



TEACHER TRAINING WORKSHOP REPORT

4th & 5th September, 2018

Conceived and Prepared by

CEE
Centre for Environment Education

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BACKGROUND OF TTW

Every year, several thousand youth are enrolled into Junior colleges of the Mumbai metropolitan region. Environment Education provides an immense opportunity to create environmental awareness, undertake small projects and studies etc. A preliminary assessment done in 2015 by the Maharashtra State Board of Secondary & Higher Secondary Education (MSBSHSE) revealed that most junior colleges are not able to implement the subject effectively. While the pressure of competitive exams is often given as the cause, there are various other reasons, including lack of staff, inadequate capacity, students not giving adequate time etc. A meeting was held with Mr. Gangadhar Mhamane, the chairman of the Maharashtra State Board of Secondary and Higher Secondary Education, Pune in the November, 2017.

The detail background study has been done to identify local specific challenges faced by city, consultations with local stakeholders like parents, teacher, citizens, local non-government organizations, citizen's representatives and students, Study of Environment Status Report (ESR report 2014-15) and City Sanitation Plan (CSP 2014) of Panvel, local specific challenges and textbook references identified, along with hypothesis from class XII textbook, evaluation process of Environment Education in Junior colleges.

RATIONALE OF THE WORKSHOP

In the process of participatory assessment of EE status, we have interacted with more than 35 EVS teachers of 26 different junior colleges in Panvel Municipal Corporation. Several discussions and consultations with teachers took place regarding the challenges faced by EVS teachers, such as time and session management, approach towards EE teaching, understanding of local specific issues and need, confidence and experience of teaching EE, criticalities of implementation, HSC board monitoring, student response and approaches. Along with challenges faced, teachers also shared their views on how to strengthen and develop better EE implementation techniques.

SPECIFIC FINDINGS PRIOR TO THE WORKSHOP

- Not a single teacher could explain rationale behind Project Based Learning (PBL) for EVS teaching.
- Projects with Hypothesis based learning have never been undertaken.
- Only 5 teachers have attended training on EVS evaluation process without knowing how to transit EVS textbooks and PBL.
- Only four teachers were able to share the list of projects submitted by students.
- Only Ten teachers were able to recall projects submitted by students.
- Lack of specific and standardize instruction and presentation method across the junior colleges.
- Student on an average spend Rs.110 -120 /- for submitting EVS projects.

TEACHER TRAINING WORKSHOP: DAY

REGISTRATION

Time of Registration: 10am

No. Of Participants: 23

No. Of Junior colleges: 22

INTRODUCTION

The session began with an Icebreaking activity, wherein teachers had to introduce each other giving brief about the projects carried out by them.

FIRST SESSION – TALK BY MR. SATISH AWATE, PROGRAMME DIRECTOR, CEE CENTRAL & AUTHOR AND ADAPTATION COMMITTEE

The session commenced with a 4000 years old story. The significance of natural resources in the foundation of human development, along with relevance of local studies and research in understanding the present scenario and finding plausible solutions, was stressed during the session.

Skills such as that of observation, inspection & records maintenance in our daily lives also holds major significance and helps build our capacities. Of utmost need is to understand the role of social education, and how natural/man-made changes affect the social structure as a whole as well as the revision of developmental concepts/ideologies and what development means to us, so as to help us be better prepared to face major changes in the environment. As the teacher, it is our primary responsibility to understand our local issues and challenges and improve the skills to mitigate the situations. Major changes require generations of changing patterns and immense time and how education can pave a way through these changes is a major learning factor we as teachers have to understand and evolve.



SECOND SESSION – HANDS-ON PROJECT WITH TEACHERS GROUPS

Teachers were segregated into groups and each group was given a hypothesis and a project and were asked to design the methodology for implementing it. The hypothesis list given, were unique and chosen after careful deliberation considering the time availability and maximum learning to be achieved.

Teachers were asked to explain each of the following aspect of the project and brief information about how they would implement the project.

- Title
- Objective
- Methodology
- Resources
- Explanation
- Conclusion

The second session was divided into 3 phases –

- 1) Preparation of action plan
- 2) Implementation of the project
- 3) Presentation of the work done

PHASE 1 - PREPARATION OF ACTION PLAN

Group 1 - Hypothesis - Diversity of food gradually reduces from generation to generation

The group was unable to decipher the hypothesis. While planning a project, one has to imagine the project in its future tense. The teachers were unable to do so, and the methodology was stated in a past tense, indicating that teachers were correlating the present hypothesis to a previous experience. The hypothesis could be proved for where the statement is true or false, but it was noticed that teachers were distracted by the reasons for the statement itself.



Group 2 Hypothesis - Currency ban helped to get rid of black money

Group 2 failed to state the objective of the hypothesis. The purpose of forming the particular hypothesis is to understand the importance of trustworthy information sources. In this kind of hypothesis, it is very important to understand and identify the sources of information. Group also faced the similar challenge to identify the right source of information. The possible ways of presentation and flow of report were discussed during the planning of the project.



