various psychological problems and hurdles during their visit. Timely interactions and interference have helped them to overcome that. Motivation was required during a particular stage

while they were getting negative response from the colleges. Stress also could be reduced to a particular level through empowerment. Proper training and guidance are required to pass through each and every stage of the implementation process. Because planning in advance is not possible to a certain extent in the case of field visit and interaction.

Outcomes of the Action Research

All DSMs in Kerala State have successfully completed the workshops in 55 colleges in 10 districts in Kerala

S. No	District	Name of the DSM	Name of the Institutions Visited
1	Thiruvananthapuram	Dr. Subha R Nair	1.Mar Ivanios College 2. All Saints College 3. Christ Nagar College 4. MMS Government College 5. SCT Engineering College

2	Pathanamthitta	Dr. Mini Samuel	1.Mar Chrysostem College of Arts & Science, Paranthal 2.Mater Dei College, Enathu 3.VNS College, Konnappara 4.St Mary's College, Thiruvalla 5.St. Thomas College, Thavalappara
3	Kottayam	ShinuThomas P	1.Alphonsa College PALA 2.St. Stephen's College, Uzhavur 3.St. Mary's College Manarcaud 4.Sree Sabareesa College Mundakkayam 5.S N College Kumarakom
4	Idukki	Sherly T	1.Sanjo college of Management and Advanced Studies. 2.NSS College Rajakkad. 3.SSM College Rajakkad. 4.Govt. Arts and Science College, Santhampara. 5.Munnar Catering College, Suryanelli
5	Alappuzha	Dr Jose Mathew	1.St. Joseph's College for Women, Alappuzha 2.NSS College, Cherthala 3.St. Michael's College, Cherthala 4.Bishop Moore College, Mavelikkara 5.St. Aloysius College, Edathua
6	Ernakulam	Santhosh Thannikkat	1.Sree Sankara College, Kalady, 2.Sree Sankara Vidyapeetham, Airapuram, 3.St Teresa's College, Park Avenue 4.Maharaja's College, Ernakulam 5.MES College, Marampilly,
7	Palakkad	Dr. Naseema P K	1. Ideal College, Cherpulassery 2. SNGS Govt College Pattambi 3. NSS College, Ottappalam 4. Nehru Academy of Law, Lakkidi 5. MES College, Cherpulassery
8	Thrissur	A S Priyanka	1. Mar Dionysius College, Pazhanji 2. St. Aloysius College, Elthuruth 3. St. Joseph's College, Irinjalakkuda 4. Christ College, Irinjalakuda 5. MES Asmabi College, Vemballur

9	Thrissur	Noorjahan Majeed	1.St. Mary's College, Thrissur 2.St. Thomas College, Thrissur 3.Little Flower College Guruvayur 4.Sree Kerala Varma College Thrissur 5.Sree Krishna College Guruvayur
10	Malappuram	Dr. Bushra M V	1.Government College, Malappuram 2.MES Keveeyam College, Valanchery 3.EMEA College of Arts &Science, Kondotty 4.MES College of Engineering, Kuttippuram 5.Thunchan Memorial Government College, Tirur
11	Kozhikode	Dr. Shiny C M	1.St. Xavier's College, Kozhikode 2.Holy Cross College, Kozhikode 3.MAMO College Manassery Kozhikode 4.Donbosco College, Kozhikode 5.Alphonsa College Thiruvambady, Kozhikode

References

1. Walter Leil Elho et al 2021, Sustainability practices at Higher Education Institutions in Asia, international journal of sustainability in higher education
2. Nicola Cronin (2019), The Powerful Benefits of Mentoring, Guider
3. Wei Cheng Chen, Senior Consultant at EHL Advisory Services The benefits of facilitation skills for education professionals

About the Author

Dr. Shiny C M is a dedicated management professional and socially committed entrepreneurial think tank with a total work experience of 25 years in Academics/Research/Industry/Entrepreneurship. She started teaching career in the year 1998 at University Institute of Technology, Kerala University and thereafter served few leading B- Schools in Kerala. She is a faculty and researcher in the disciplines of Marketing, Human Resources Management and Entrepreneurship. She is currently associated with SNES Institute of Management Studies and Research (SNES IMSAR), Calicut as a Professor and Director in Charge. She is a PhD guide under KUFOS. There are more than 15 research articles and 3 books, both quantitative and qualitative to her credit and presented more than 10 papers at various international and national conferences. She has coordinated national and international seminars, conferences, workshops, webinars etc. and acted as resource person for various national and international seminars and conferences organized by management institutes and corporates. She has been awarded the

“Teachers Excellence Award 2019 under Gold Category” by KMM College of Management and Technology, Cochin.

She is a **Co-Founder** of **PLATFORM**, a start-up for business solutions and an expert in setting up of start-ups, managing Incubation Centres, Skill Development Centres etc. She is a regular resource person/trainer for corporate houses and Government Organisations such as MANAGE (Ministry of Agriculture), MGNCRE (Ministry of Education), MILMA, KITCO, India Post, Kerala Start-up Mission (Govt. of Kerala), Colleges/Universities etc. Since she is highly passionate about women empowerment, she is always been a part of the women empowerment movement and activities initiated by various Higher Education Institutions. Her areas of interest include **Marketing, HR, Design Thinking, Retail Management, Entrepreneurship Development, Digital Marketing, Market Research and Training**. She has completed Google Digital Marketing Certification course and has conducted hands on training to various young professionals and entrepreneurs.

She is a Resource Person, MGNCRE, Dept. of Higher Education, Ministry of Education, Govt. of India and actively involved in conducting Rural Entrepreneurship Development sessions, Community Engagement Programmes, Psychosocial counselling to Covid 19 patients and families and Faculty Development Programmes for Higher Education Institutions across the country. She has conducted nearly 200 workshops pan India till now.

Annexures

Mahatma Gandhi National Council of Rural Education
Department of Higher Education, Ministry of Education, Government of India

Sustainable Campus Plan - 2021-22 College Success Story - Format

1. Name and Introduction of the Institution (5 lines)

2. Strength of the Institution (Full-time)

Student Strength	
Number of Teaching Staff	
Guest Faculty	
Number of Non-Teaching Strength	

3. Residential Facilities (10 lines)

Include key sustainable features

4. Solid and Liquid Waste Management in Campus (15 lines)

Include key sustainable features

Recycle, Re-Use, Reduce, Refuse, Composting

Collection, segregation and Disposal

Biomedical waste management, laboratory waste management

Administration of waste management

5. Hostel Kitchen Facilities (10 lines)

Include key sustainable features

6. Campus Greenery (10 lines)

Include key sustainable features

Area under green cover (%), nursery on campus, plant protection management, tree plantations, exotic, medicinal, local species plants

7. Land Use Management (5 lines)

Include key sustainable features

Sustainable activities, constructed and non-constructed area, proposed areas for greenery development, land use management plan

8. Solar Energy Conservation (5 lines)

Include key sustainable features

Solar Panel Installations, demand and supply of energy, solar energy generated (KW per month/year)

9. Water Management (15 lines)

Include key sustainable features

Quantified water usage, water availability, rainwater harvesting, recycling of water from sewage treatment plant (STP), functional drainage systems

10. COVID 19 Interventions (10 lines)

Include key sustainable features

Sanitation and Hygiene

Counselling

Technology

Other

11. Adopted Villages

12. Key Interventions/ Achievements in Adopted Villages (10-15 lines)

Include key sustainable features

13. Key Institutional Achievements/Outcomes (10-15 lines)

Include key sustainable features

Note for Submission:

- ✓ Font - Calibri
- ✓ Main Heading – Font Size 14
- ✓ Sub Heading – Font Size 12
- ✓ Content - Font Size 11
- ✓ Check thoroughly the spelling of the college name
- ✓ Run spell check and grammar check of the content before final submission
- ✓ Place relevant high-resolution pictures, images, media clippings (if any), as per content relevance along with captions.

