

BEST PRACTICES OF THE INSTITUTION

BEST PRACTICE ONE

1. Title of the Practice:

Soil and Water Analysis as an Impact-Oriented Learning Initiative

2. Objectives of the Practice (Goal):

The existing curriculum for the Science courses suffers from the limitations of not having lab-based experiments extendable for small scale projects and research on current topics like environmental pollution and more specifically water and soil pollution. Added to this, are the problems of skill deficiency among the students and the unavailability of proper resources in host institutions. The current practice addresses the following issues:

- Provide the infrastructure and develop skills among the students.
- Provide hands-on investigation and analysis of water and soil quality parameters.
- Serve as an extension of the School Outreach Programs and bridge the knowledge gap between high schools and institutes of higher learning.

3. The Context

As per government records of the last five years, water-borne diseases have caused 10,738 deaths in India. The Darjeeling Hill region is no exception and water-borne diseases have been on the rise. Major waterborne diseases plaguing the region are cholera, diarrhoea, dysentery, Enteric Fever, Typhoid and Viral Hepatitis (A & E). Less than 50% percent of the district has access to portable water and sanitation (GoI census data). In urban areas, public water supply which draws its source from the Senchel lakes is limited in terms of quantity and quality (no treatment). Alternatively the entire populace depends on water supplied by tankers which collect water from natural springs. In rural areas like the villages and the tea estates people mostly depend on streams and natural springs. These sources are exposed to contamination by domestic effluence and the run-off from tea gardens during the rainy season which have indiscriminately used pesticides and inorganic fertilizers. Adequate knowledge about the portability of water from this region is not only desirable but a must. In addition to this the farmers around Darjeeling Hills have been experiencing the impacts of soil and water degradation with a downslide in quality of farm produce like oranges and cardamom, among others, which warrant immediate attention. Keeping in mind these challenges, the institution took the initiative to set up a laboratory for Water and Soil Analysis.

4. The Practice

The College set up the Soil and Water Analysis Laboratory in 2014 with the initiative of the Department of Chemistry. It is an in-house water and soil quality testing facility, sponsored wholly by the institution. The aim is to create the next generation of water and soil analysts with a practical outlook to help provide practical solutions to some of the real environmental problems viz., water pollution and soil pollution. The hands-on investigation and analysis of Water Quality Parameters is a part of Active Learning. The strategy entails active involvement of the students in performing the tests themselves while thinking about it. They actively communicate with other fellow students taking part in the activity about what they are learning. They are asked to write reflectively about it, relate their findings to previous studies and report their findings.

The Lab has been designed to address students training as well as research activities. It is an activity based learning initiative which provides training and hands on experience through:

- a workshop session for the students on the basic concepts of water and soil pollution and waterborne diseases.
- a detailed instruction of the various water quality parameters that needs to be checked. Hand-outs of standard operating procedures are distributed to the participants.
- hands on training of the various tests are conducted and specific guidelines for the handling of instruments given

5. Evidence of Success

Immediately after the setting up of the lab, it was used for carrying out the physio-chemical studies of water related to various research projects, by the teachers. Their results have been well-documented and presented in a UGC sponsored National Seminar held in 2015 (B. Rai & U. Rai, Assessment of Physiochemical Characteristics of Major Sources of Drinking Water in Darjeeling) and also in the form of an edited chapter in a book published by the College: Climate Change, Impact and Adaptations, 2017 (K. Pradhan, Hydrocarbon pollution in Water: Schiff Base Metal Complex for Its Chemical Remediation). The facility has also helped students from different schools to do outstandingly well in science exhibitions and fairs. Recently in 2019, students from a school from a remote area, Rabindranath High School, Soureni Bazaar were adjudged second best in the State level science exhibition at Kolkata. The students had availed the use of the facility at St. Joseph's College for their project preparation and sample analysis. St. Robert's School and St. Michael's School in Darjeeling had been chosen to represent in the State-level competitions, in 2018 and the students along with their supervisor had been provided free access of the College resources.

6. Problems encountered and resources required:

Since the school outreach program had to be done over and above the regular class duties, coordinating with the school supervisor and arranging to accommodate them in the regular College timings was a big hurdle. Since the analysis requires a series of tests that need to be performed, sometimes repeatedly, it is an expensive affair as the costs of chemicals have gone up. Instrument maintenance is yet another hurdle. Abrupt power failures are a big cause of concern, rendering the investigation useless at times. Frequent power cut has damaged the UV spectrophotometer.