Group 3 Hypothesis - Women have more information about fruits and vegetables than men.

This kind of project idea requires having a strong rationale behind selecting the sample size as it would have much influence on project result along with timeline estimation, defining of tasks and responsibilities and individual capabilities for better project management, availability of resources etc.



Group 4 Hypothesis - Scarcity of drinking water is found to be more critical by women than men

Teachers failed to differentiate between hypothesis and project. Forming and asking the right question in an effort to get the relevant information is the most critical as well as the technique and skills of constructing the question, asking indirect questions and how to avoid pre-assumptions, perceptions, beliefs in the process of testing the hypothesis.



Group 5 Project Title – Prerequisites for a good living

The major learning was to know the difference between hypothesis and project and how to frame a hypothesis of any given project. In the process of forming the reference question, or drafting criteria for the project, it is important to avoid repetition, and keep in mind the target area/audience, etc. Teachers in the group faced the problem of sequencing questions and criteria/options.

Instructions for teachers while doing the project –

- Fair allocation of responsibility and tasks in the group.
- Preplanning requirements like available time, resources, place of visit, etc.
- Choosing an appropriate sample size.
- Resource material development
- Presentation methodology.

PHASE 3 – PRESENTATION OF PROJECTS

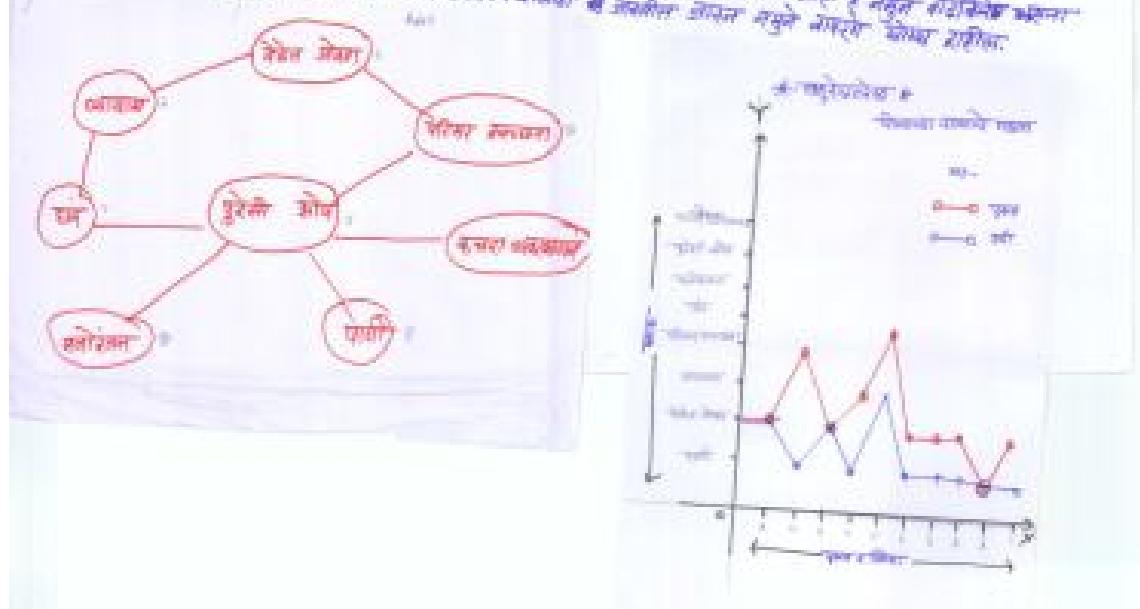
Group 1 Hypothesis - Scarcity of drinking water is found to be more critical by women than men

Teachers are able to do their presentation within the given time. Data and information collection was graphical represented. However, teachers were unable to draw the appropriate graphs as per the information.

The audience is to develop relevant and precise question and feedback.