Name of the Faculty/ Staff SUPPORTED FOR REPORT PREPARATION:

SUPPORT MOBILE NUMBER: SUPPORT EMAIL:

NAME OF THE HEAD OF THE INSTITUTION/ PRINCIPAL :

MOBILE OF THE HEAD OF THE INSTITUTION:

EMAIL OF THE HEAD OF THE INSTITUTION/ PRINCIPAL:

SUSTAINABLE PRACTICES IN THE CAMPUS – A REPORT
(Submitted to MGNCRE, DHE, Ministry of Education, Government of India)

16.	Date of Workshop cum Field Visit	
17.	Name of the District Resource Person (DRP)	
18.	Contact Number of DRP	
19.	E mail id of DRP	
20.	District and State	
21.	Name of Institution	
22.	Address of the Institution	
23.	University Affiliated to	
24.	District & State	
25.	Name of Principal/Hol	
26.	Contact Number (WhatsApp Number)	
27.	E Mail ID	
28.	No. of Students	
29.	No of Teaching Staff	
30.	No. of Non-Teaching Staff	




Report - 2021-22

#	AREA	TICK THE ACTIVITIES BEING DONE FROM LIST BELOW	LIST OF ADDITIONAL ACTIVITIES (Please fill in)
6.	SANITATION AND HYGIENE (CAMPUS&COMMUNITY/ADOPTED VILLAGES)	<ul style="list-style-type: none"> ● Post COVID19 Sanitation Measures and Drill ● Clean and functional toilets (365x24) ● Safe drinking water (365 x24) ● Clean surroundings ● Clean buildings/rooms ● Campus Landscaping ● Zero Littering ● Organize awareness programmes for better sanitation practices like using the toilet, hand washing, health and hygiene awareness and garbage disposal in the adopted villages ● Work with SHGs for mask making and other similar activities 	
7.	WASTE MANAGEMENT (CAMPUS&COMMUNITY/ADOPTED VILLAGES)	<ul style="list-style-type: none"> ● Campus/Dept wise waste audit ● Campus/Dept waste segregation ● Reduction in waste, month-on-month ● Recycling waste (paper, organic waste from canteens and kitchens) ● Set up compost pit for recycling waste ● Ban plastic use in the campus ● Banflexi banners (Only cloth banners to be used) ● Paperless work – use of email, WhatsApp for communication ● Recycling Farm waste ● Setting up community compost pits in villages ● Awareness camps for Clean and Green Village (Zero Littering – IEC Material) including banning single-use plastic ● Partner with local NGOs and CSR organizations in this field 	
8.	WATER MANAGEMENT (CAMPUS&COMMUNITY/ADOPTED VILLAGES)	<ul style="list-style-type: none"> ● Audit of water sources in the campus ● Audit of monthly water use in the campus ● Audit of drinking water on campus (bottled water) ● Constructing/Increasing no. of Rain Water Harvesting pits in the campus 	

#	AREA	TICK THE ACTIVITIES BEING DONE FROM LIST BELOW	LIST OF ADDITIONAL ACTIVITIES (Please fill in)
		<ul style="list-style-type: none"> ● Fixing leaky taps ● Recycling water (grey, brown and black) ● Activities for recharging dry borewells ● Converting villages into water plus areas ● Partner with local NGOs and CSR organizations in this field 	
9.	ENERGY MANAGEMENT (CAMPUS&COMMUNITY/ADOPTED VILAGES)	<ul style="list-style-type: none"> ● Audit of energy efficient heating, cooling, lighting and water systems in the campus. ● Audit of building wise monthly use of electricity. ● Incentivize reduced electricity usage by depts/buildings ● Cycles on the campus (reducing carbon footprints) ● Reducing carbon footprints via intelligent Purchase Standard Operating Procedures (SOPs) ● Partner with local NGOs and CSR organizations in this field 	
10.	GREENERY (CAMPUS&COMMUNITY/ADOPTED VILLAGES)	<ul style="list-style-type: none"> ● Setting up a nursery/kitchen garden ● Setting up a compost pit ● Researching trees that take up minimal water and are good for the ecosystem (local, resilient species) and planting them during monsoon and taking care of them (Vanamahotsav) ● Landscaping in the campus ● Use of organic manure for the plants ● New buildings on the campus will follow green building norms ● Partner with local NGOs and CSR organizations in this field ● Growing coconut trees and Banana on and Greenery Programme 	

We have observed and celebrated the following Days to inculcate and internalize in our faculty, students and community, the values of Mentoring, Social Responsibility, Swachhta and Care for Environment and Resources (tick all the days you have celebrated and/or fill in any celebratory day not listed here)

#	Day	Date	Insert tick mark ✓
25.	National Youth Day	Jan 12	✓
26.	International Mentoring Day	Jan 17	✓
27.	Global Community Engagement Day	Jan 28	✓
28.	World Wetlands Day	Feb 2	✓
29.	World CSR Day	Feb 18	✓
30.	World NGO Day	Feb 27	✓
31.	World Water Day	Mar 22	✓
32.	CSR Day India	Apr 1	✓
33.	Earth Day	April 22	✓
34.	World Environment Day	June 5	✓
35.	No Plastic Day	July 3	✓
36.	World Population Day	July 11	✓
37.	World Entrepreneurs Day	Aug 21	✓
38.	World Habitat Day	1 st Monday of October	✓
39.	National Mentoring Day	Oct 27	✓
40.	Women's Entrepreneurship Day	Nov 19	✓
41.	World Toilet Day	Nov 19	✓

42.	National Pollution Control Day	Dec 2	
43.	World Soil Day	Dec 5	
44.	International women's day	March 8	
45.			
46.			
47.			
48.			

Date of Report: |

Digital Signature of DRP

Mentoring and Facilitation for Introduction and Implementation of Sustainable Practices in Higher Educational Institutions of Punjab, Delhi and Rajasthan

An Action Research Project

Samarth Sharma

Abstract

This research paper contains a review on the role of mentoring to help attain the aim of introducing sustainable practices in Higher Educational Institutions. The project-oriented mentoring took in its folds the establishing of networking for which the DSMs chosen played an important role. The five sustainable practices namely sanitization and hygiene, waste management, water management, energy management, and greenery were required to be assessed physically and this is where the DSMs were a perfect choice. The project was a combination of professional and personal interventions and the mentees were required to play the role of the mentee to mentor during visits to HEIs. The research paper targets the key areas of mentoring as a process and the efficacy of role reversal for project completion. The analysis of strategies adopted towards mentoring both by the mentor and the mentees during role help will help in establishing ground for further studies which require project-oriented mentoring.

Key Words: Sustainability, Mentoring, Facilitation, Higher Education Institutions

Introduction

Mentoring has evolved to embrace a wide range of activities in recent years: from being an individual who responds to queries to an individual gives moral support, to administer schemes that depend on counselling; given the complexity of the needs of the mentee.

'Mentoring is to support and encourage people to manage their own learning in order that they may maximise their potential, develop their skills, improve their performance and become the person they want to be.'

There are particular words and phrases in this quote that draw our attention:

- 'Supporting' and 'encouraging' suggest it is non-directive.
- 'Manage their own learning' suggests that the responsibility for this lies with the mentee.
- 'Maximise potential, develop their skills, improve their performance' identifies the spirit of growth and development.
- 'The person they want to be' clarifies that this is about an individual establishing their own goals with help.

Mentor

A mentor is a person who has professional and life experience and who voluntarily agrees to help a mentee develop skills, competencies, or goals. Put another way, a mentor is an advisor and role model who is willing to invest in the mentee's personal growth and professional development.

MENTORS are those special people who, through their deeds and works help to move towards mentee's potential

M	Mature/Motivating
E	Energetic/Empathetic
N	Nurturing
T	Trustworthy
O	Open-minded
R	Resourceful/Responsive

What makes a good mentor?

- A desire to help others succeed
- A willingness to pass along information
- A willingness to give and receive feedback
- A desire to work with others
- A desire to engage with others on an

interpersonal level

- A desire to learn
- A motivation to mentor
- Good listening and communication skills
- Good people management and leadership skills
- Self-confidence and self-awareness
- Strong ethics
- Openness, honesty and trustworthiness
- Patience
- Empathy

Mentee

A mentee is someone who has identified a specific personal or professional goal and who believes that the guidance and help of a mentor – and being held accountable to the mentor – can help them achieve their goal.

Qualities to look for in mentees

- A willingness to learn about themselves
- A willingness to learn from others' experience

Introduction to Facilitation

Facilitation is a technique used by trainers to help learners acquire, retain, and apply knowledge and skills. Participants are introduced to content and then asked questions while the trainer fosters the discussion, takes steps to enhance the experience for the learners, and gives suggestions. They do not, however, do the work for the group; instead, they guide learners toward a specific learning outcome.

Facilitator Skills

Facilitators can come from any background and a variety of experience levels. The best facilitators, however, demonstrate the following skills:

- **Listening.** A facilitator needs to listen actively and hear what every learner or team member is saying.
- **Questioning.** A facilitator should be skilled in asking questions that are open ended and stimulate discussion.
- **Problem solving.** A facilitator should be skilled at applying group problem-solving techniques, including:
 - defining the problem, determining the cause, considering a range of solutions, weighing the advantages and disadvantages of solutions, selecting the best solution, implementing the solution, evaluating the results.
- **Resolving conflict.** A facilitator should recognize that conflict among group members is natural and, as long as it is expressed politely, does not need to be suppressed. Conflict should be expected and dealt with constructively.
- **Using a participative style.** A facilitator should encourage all learners or team

- Commitment to their personal and professional growth
- Strong interpersonal skills
- Good listening skills
- An easy ability to learn
- An open mind and a willingness to try new things
- An ability to accept feedback and learn from it
- Patience and ability to take a long-term view
- Good communication skills
- Flexibility
- Respect for other people's time and effort
- Realistic expectations
- A strong work ethic
- A strong initiative
- A clear commitment to being mentored
- A willingness to take responsibility for their career
- Openness, honesty and trustworthiness

members to actively engage and contribute in meetings, depending on their individual comfort levels. This includes creating a safe and comfortable atmosphere in which group members are willing to share their feelings and opinions.

- **Accepting others.** A facilitator should maintain an open mind and not criticize

ideas and suggestions offered by learners or group members.

- **Empathizing.** A facilitator should be able to “walk a mile in another’s shoes” to understand the learners’ or team members’ feelings.
- **Leading.** A facilitator must be able to keep the training or meeting focused toward achieving the outcome identified beforehand.

Purpose of the Action Research

- To check how mentoring helps in achieving project goals.
- How sharing knowledge and mentoring skills of mentor helped mentee in handling challenges during project.
- To find how to overcome challenges and built strong mentor and mentee relationship.

Objective of the Action research

- To check how mentoring helps in improving performance of the mentee.
- To check how mentoring help in building rapport with DSMs and Higher Education Institutions
- To provide corrective feedback to the mentee.

Review of the Literature

KATHY DUNNE AND SUSAN VILLANI, MENTORING NEW TEACHERS THROUGH COLLABORATIVE COACHING: FACILITATION AND TRAINING GUIDE WESTED; LSLF/CDR PUBLICATION, 2007

This book explain that mentoring activities are organized at two levels: (1) for working directly with mentor teachers and (2) for helping professional developers design their own mentor training programs. Each step-by-step activity includes a statement of purpose, facilitator notes, and all necessary handouts and overheads.

LOIS ZACHARY AND LORY FISCHLER, FEEDBACK AND FACILITATION FOR MENTORS: MENTORING EXCELLENCE, JOSSEY BASS PUBLICATIONS, 2012

This volume attempt to explain crucial aspects of mentoring as quick references that mentors and mentees can use to refresh their understanding, prepare for mentoring sessions, grasp key concepts of the process, and improve their overall experiences and strengthen their mentoring relationships.

LOIS J. ZACHARY, THE MENTOR'S GUIDE: FACILITATING EFFECTIVE LEARNING RELATIONSHIPS, JOSSEY-BASS PUBLICATIONS, 2011

This book provides the critical process of mentoring and presents practical tools for facilitating the experience from beginning to end. Managers, teachers, and leaders from any career, professional,

or educational setting can successfully navigate the learning journey by using the hands-on exercises in this unique resource.

ANNE BROCKBANK, FACILITATING REFLECTIVE LEARNING: COACHING, MENTORING AND SUPERVISION 2ND EDITION, KOGAN PAGE; 2ND EDITION PUBLICATIONS, 2012

This book explains how coaching and mentoring works in different situations. The key learning theories; describe the different models available for coaching and mentoring; and demonstrate how they can be applied in practice. The coaching and mentoring skills used in different situations are clearly described. Various concept such as templates for contracting, reviewing and evaluating, as well as guidance on group dynamics for team coaching and group supervision is available in the book. Advice is also included on sensitive areas such as the boundary between mentoring or coaching and therapy, and the desirability of supervision.

LINDA ALGOZZINI, GROUP COACHING AND MENTORING: A FRAMEWORK FOR FOSTERING ORGANIZATIONAL CHANGE, FASTPENCIL PUBLISHING, 2017

Take one leader with a breadth of experience and expertise who envisions a dynamic plan for change. Add colleagues who grasp that vision and are willing to implement the plan. The results are a bold and effective way to shift an organization's mindset to align with the needs of most any 21st Century organization. This book is one team's journey to shift an entire operating unit's culture. In this book, you will find a blueprint for change that can be applied to most any organization seeking to foster individual and organizational growth. Read this book to discover why, how, and what to change, including how to: Align individual, group, and organizational goals, ask metacognitive questions to shift mindset, reflect with purpose on current practices, take focused action in new directions, evaluate each step to confirm effectiveness, hold self and others accountable, Create a culture of embracing change.

ANN ROLFE, MENTORING MINDSET, SKILLS AND TOOLS: MAKE IT EASY FOR MENTORS AND MENTEES, MENTORING WORKS, 2020

This book is written both for mentors and mentees. It is based on the experience and explains the essential ingredients of mentoring conversations and relationships that work. In this book you'll discover: What mentoring is and isn't and the differences between mentoring and coaching, How Mentor and mentee roles in an organization, a framework for the mentoring process and how to start, maintain and end an effective mentoring relationship. The proven techniques have been used in mentoring for professionals, graduates and students in health, construction, energy, communications, education, law and government.

DR STEPHEN GOUGH, HIGHER EDUCATION AND SUSTAINABLE DEVELOPMENT: PARADOX AND POSSIBILITY, ROUTLEDGE PUBLICATIONS, 2018

This book contains 'Key Issues in Higher Education' series aims to raise both awareness and the standards of debate on the fundamental issues that lie at the very heart of higher education and intends to assist national and international debate. *Higher Education and Sustainable Development* examines whether it is actually possible to mandate, plan, monitor and evaluate the higher education sector's route to the production of educated, innovative, independent, self-determining, critical individuals while at the same time achieving a range of wider policy goals on the side.

Research Hypothesis

To prove that mentoring and facilitation skills are required at all level of project implementation mentoring and facilitation skills enhance the otherwise existing skills in the DSMs

Challenges

- **Finding the Right Mentee (Before this project):** If you want to be successful in mentoring it is very important to find the right mentee.
- **Schedule a meeting:** both mentors and mentees have commitments and responsibilities, both of which serve as convenient excuses for postponing a mentoring meeting.
- **Technical handicap:** most of the mentee don't know the computer basics and they face technical challenges while sending emails, sending letters and compiling reports.
- **Building mentee's confidence:** Most of mentee before their first visit is nervous either they are able to perform well or not or how HEIs deal with them.

Actions Planned to Address the Challenges

1. Finding right mentee was the biggest challenge. On the basis of FDP performance in 10 mentees were selected to represent one district each.
2. While working in a team the biggest barrier is to be at one place and at one time on an online meeting. To ensure maximum participation buddy system was introduced. For Example: if Dr. Parveen (Mentee) is not present in the meeting then his buddy Dr. Bharti (mentee) will call him and ask her to join the meeting.
3. For enhancing technical skills, demo sessions were arranged on how to send official emails to HEIs and how to make changes therein.
4. Going for a field visit and collecting data is sometimes de-motivates the mentees, to overcome this challenge plan of action was shared and regular counseling was done through meetings to help instill confidence.

Sampling Design

10 District Sustainable Mentors are the respondents, DSMs are in between 26 to 55

Note: The sampling size has been chosen between the age group 26 to 55 the age group. This sampling design therefore provides suitable ground for Pre mentoring, middle mentoring and Post Mentoring.

Research Methodology

Sample Size:

Sample can be defined as the selection of a part or a group or an aggregate with a view in obtaining information about the whole population.

Data Collection:**Sample Size: 10 District Sustainable Mentors****Primary Data:**

Primary data was collected through google form. The questionnaires were carefully designed by taking into account the parameters of my study.