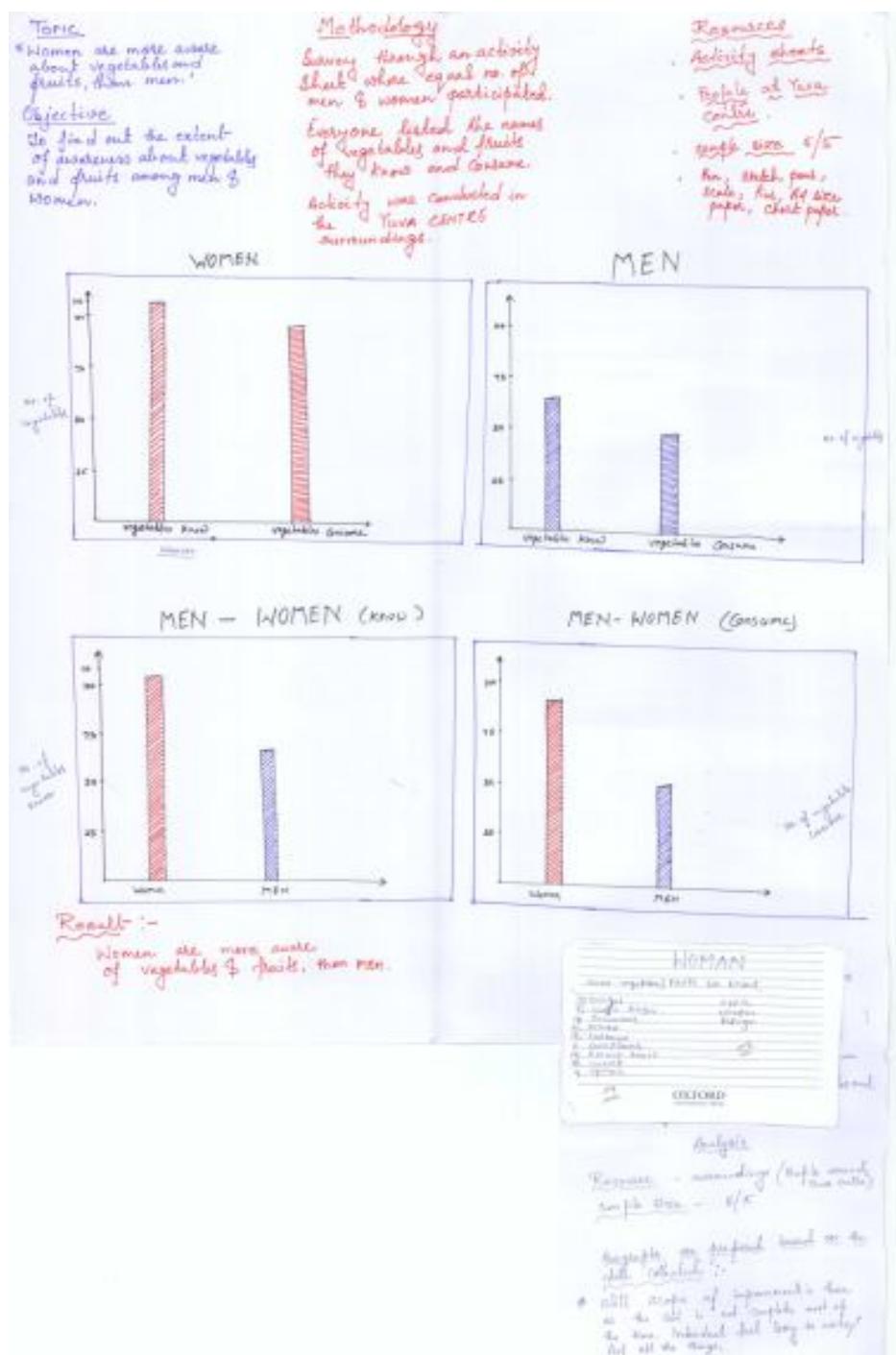
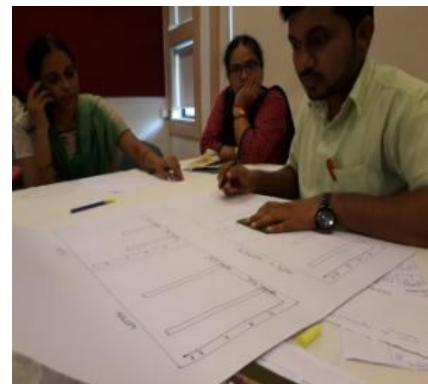


* पुरुषांपेक्षा स्त्रीयांना प्रियतर्या पाठ्याचा
कृत अधिक महत्वाचा ग्रटतो.