Secondary Data:

Data was collected from books, magazines, web sites etc. It is the data which has been collected by individual or someone else for the purpose of other than those of our particular research study. Or in other words we can say that secondary data is the data used previously for the analysis and the results are undertaken for the next process

Information of District Sustainability Mentors/ Respondents**Table 1:** Information of Districts, States, Number of institutions, Number of Reports and Number of Success stories

Sr no	Name	Districts	State	No of institutions visited	No of reports	No of success stories
1.	Dr Amita Sharma	Barnala	Punjab	5	5	5
2.	Ms. Deepika Kanwar	Faridkot	Punjab	5	5	5
3.	Dr. Mokshi Sharma	Ferozepur	Punjab	5	5	5
4.	Dr. Parveen Arora	Ludhiana	Punjab	5	5	5
5.	Dr. Jayanti P Sahoo	Central Delhi	Delhi	5	5	5
6.	Dr, Neha Goyal	North West Delhi	Delhi	5	5	5
7.	Dr. Surya Prakash	North Delhi	Delhi	5	5	5
8.	Dr. Meenakshi	West Delhi	Delhi	5	5	5
9.	Dr. Neeraj Priya	North East Delhi	Delhi	5	5	5
10.	Dr. Bharati Veerwal	Chittorgarh	Rajasthan	5	5	5

This table have the information of Districts, States, No. of institutions, No. of Reports and No. of Success Stories of DSMs/ mentees. The respondents were to complete 5 field visits to in Higher Education Institutions of their districts (Annexure 2) and direct field overviews on Sustainable Parameters followed under the Swachta Action Plan (SAP) and give inputs on field visits in the

form of sustainability practices reports and success stories.

On the whole, the Master Trainer prepared, directed and tutored the respondents towards accomplishing the objective of 50 institutional visits, 50 reports and 50 examples of overcoming adversity.

Table 2: Information of age, Gender, designation and qualification of DSMs

Sr no	Name	Age	Gender	Designation	Qualification
1.	Dr Amita Sharma	35	Female	Assistant Professor	PhD
2.	Ms. Deepika Kanwar	28	Female	Assistant Professor	LLM
3.	Dr. Mokshi Sharma	38	Female	Associate Professor	PhD
4.	Dr. Parveen Arora	42	Female	Associate Professor	PhD
5.	Dr. Jayanti P Sahoo	52	Female	Associate Professor	PhD
6.	Dr, Neha Goyal	36	Female	Assistant Professor	PhD
7.	Dr. Surya Prakash	44	Male	Associate Professor	PhD
8.	Dr. Meenakshi	53	Female	Associate Professor	PhD
9.	Dr. Neeraj Priya	55	Female	Professor	PhD
10.	Dr. Bharati Veerwal	36	Female	Assistant Professor	PhD

This table represents age, gender, Designation, qualification of DSMs. This table likewise assists the tutor with getting a superior comprehension of his/her mentees and this in turns assist with way forward and reception of coaching procedures.

Data Interpretation

Early Stages of the Mentoring and facilitation Relationship between Master Trainer and Mentor

1. Did your Master Trainer provide close supervision and guidance?

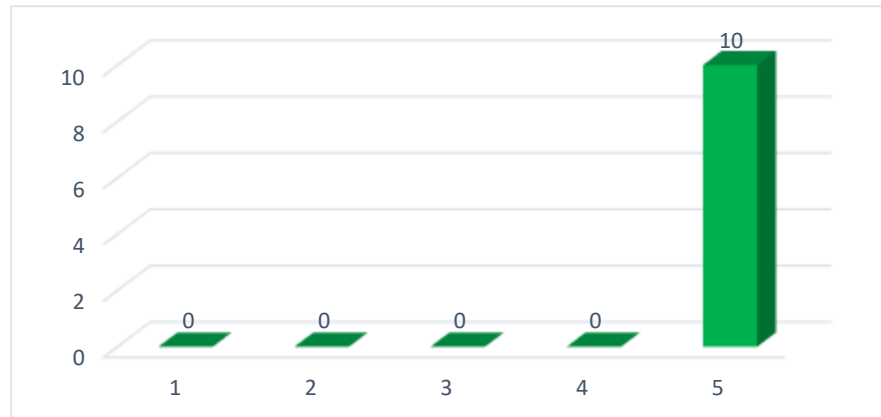


Figure 1

Interpretation:

100% DSMs agreed that Master Trainer provided close supervision and guidance

2. Did you feel personal and friendly relationship between Master Trainer and mentor is important during the project for successful implementation

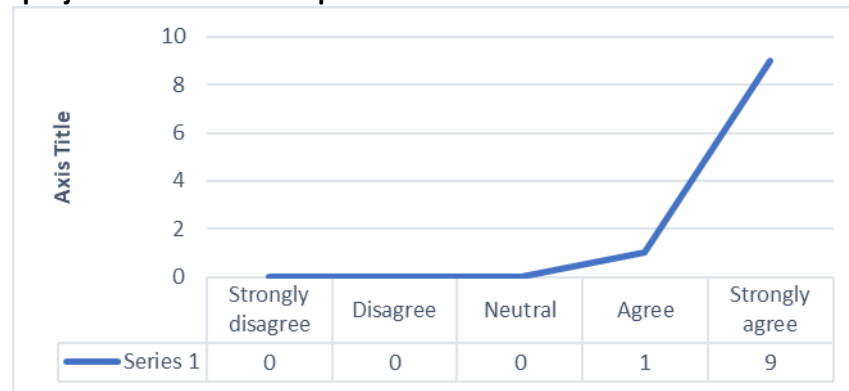


Figure 2

Interpretation:

90% strongly agree and 10% agree and feel personal and friendly relationship between Master Trainer and mentor is important during the project for successful implementation

3. Did your Master Trainer play a significant role in providing strategies to achieve goal?

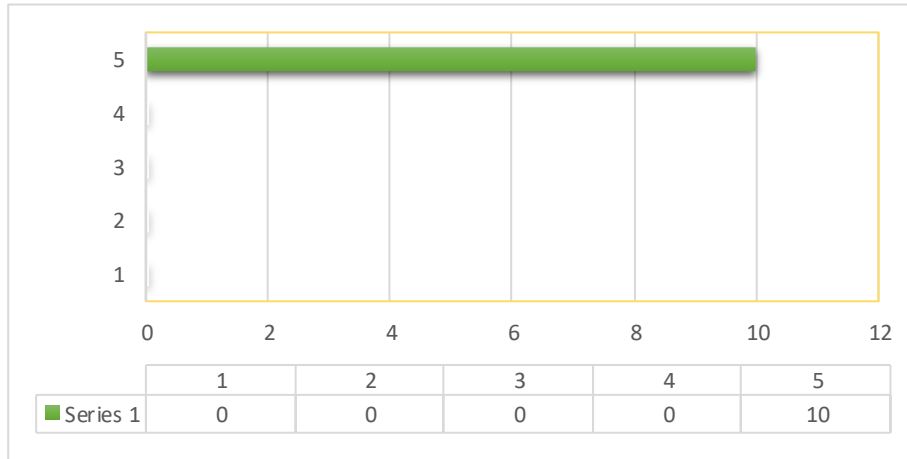


Figure 3

Interpretation:

100% agreed that Master Trainer played a significant role in providing strategies to achieve goal

4. Was your Master Trainer able to employ strategies to improve your skills and performance?

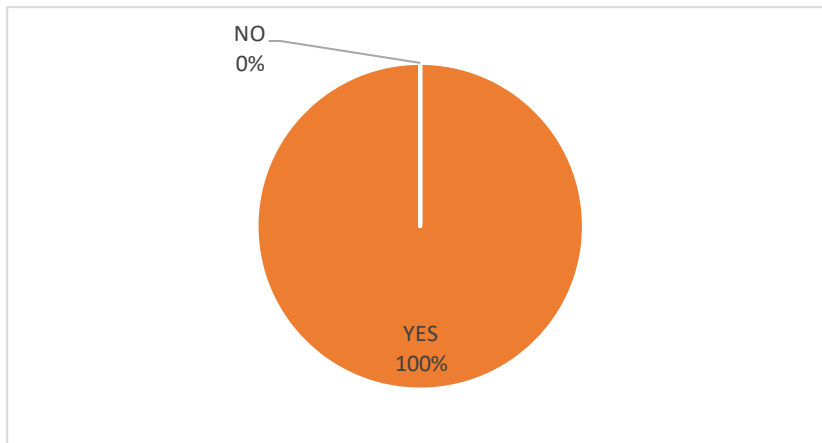


Figure 4

Interpretation:

100% DSMs Agreed that Master Trainer was able to employ strategies to improve their skills and performance

5. Was your Master Trainer able to work with you to set clear expectations

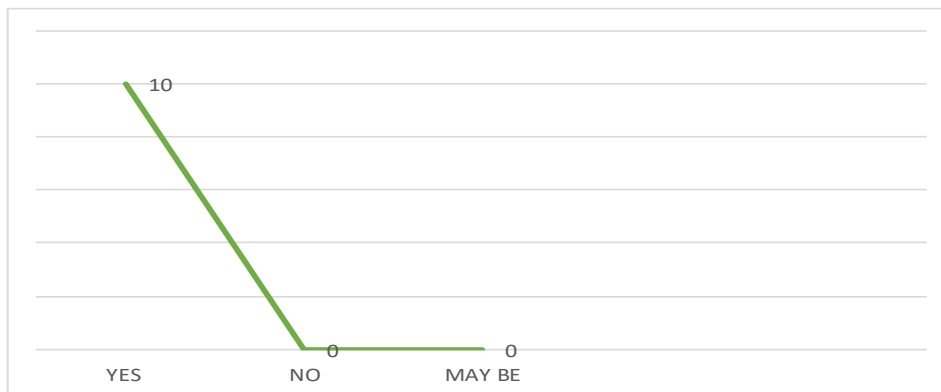


Figure 5

Interpretation:

100% DSMs agreed that Master Trainer was able to work with them and set clear expectations.

6. Was your Master Trainer able to help you in striking a balance between your personal and professional life?

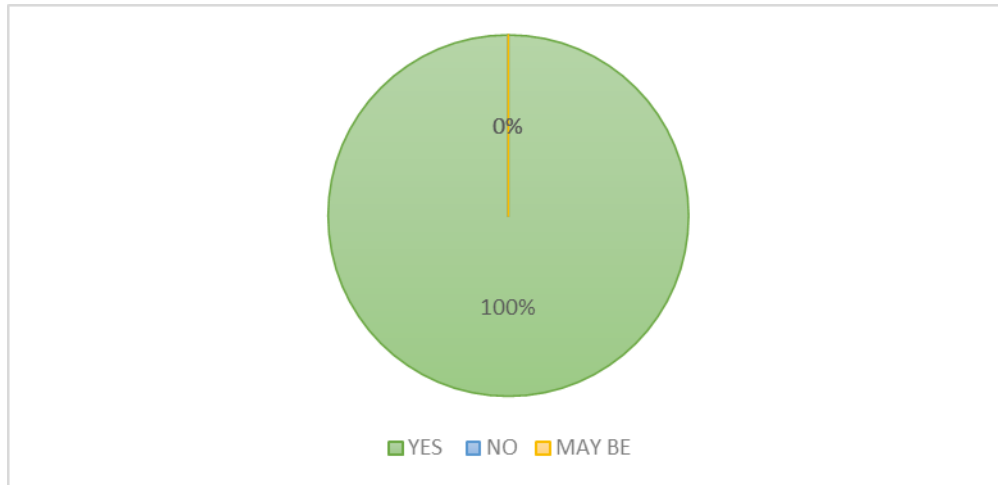


Figure 6

Interpretation:

Yes 100% DSMs agreed Master Trainer was able to help in balancing personal and professional life

Middle Stages of the Mentoring Relationship

7. Was your Master trainer the primary guide for you in achieving Project and professional goals?

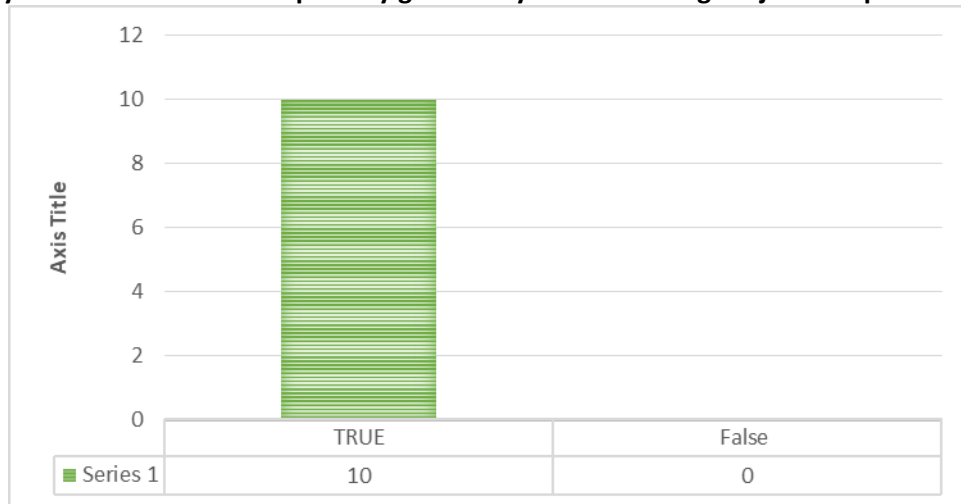


Figure 7

Interpretation:

Yes 100% DSMs agreed that master trainer was the primary guide for them in achieving Project and professional goals.

8. Was your Master Trainer the first one you turned to when you had problems with the project

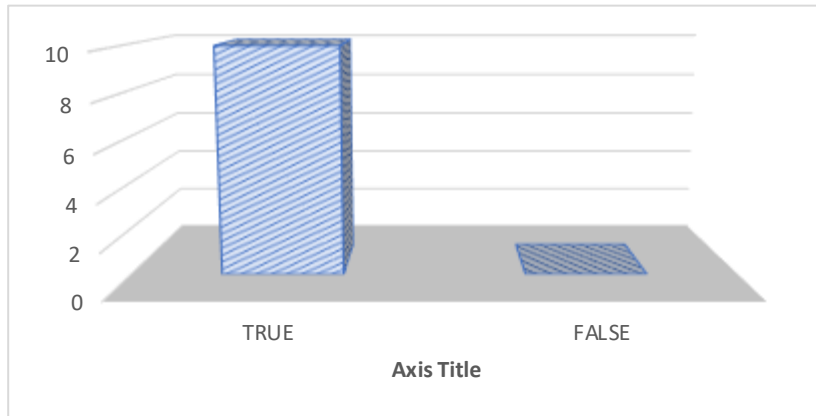


Figure 8

Interpretation: Yes 100% DSMs agreed that Master Trainer was the first one they turned to when they had a problem.

9. Did your Master trainer check regularly that your work was consistent and you were meeting deadlines?

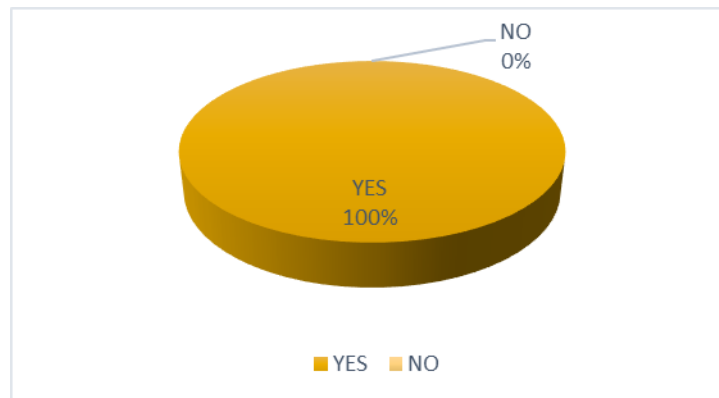


Figure 9

Interpretation:

Yes 100% DSMs agreed that master trainer regularly checked their work performance.

10. On a scale of 5 rate whether master trainer was able to develop an appropriate plan of action for the mentees to implement project effectively

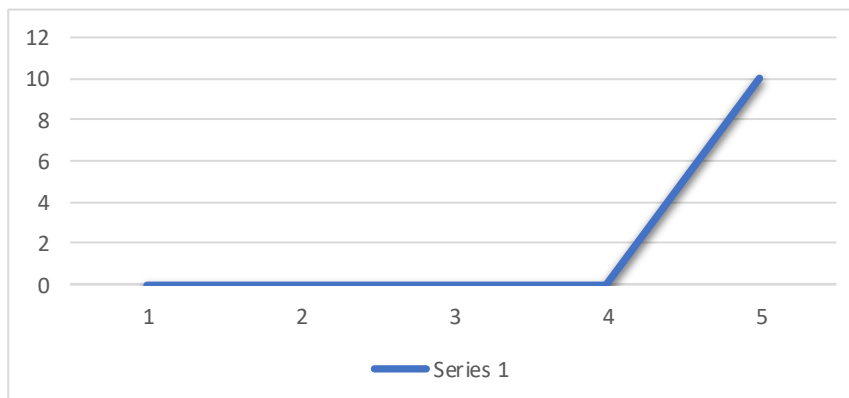


Figure 10

Interpretation:

Yes 100% DSMs agreed that master trainer developed an appropriate plan and timetable of research and study for the mentor.