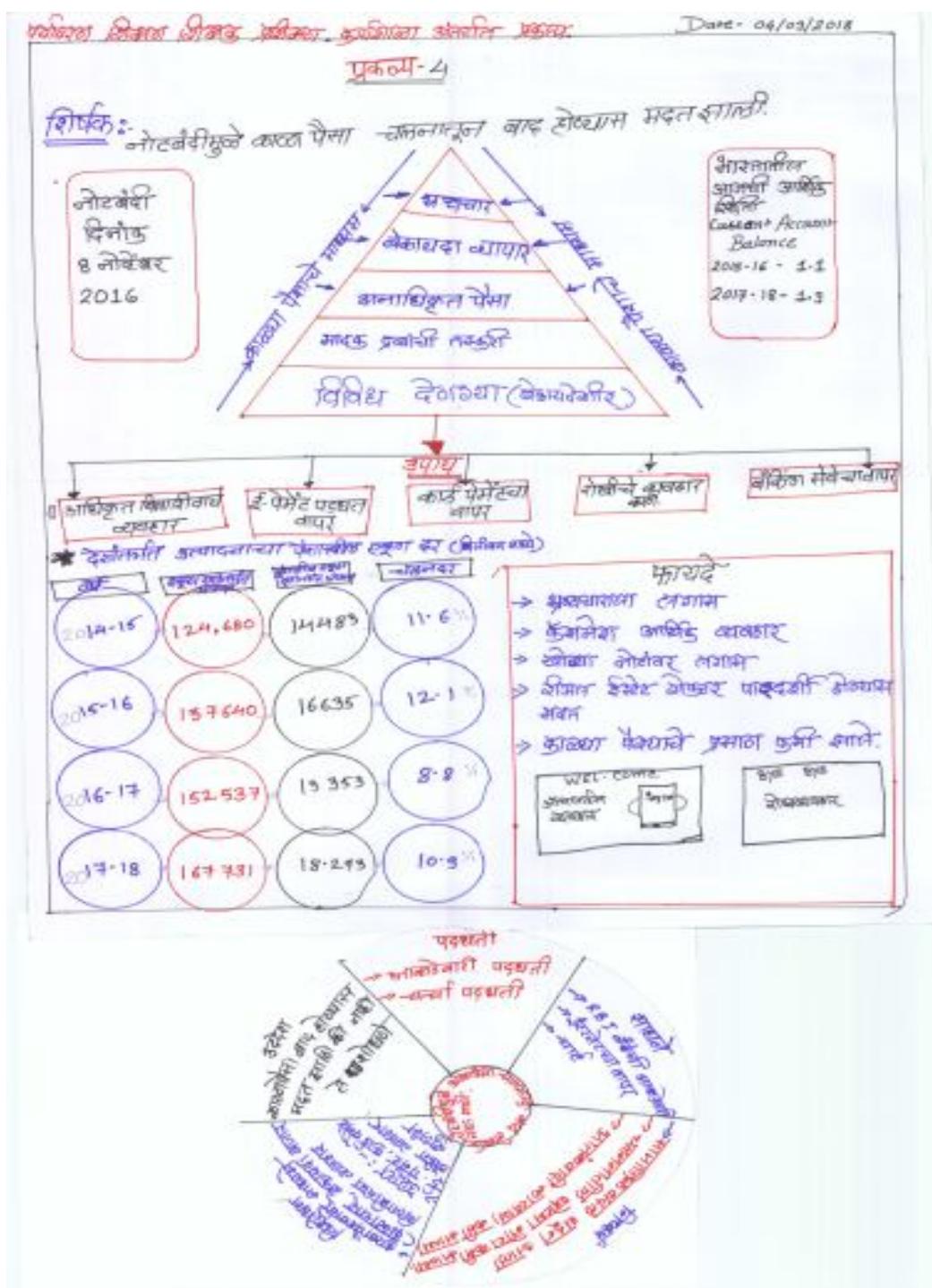
Group 2 Hypothesis - Women have more information about fruits and vegetables than men.

This group presented the information in a graphical form. Teachers took very less sample size. An appropriate sample size was discussed among teachers. The team management, distribution of responsibility, time allotment, the importance of group work and skill development aspects were discussed in the audience. The conclusion of hypothesis should be the test result of the hypothesis.



Group 3 Hypothesis -The diversity of food is gradually reducing generation by generation

In this particular project, we got to learn the importance of question, objection, and queries from another group. As there were plenty and N number of secondary sources are available for information then how difficult and how much it's important to find the right source of information. One of the objectives of project-based EE is to give trigger to learning and education process in amongst teacher and student.



Group 4 Hypothesis – Diversity of food gradually reduces from generation to generation

In the process of observation, inspection and interviewing people, it is important to make sure the interviewee is comfortable with the language used. Teachers were able to develop resource material for the project.



विषय/सीर्जना:- पिंडीनुसार खाव्यातील विविधता
उल्लेखन करी सोन जाते.

उद्देश्य:- पिंडीनुसार खाव्यातील विविधता अविळीकृत करी कोण नाही के अविळीकृत.

प्रेस्ट:- ① उल्लेखन प्रक्रम
 ② अविळीकृत प्रक्रम
 ③ अविळीकृत प्रक्रम

संरचना:- ① प्रुणी पिणी - A
 ② माघाची पिणी - B
 ③ नवीनी पिणी - C
 ④ गोड, गोड, गोड, गोड, गोड, गोड

पिणी	A	B	C
गोड	26	53	82
गोड	26	53	82

प्राप्ताचारी अवलोकन करिविकार निमित्त नोंदवा.
 ① असी नोंदवा करावा ते आवा ② अविळीकृत
 ③ शुरुआती के अवलोकन

निविधता
खाव्यातील विविधता अविळीकृत जाते.

आवारा
 • CENTRE FOR ENVIRONMENT EDUCATION •
 • प्रशिक्षक [नार्मदा जाती] •
 जा. भी. जाती जावी जा.

Group 5 Project Title - Prerequisites for a good living

The group made a good presentation and were clear about the title and methodology. The teachers acknowledged those who helped and proved the information. The rationale behind the project based learning and its introduction in the education were highlighted.

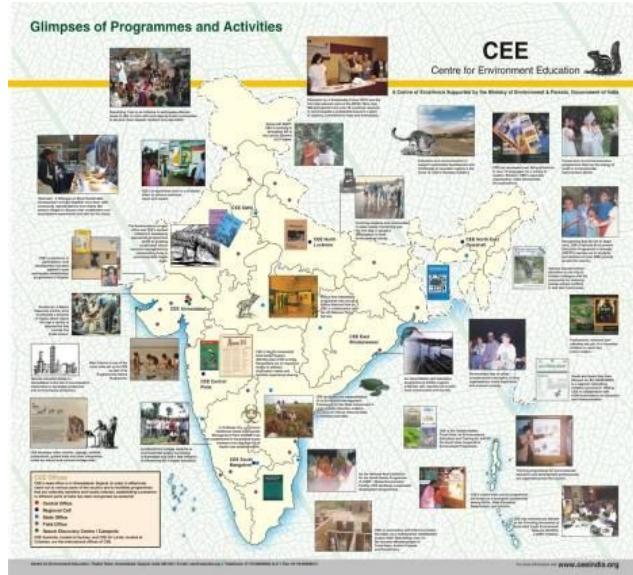


TEACHER TRAINING WORKSHOP: DAY II

SESSION 1: BRIEF ABOUT CEE AND PROJECT INTRODUCTION

The Centre for Environment Education (CEE) was established in 1984 as a Centre of Excellence supported by the Ministry of Environment and Forests, Government of India. CEE has a mandate to promote environmental awareness nationwide. CEE has its headquarters in Ahmedabad, and Regional Cells in Bangalore, Guwahati, Lucknow, Ahmedabad and Pune.

CEE is committed to ensuring that due recognition is given to the role of Environmental Education in the promotion of sustainable development. CEE develops innovative programmes and educational material, and builds capacity in the field of education and communication for sustainable development. It undertakes demonstration projects in education, communication and development that endorse attitudes, strategies and technologies that are environmentally sustainable.



SESSION 2: VIDEO MESSAGE BY MS. SANSKRITI MENON, PROGRAM DIRECTOR, CEE, PUNE AND CONVENOR & MEMBER OF BOARD STUDIES

The conservation, protection, and respect towards the Environment are in our culture, social, religious tradition and also our constitution states it as a duty of every individual. In The National Policy of Education, 1986 environment education was emphasized as one of the thrust areas. In response to the petition filed by M. C. Mehta in 1991 Supreme Court has given the directives to all education institutions and boards that EE has to be integrated at every level of education. In response to the directive, many education institutions, boards and states have

integrated EE in the curriculum. In 2003 Supreme Court issued a notice to all boards and education institutions asking to clarify the status of EE integration in education. NCERT adopted the constructive approach of EE while framing the National Curriculum Framework, NCF. Maharashtra State HSC and SSC board in 2005, decided to have EE with an Infusive approach for STD 1st to 8th and exclusive approach for 9th to 12th. The value addition to textbooks for EE was done through activities, projects, case studies, etc while giving emphasis on Project Based Learning.



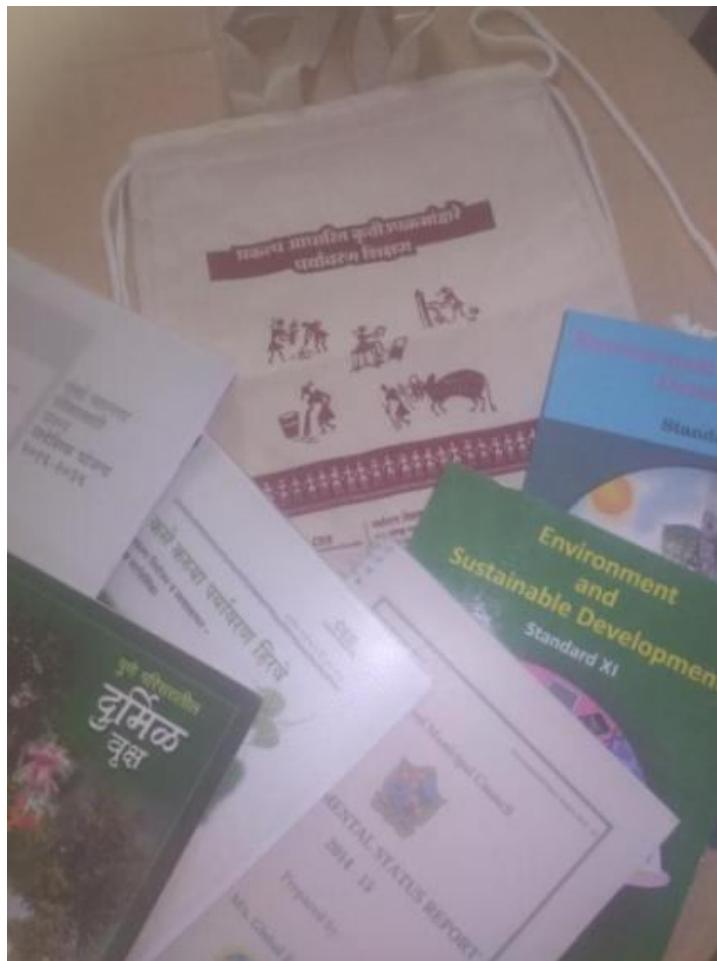
SESSION 3: HISTORY OF PANVEL AND CURRENT ENVIRONMENT STATUS

“Suvarnakshan” 1852-2002 by Panvel Municipal Council has given brief information on the history of Panvel. The Water management of Panvel, Tax introduction and its evaluation, the formation of local body and changes with time like, Ponds and its history, Religious and Cultural History, Population and History of Education in Panvel. And several such aspects have been introduced.