Advanced Stages of the Mentoring Relationship

11. Was your Master Trainer effectively able to initiate the preparation of presentations, papers, success stories and reports

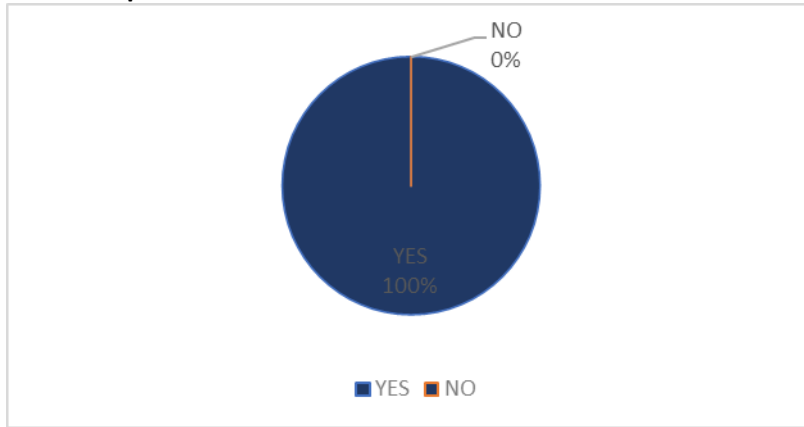


Figure 11

Interpretation:

Yes 100% DSMs agreed that Master Trainer effectively initiated the preparation of presentations, papers, success stories and reports.

12. Did your Master trainer insist on seeing all drafts of work (presentations, thesis, papers, etc) to ensure that the mentee is on the right track

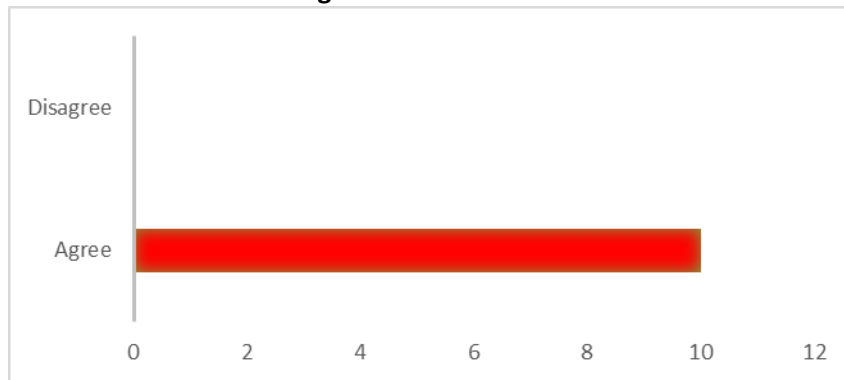


Figure 12

Interpretation:

Yes 100% DSMs agreed that Master trainer insisted on seeing all drafts of work (presentations, thesis, papers, etc) to ensure that the mentee is on the right track

13. Do you believe that Master trainer is efficient in providing advice and professional connections?

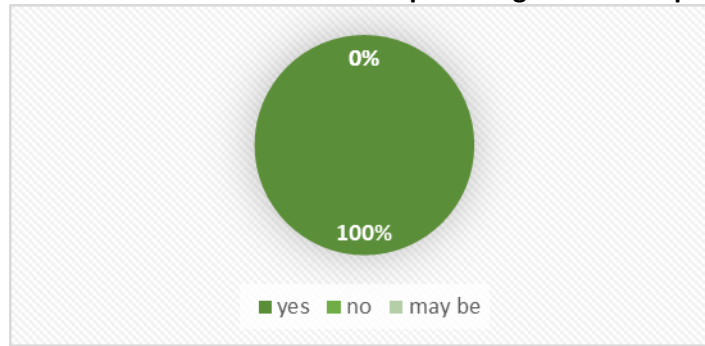


Figure 13

Interpretation: Yes 100% DSMs agreed that master trainer is efficient in providing advice and professional connections

14. What are the skills of mentoring you have learnt from your Master trainer

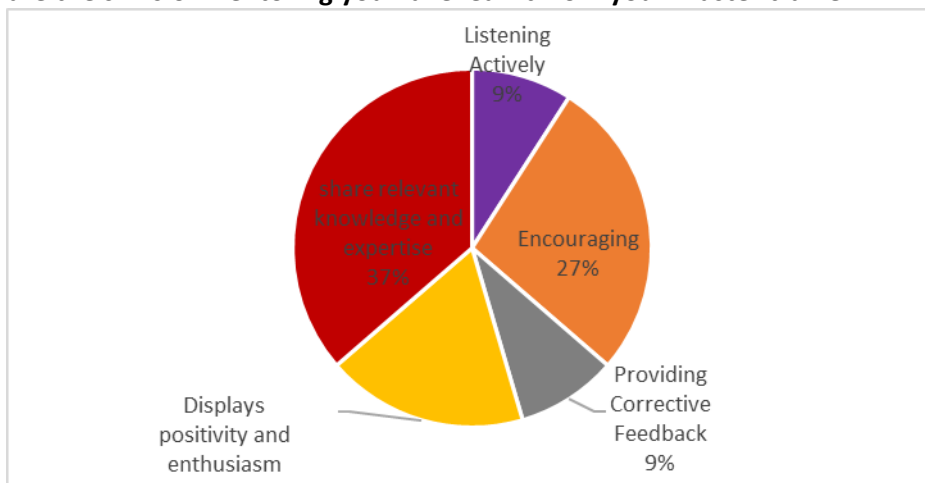


Figure 14

Interpretation:

DSMs believed that they learnt a lot from their master trainer namely:

9% believed that they learnt active listening

9% believed that they learnt how to give correct feedback

27% believed that they learnt how to motivate and encourage

18% believed that they learnt to be positive and enthusiastic

37% believed that they learnt how to share knowledge and expertise

15. How would you rate the overall quality of mentoring?

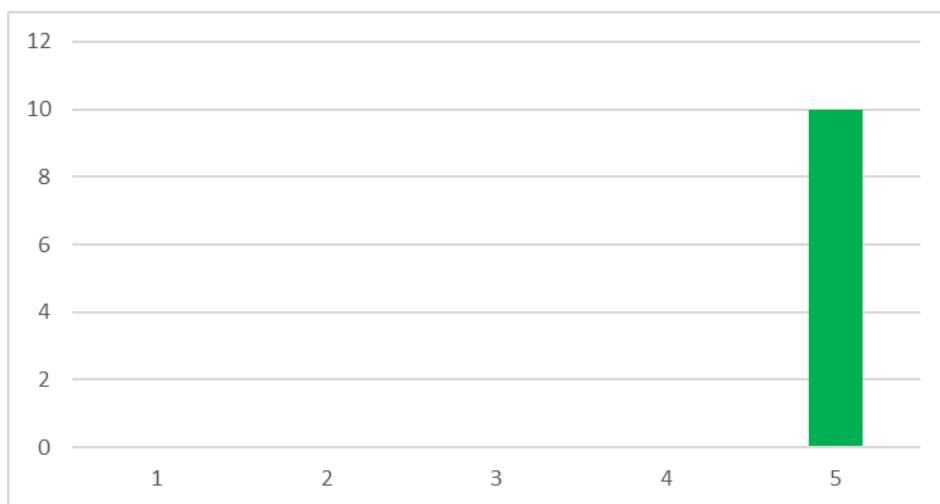
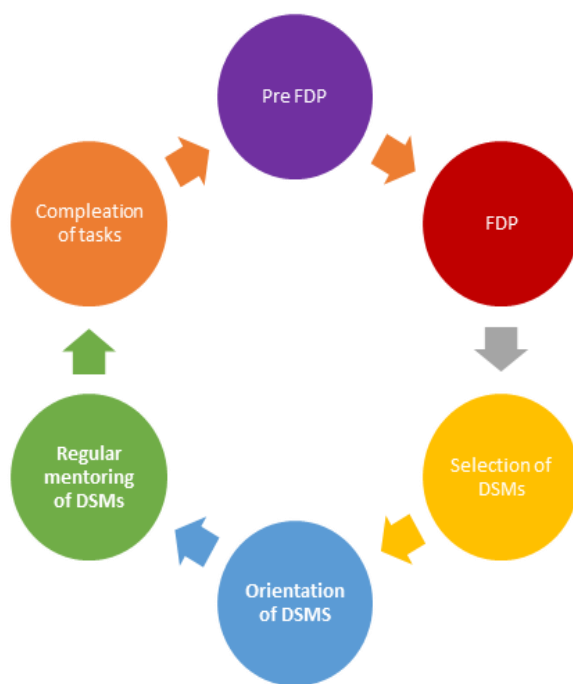


Figure 15

Interpretation:

100% DSMS gave 5/5 rating for overall mentoring.