ESR 2015 includes findings like analysis of ambient air quality, noise level monitoring, Water quality, sewage characteristics, Soil samples and Survey of tree count, temperature and traffic count from respective sites.

SESSION 4: AN INTRODUCTION TO THE FACILITATORS KIT

- EVS Textbook of standard XI and XII
- Kase Karuya Paryavaran Hirve
- “Pune parisaratil durmil vruksh”
- MMRDA DP plan
- Panvel ESR plan
- Teachers Announcement
- Note pad, file, pen along with Bag



SESSION 5: DOABLE HYPOTHESIS OR PROJECT TITLES

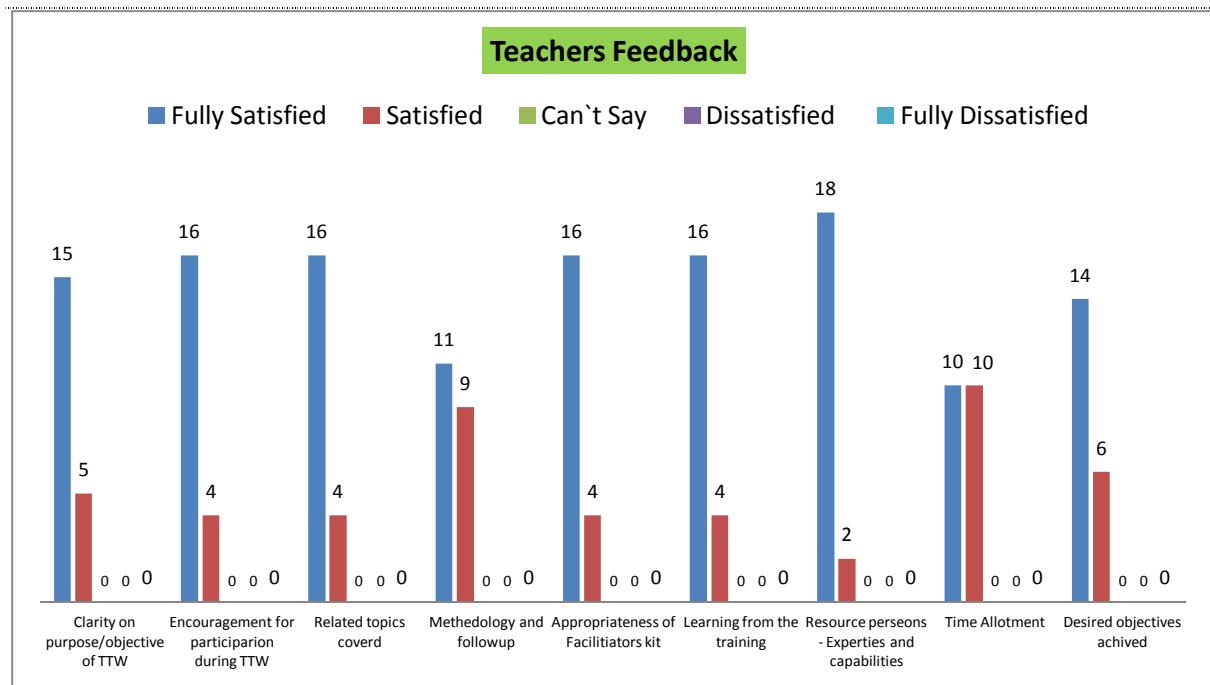
The objective of this session was to derive at thematic hypothesis and those which teachers would like to implement on campus. During the station round it was observed that most of the teachers were comfortable to write project title rather than hypothesis. Few teachers suggested valuable and unique doable project ideas and hypothesis. Most of the teachers faced challenges to form the hypothesis and to state the objective of the written project title.

SESSION 6: PROJECT OUTLINE IN DETAIL

The session intended for teachers and eventually students to be clear about what is expected to be done in each component of the project. Teachers need to have clarity about project timeline, future challenges, cost and resource management, and are also able to effectively monitor the project and student progress.

FEEDBACK

Teachers were asked to provide feedback on the sessions taken and the methodology adopted. Overall the teachers were satisfied with the content, though time allotment for tasks was stated to be less, as the workshop was revised for 2 days instead of a 3-day period.



ANNEXURE

1. TTW Training Detail
2. Letter of Approval from Panvel Block Education Officer
3. TTW Time Table
4. Teacher Questionnaire (TTW Need Assessment)
5. Registration and Attendance sheets
6. Copies of Presentation Poster
7. Copies of Thematic Project and Hypothesis
8. Copies of Project Outline

ANNEXURE 1: TEACHER TRAINING WORKSHOP DETAIL

Teacher Training Workshop Detail	
TTW Subject	Environment Education through Project Based Learning
Dates	4 th and 5 th September
Venue	Yuva Centre, Sector 7, Plot 23, Kharghar – 410210,
No. of Participant for Day I	23 Participants from 22 Junior Colleges
No. of Participant for Day II	20 Participants from 20 Junior Colleges
Facilitator	Mr. Satish Awate, Ms. Supriya Nishandar, Mr. Swapnil Newale, Mr. Kunal Jaiswal

ANNEXURE - 2 : LETTER OF APPROVAL FROM PANVEL BLOCK EDUCATION OFFICER

जा.क्र.पंसप/गशिअ/ २५६२ /२०१८
गटशिक्षणाधिकारी यांचे कार्यालय,
पं.स.पनवेल दि. २ /०८/२०१८.

प्रति,
प्राचार्य,

कनिष्ठ महाविद्यालय.

पनवेल विभाग, पनवेल

विषय :- पर्यावरण आणि शाश्वत विकास या अनिवार्य विषयाचे शिक्षक प्रशिक्षण.

संदर्भ :- १.शिक्षण संचालक, माध्यमिक व उच्च माध्यमिक शिक्षण संचनालय,
महाराष्ट्र राज्य,पुणे यांचे उच्च माध्य-२४३/१८३३२/पर्यावरण/१९/८३२५२
दि. १०/१०/२०१७ चे पत्र.

२.कार्यक्रम संचालक,पर्यावरण शिक्षण केंद्र,केंद्रीय कक्ष यांचे पत्र क्र.
CEE/CENT/MMREIS-०२/२०१८-१९ दि. २/०७/२०१८.

उपरोक्त संदर्भिय विषयान्वये आपणास कळविण्यात येते की, इ. ११वी आणि १२ वी मध्ये पर्यावरण आणि शाश्वत विकास हा अनिवार्य विषय आहे. सदर विषय शिकविण्यास येणाऱ्या व्यावहारीक अडचणी समजून घेऊन, सदर विषय शिकविण्याचा शिक्षकांचे प्रशिक्षण करण्याचे नियोजन केले आहे. पनवेल महानगरपालिकेतील स्थानिक पर्यावरणीय समस्यांबद्दल प्रकल्प आधारित शिक्षण (Project Based Learning) या माध्यमातून करण्यासाठी संबंधित शिक्षकांच्या क्षमता विकसनाचा प्रयत्न या प्रशिक्षणाच्या माध्यमातून करण्यात येणार आहे.

आपल्या महाविद्यालयातील संबंधित पर्यावरण शिक्षकांना तीन दिवसीय प्रशिक्षणासाठी सहभाग नोंदवून सहकार्य करावे. प्रशिक्षणासाठी प्रस्तावित कार्यक्रम पत्रिका सोबत जोडली आहे. तरी संबंधित कार्यालयीन पूर्तता करून संबंधित पर्यावरण शिक्षकांना प्रशिक्षणासाठी निर्गमित करावे.

प्रशिक्षण दिनांक :- ४/०९/२०१८ ते ६/०९/२०१८.

प्रशिक्षण स्थळ :- युवा सेंटर,प्लॉट नं.२३, सेकटर-७, नवी मुंबई, खारघर, पनवेल.

वेळ :- सकाळी १०.०० ते संध्या. ५.३०.

४४४/१८
गटशिक्षणाधिकारी
पंचायत समिती पनवेल

ANNEXURE - 3 : TTW TIME TABLE

**प्रकल्प आधारित कृती उपक्रमाद्वारे पर्यावरण शिक्षण
शिक्षक प्रशिक्षण कार्यशाळा वेळापत्रक**

वेळ	विषय	साधन व्यक्ति
०४ सप्टेंबर, २०१८ (पहिला दिवस)		
१० ते १०:३०	नोंदणी	सुप्रिया निशाणदार
१०:३० ते ११:००	प्रकल्प परिचय, शिक्षक परिचय आणि प्रशिक्षणातील आपले नियम	कुणाल जैस्वाल
११ ते ११:१५	चहापान	
११:१५ ते १२:३०	प्रकल्प आधारित शिक्षण व त्या मागील शासनाचा उद्घेश	सतीश अवटे
१२:३० ते १	गट विभागणी आणि प्रकल्प करण्याची पूर्व तयारी	
१ ते २	जेवण	
२ ते ४	प्रकल्प करण्यासाठीचा वेळ	सतीश अवटे
४:१५ ते ५:३०	प्रकल्प मुल्यांकन	
०५ सप्टेंबर २०१८ (दुसरा दिवस)		
१० ते १०:३०	पहिल्या दिवशीचा आढावा	सुप्रिया निशाणदार
१०:३० ते १०:४५	पर्यावरण शिक्षण - संस्कृती मेनन चित्रफित संदेश	कुणाल जैस्वाल
१०:४५ ते ११:३०	पनवेलचा इतिहास, MMRDA मसुदा, पर्यावरण अहवाल सादरीकरण	कुणाल जैस्वाल
११:३० ते ११:४५	चहापान	
११:४५ ते १	गृहीतक बांधणी उपक्रम	सुप्रिया निशाणदार / स्वप्नील नेवाळे
१ ते २	जेवण	
२ ते २:३०	एनार्जाएङ्गर खेळ आणि शिक्षकांसाठी पुस्तक संसाधनांचा परिचय	स्वप्नील नेवाळे
२:३० ते ३:३०	वार्षिक प्रकल्प नियोजन	कुणाल जैस्वाल
३:३० ते ४:००	चहापान	
४:०० ते ५	प्रवास खर्च / शिक्षकांचे अभिप्राय	सुप्रिया निशाणदार