Implementation of the Study



Two days before FDP, MGNCRE conducted pre-FDP for the faculty of Higher Education Institutions followed by 5 Days FDP for faculty. This Faculty Development Program aimed to groom faculty to make innovative strides and reforms in teaching-learning environment.

It was thought that Mentoring of faculty would go a long way in achieving institutional and organizational goals. Higher Education Institutions are responsible for creating knowledge for welfare of mankind. But this aspect changed in the last two decades when

education became a money minting concept and a business prospect.

It is high time HEIs fulfill their fundamental duty of social responsibility by mobilization of their intellectual resources for the better cause of society and mankind as a whole through research, innovation and knowledge.

Contribution of knowledge: for which the HEI stands, as part of its objectives towards social responsibility, may be considered superior over any other mode of contribution, particularly at a time when the youth of today especially in India: need to have a rural

connect and learn through experience. Further, meaningful and gainful engagement of student community for the betterment of society itself is a social responsibility of an HEI because society as a whole view the HEIs as a source of bright future for their children.

Based upon the interaction done by participants during FDP, MGNCRE Master trainer short listed one DSM per district. All the DSMs were assigned one master trainer who oriented them for completing 5 HEIs Field visits, 5 success stories and 5 reports. With proper mentoring they were able to complete the given task.

Table 3: Phases of action research and key outputs

Phases of the Action Research	Key Activities	Key Output
Pre-preparation	<ul style="list-style-type: none"> ▪ Orientation by the Resource Person ▪ District Sustainability Mentors' (Sustainability Transition) Team Formation 	<ul style="list-style-type: none"> ▪ Initial Action Research Project description ▪ Sustainability Transition Team
Preparation and Exploration	<ul style="list-style-type: none"> ▪ Process Design ▪ Stakeholder Analysis ▪ Monitoring Framework 	<ul style="list-style-type: none"> ▪ Plan for execution ▪ Insightful overview of major challenges to focus on ▪ Stakeholder Identification (Selection of the five HEIs) ▪ Monitoring framework devised
Problem Structuring and Envisioning	<ul style="list-style-type: none"> ▪ Participatory Problem Structuring ▪ Selection of key priorities ▪ Vision building 	<ul style="list-style-type: none"> ▪ Data Collection focusing on five parameters of Swachhta ▪ Individual and shared perceptions on challenges ▪ Individual and shared vision
Pathways and Agenda Building	<ul style="list-style-type: none"> ▪ Participatory back casting ▪ Formulation of agenda and specific activities ▪ Monitoring structured and unstructured interviews of the stakeholders 	<ul style="list-style-type: none"> ▪ Back casting analysis ▪ Learning and process feedback

Experimenting and implementing	<ul style="list-style-type: none"> ▪ Dissemination of visions, pathways and agenda ▪ Coalition forming and broadening the network 	<ul style="list-style-type: none"> ▪ Broader public awareness and extended involvement ▪ Broadened network of mentors inducing Sustainability Transitions ▪ Learning and Implementation
Monitoring and Evaluation	<ul style="list-style-type: none"> ▪ Participatory evaluation of method, content and process 	<ul style="list-style-type: none"> ▪ Adapted methodological framework, strategy and lessons learnt for governance ▪ Insight to drivers and barriers for Sustainable behavior

Findings and Outcomes of the Action Research

- 1) 100% DSMs agreed that master trainer provided close supervision and guidance.
- 2) 90% strongly agreed and 10% agreed and felt that personal and friendly relationship between Master Trainer and mentee is important during the project for successful relationship.
- 3) 100% agreed that Master Trainer played a significant role in providing strategies to achieve goal
- 4) 100% DSMs Agreed that Master Trainer was able to employ strategies to improve their skills and performance
- 5) 100% DSMs agreed that Master Trainer was able to work with them and set clear expectations.
- 6) Yes 100% DSMs agreed Master Trainer was able to help them in balancing personal and professional life
- 7) Yes 100% DSMs agreed that master trainer was the primary guide for them in achieving Project and professional goals.
- 8) 100% DSMs agreed that Master Trainer was the first one they turned to when they, the mentees had problems with the project
- 9) 100% DSMs agreed that master trainer checked regularly either the mentor is working consistently and finishing tasks.
- 10) 100% DSMs agreed that master trainer had developed an appropriate plan and timetable of research and study for the mentee.
- 11) 100% DSMs agreed that Master Trainer initiated preparation of presentations, papers, success stories and reports.
- 12) 100% DSMs that Master trainer insisted upon seeing all drafts of work (presentations, thesis, papers, etc) to ensure that the mentee is on the right track
- 13) 100% DSMs agreed that master trainer was efficient in providing advice and professional connections
- 14) DSMs learnt skills of mentoring form Master trainer, 9% Listening Actively, 9% learned Providing Corrective Feedback, 27% learned Encouraging, 18% Displays positivity and enthusiasm, 37% share relevant knowledge and expertise.

15) 100% DSMs gave 5/5 rating for overall mentoring.

16) These sessions are very effective and results in 100% success. Now all my 10 DSMs know how to send professional emails and letters

Conclusion

The present study has proved all Hypothesis to be correct. It was found that mentoring is very important in all levels and it influences mentees to perform their task effectively. Having a good mentor can have untold benefits for completion of the project. By connecting with a mentor, one can get the value of their experience and knowledge. But more importantly, a mentoring relationship will give accountability, milestones to reach, and an accurate assessment of one's skills.

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[menteehttps://www.td.org/talent-development-glossary-terms/what-is-facilitation](https://www.td.org/talent-development-glossary-terms/what-is-facilitation)

About the Author

Samarth Sharma is an educationist, a motivator and counsellor and has counselled 5000 young minds for providing COVID support. An MBA, his field of interest and research, have been mostly related to rural development. He is a master photographer and has trained 500 UT teachers the art of video editing. With his expertise in photography, he has trained 400 students for certificate courses. At present he is a Resource person with MGNCRE, Ministry of Education, Government of India and has worked actively with 500 Higher Education Institutions in 12 districts across India.

Annexures

Annexure 1

Questionnaire

Early Stages of the Mentoring and facilitation Relationship between Master Trainer and Mentor

1. Did your Master Trainer provide close supervision and guidance?
2. Did you feel personal and friendly relationship between Master Trainer and mentor is important during the project for successful implementation
3. Did your Master Trainer play a significant role in providing strategies to achieve goal?
4. Was your Master Trainer able to employ strategies to improve your skills and performance?
5. Was your Master Trainer able to work with you to set clear expectations
6. Was your Master Trainer able to help you in striking a balance between your personal and professional life?

Middle Stages of the Mentoring Relationship

7. Was your Master trainer the primary guide for you in achieving Project and professional goals?
8. Was your Master Trainer the first one you turned to when you had problems with the project
9. Did your Master trainer check regularly that your work was consistent and you were meeting deadlines?

10. On a scale of 5 rate whether master trainer was able to develop an appropriate plan of action for the mentees to implement project effectively

Advanced Stages of the Mentoring Relationship

11. Was your Master Trainer effectively able to initiate the preparation of presentations, papers, success stories and reports
12. Did your Master trainer insist on seeing all drafts of work (presentations, thesis, papers, etc) to ensure that the mentee is on the right track
13. Do you believe that Master trainer is efficient in providing advice and professional connections?
14. What are the skills of mentoring you have learnt from your Master trainer?
15. How would you rate the overall quality of mentoring?