ANNEXURE - 4 : TEACHER QUESTIONNAIRE (TTW NEED ASSESSMENT)

शिक्षकांसाठी प्रश्नावली

कनिष्ठ महाविद्यालयाचे नाव -

शिक्षकाचे नाव -

संपर्क क्र. -

मुख्य विषय -

१) पर्यावरण विषयाची जवाबदारी मिळाल्या पासून आपली पर्यावरण शिक्षणासंबंधी कार्यशाळा किंव्हा प्रशिक्षण झाले आहे का?

- होय झाले आहे – केंव्हा
- नाही झाले

२) मागील वर्षी विद्यार्थ्यांना देण्यात आलेल्या प्रकल्पाची यादी उपलब्ध आहे.

उपलब्ध आहे / नाही
उपलब्ध असल्यास एक प्रत द्यावी हि विनंती - प्रत मिळाली / मिळाली नाही

मागील काही वर्षात विद्यार्थ्यांनी केलेल्या प्रकल्पापैकी कुठले प्रकल्प आपल्याला आवडले होते आणि का? त्या पैकी काही प्रकल्पां बदल आम्हाला अधिक माहिती सांगाल का?

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३) मागील किंवा चालू शैक्षणिक वर्षात विद्यार्थ्यांना दिलेल्या प्रकल्पाचे विषय आपण करसे निवडले आहेत व त्यांचे स्रोत काय आहे?

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सांगता आले नसल्यास पर्याय

- o पुस्तकामधील प्रकल्प दिली
- o INTERNET वरून शोधून दिली
- o विद्यार्थ्यांनी त्यांच्या मानाने केली
- o प्रकल्प वहीतून दिली
- o शिक्षकांनी स्वतः ठरवली

४) विद्यार्थ्यांनी प्रकल्प करसे केले पाहिजे आणि त्यांचे दास्ताऐवजीकारण, सादरीकरण करावे या अनुषंगाने आपण काही सूचना देता का?

- होय नाही
- असल्यास खालील प्रमाणे

- ५) विद्यार्थ्यांचे अवलोकन हे प्रकल्पाच्या माध्यमातून व्हावे या मागील शासनाची नेमकी भूमिका काय असावी असे तुम्हाला वाटते? शासनाची भूमिका
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प्रकल्प आधारित शिक्षणामध्ये hypothesis बांधण्याचा एक महत्वपूर्ण उद्देश पूर्ण होता तो पूर्ण होत असल्याचे आपणास वाटते का? होय? उदा: देऊन सांगा.

नाही? मागील करणे

- ६) जेंव्हा विद्यार्थी प्रकल्प सदर करतात तेंव्हा साधारणतः प्रत्येक विद्यार्थ्याला प्रकल्पा साठी अंदाजे किती खर्च येत असेल असे आपणास वाटते?
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- ७) सोबत प्रकल्पाची यादी जोडलेली आहे त्यापैकी कोणते प्रकल्प आपल्याला विद्यार्थ्यांना सोबत करायला आवडेल हे कृपया चिन्हित करा..
- ८) मुंबई महानगरप्रदेशाचा नकाशा दाखवून पर्यावरण संबंधी कुठल्या अडचणी व समस्या आहे?

सांगता आले नसल्यास

काही उदा: दिल्यानंतर

पनवेलसाठी?

वरील पैकी कुठले पर्यावरणीय प्रश्न विद्यार्थ्यांच्या प्रकल्पांच्या माध्यमातून चांगल्या प्रकारे समजून घेऊन त्यासमस्या यशस्वी पद्धतीने सोडवण्यासाठी प्रयत्नशील ठरू असे आपणास वाटते.

होय उदा: देऊन सांगा.....
नाही कारण

- ९) आपल्याला कधी बाह्य परीक्षक म्हणून इतर कनिष्ठ महाविद्यालयामध्ये जाण्याची संधी मिळाली असल्यास आपला अनुभव थोडक्यात सांगता येयील का?
- १०) आम्ही मागील काही वर्षातील गुणवत्तापूर्ण प्रकल्पांना प्रोत्साहित करू इच्छित आहोत आपण काही गुणवत्तापूर्ण प्रकल्पाची प्रत किंहा विद्यार्थ्यांचा संपर्क देऊ शकाल का?
- ११) आपल्या संपर्कातील पर्यावरण शिक्षणामधील तज्ज्ञ किंव्हा मास्तर ट्रेनर असल्यास त्यांचा संपर्क मिळू शकेल काय?
- १२) कनिष्ठ महाविद्यालयाकडून मिळालेल्या प्रकल्पाबद्दल निरीक्षण.