**Annexure 2
List of colleges covered by DSMs**

S. No	State	District	Name of the DSM	Name of the Institutions Visited
	Punjab	Barnala	Dr Amita Sharma	Sh. LBS Arya Mahila College, Barnal, Punjab SSD College, Barnala, Punjab AryaBhatta Group of Institutes, Barnala, Punjab University College, Barnala, Punjab DS Dani College Barnala
	Punjab	Faridkot	Ms. Deepika Kanwar	Dasmesh Institute of Research and Dental Sciences, FDK S.B.R.S College for Women, Sadiq, FDK. Guru Gobind Singh Medical College, FDK Baba Banda Bahadur College of Nursing, FDK Saheed Bhagat Govt College, Kotkapura, FDK
	Punjab	Ferozepur	Dr. Mokshi Sharma	Dev samaj College of education for women R.S.D. College D.A.V College for Women Guru Nanak college Dev Samaj college for women
	Punjab	Ludhiana	Dr. Parveen Arora	Women's College Ludhiana Punjab Guru Nanak girls' college Ludhiana DD Jain College., Ludhiana Government College for Girls Ludhiana. Ramgarhia Girls College Ludhiana
	Delhi	Central Delhi	Dr. Jayanti P Sahoo,	Janki Devi Memorial College Lady Irwin College Mata Sundri College for women Zakir Husain College Dayal Singh College
	Delhi	North West	Dr. Neha Goyal	Sri Guru Gobind Singh College of Commerce

		Delhi		Satyawati College Jagan Institute of Management Studies Shaheed Sukhdev College of Business Studies Bhagwan Parshuram Institute of Technology
	Delhi	North Delhi	Dr. Surya Prakash	Shri Ram College of Commerce Hansraj College Ramjas College SGTBK College Lakshmibai College
	Delhi	West	Dr. Meenakshi	Shyama Prasad Mukherji College Rajdhani College Bharati College Atma Ram Sanatan Dharma College Shivaji College
	Delhi	North east	Dr. Neeraj Priya	DIET Dilshad Garden Guru Ram Dass College of Education Shyam Lal College Evening Dr. Bhim Rao Ambedkar College University College of Medical Science
	Rajasthan	Chittorgarh	Dr. Bharati Veerwal	Mewar Girls College, Chittorgarh Vision College of Commerce, Chittorgarh Maharana Pratap Government College, Chittorgarh Dr. Bhimrao Ambedkar Govt. P.G. College, Nimbahera, Chittorgarh Govt.Girls College, Chittorgarh

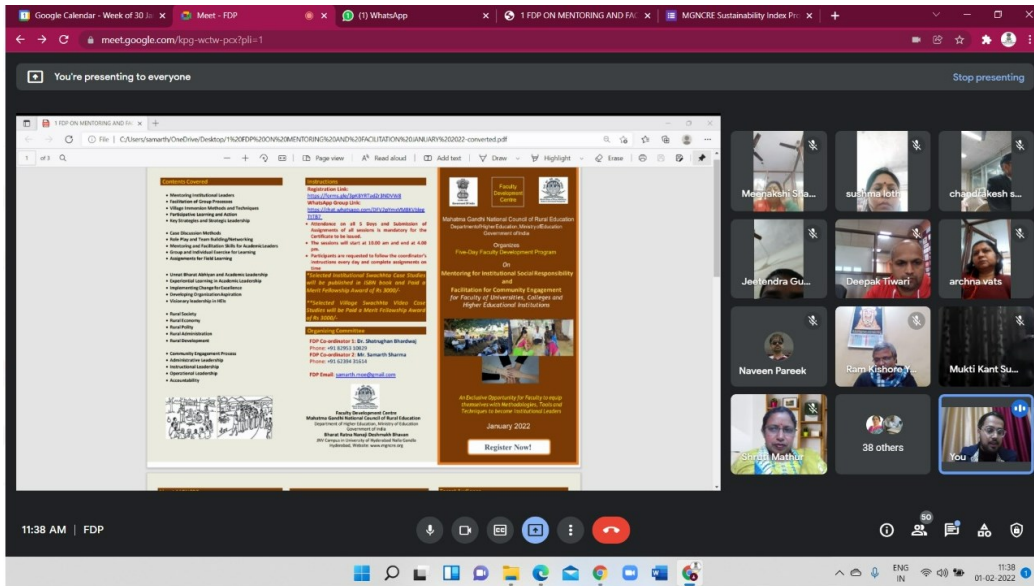


Figure: 8.3.1 (pre-FDP for the faculty of Higher Education Institutions)

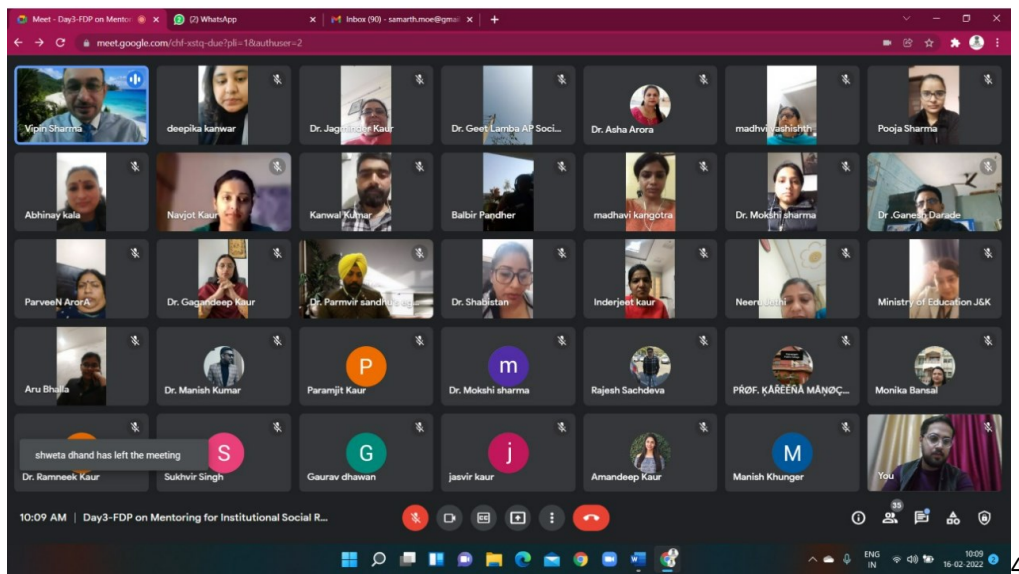


Figure 8.3.2 (Five Days Faculty Development Porgramme)

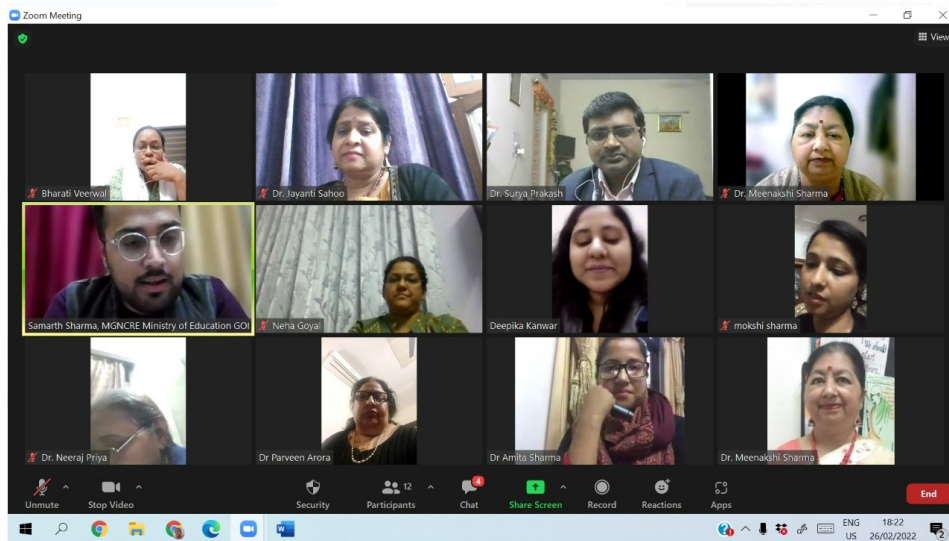
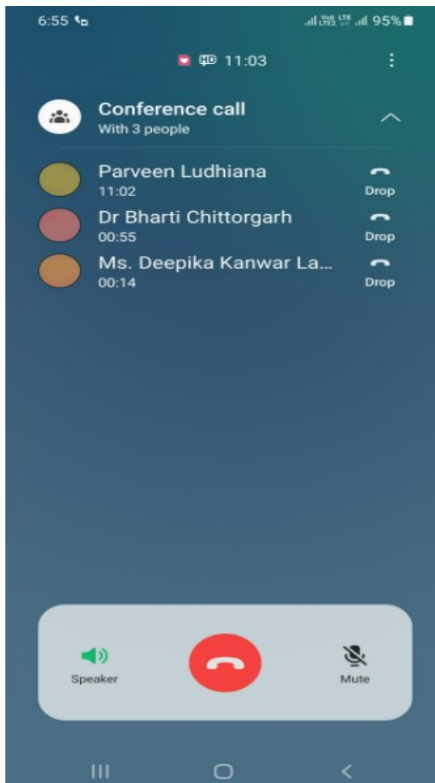


Figure: 8.3.3 (Orientation of 10 District Sustainable Mentors by Master Trainer Mr. Samarth Sharma)



Figure: 8.3.4 (Regular Review Meetings of DSMs)



(Figure 8.3.5 Regular mentoring on Conference calls)



(Figure 8.3.6 Regular Feedback by Mr. Samarth Sharma on the work done by DSMs)



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