The resources required are the following:

- 1.Apparatus set up for titration
- 2.Chemicals for various tests
- 3.Distilled water unit
- 4.pH Meter
- 5.Conductivity Meter
- 6.TDS Meter
- 7.BOD Incubator
- 8.Flame photometer
- 9.UV spectrophotometer

The Soil and Water Analysis as an Impact-Oriented Learning Initiative has been a fruitful endeavour as this is the only laboratory in Darjeeling Hills working in this direction; and is expected to contribute significantly to environmental awareness and regeneration in the region. Furthermore, the initiative is expected to contribute towards alternative livelihood planning for the farmers in the long run with the sustained awareness and planning towards soil and water testing and analysis through this initiative.

BEST PRACTICE TWO

1. TITLE OF THE PRACTICE

Conscientization Towards Creation of Humane and Just Society

2. OBJECTIVES OF THE PRACTICE

St Joseph's College has always been a community College in the sense that it believes that education must serve the community and therein lays its relevance. One of the aims of the College has been to prepare men and women of competence, commitment, conscience and compassion. Within the limitations of the affiliating University fixed curriculum, the College has innovative measures to make its students and its 'education' to be responsible to the society and address its concerns. This led to the formation of Youth Against Trafficking (YAT), on 15th June, 2016 with the objective to spread awareness amongst the students and the community at large about the social evils of human trafficking, instil vigilance, sensitize vis-à-vis the possible victims and try to curb its increase.

3. THE CONTEXT

Darjeeling has grown exponentially from a colonial hill station to a post-independence hill town. With rapid urbanization has come the ever-widening gap between the two economic extremes of the society. This urbanization as usual has been accompanied by a steady rise in crime. Crime has risen from economic marginalization and against the economically marginalized. It is perhaps pertinent to add here what the former President of the republic Dr. A.P.J. Kalam has rightly said that 'poverty is the greatest crime'. Preying upon the naiveté and economic vulnerability of the prospective victims, human traffickers have been indulging in this modern form of slavery. The victims are the young, rural and urban, inexperienced and gullible, looking for an escape from the morass of poverty as also those looking for quick money. This has led Darjeeling to become a 'source area' for human trafficking. The challenges have been the usual, primarily the acceptance of the prevalence of such a social evil in society, its growing menace, analyze the reasons for the origin and growth, and the will to curb and uproot it.

4. THE PRACTICE

Given its sensitive nature, its complex moral and economic strands the entire issue had to be handled accordingly. The entire exercise was to be two fold, to spread awareness and then create the will to act on it. In this mission the College and its YAT team has collaborated with Mankind In Action for Rural Growth (MARG), a renowned NGO working in the field of combating human trafficking and child sexual abuse. Thus taking a cue from the founder of MARG that 'awareness is the first step towards combating', YAT has been regularly organizing a slew of awareness programmes both within the campus as also outside in society in collaboration with various stakeholders both governmental as well as non-governmental. YAT members in the process have been organizing and participating in rallies, walkathons, marathons, public relation campaigns, performative story telling, debates, quiz programmes, graffiti painting, and special talks to highlight this menace. Every year special talks are held for the students and the general public on human trafficking and child sexual abuse in collaboration with MARG.

Realizing that the will to combat the menace very often comes from the strength of the laws of the land, YAT regularly organizes sensitization programmes on Prevention of Atrocities (POA) and Protection of Civil Rights (PCR) Acts, Trafficking of Persons (Prevention, Protection and Rehabilitation) Act and Protection of Children from Sexual Offences Act

among others. They also hold regularly drives to inculcate amongst students an enduring respect for fellow human beings.

The YAT members have also been fervently sensitizing stakeholders like governmental agencies about the necessary infrastructure needed for dealing with the agents and the victims of human trafficking. They have been raising awareness for the need of Anti Human Trafficking Units, the establishment of Juvenile Justice Board, Child Welfare Committees and government run 'shelter homes' in the region. The members being aware of the economic factor behind human trafficking and the power of education and literacy to combat it have regularly participated in as well as carried out surveys amongst the marginalized sections to provide student scholarships. Taking a proactive stance they have also taken the awareness drives to the school students.

All in all YAT has secured a unique place. It has exemplified the transformative role of student and youth in taking the front row in spreading awareness and creating a strong will in combating a social evil like human trafficking. It has given new meaning to 'youth with a purpose' upstaging the clichéd tag of 'rebel without a cause' by channelizing youth power to constructive and reformative purposes. They have through their actions breathed new life to the social relevance of education. By their activities they have secured their role as important stake holders in society building as also nation building, that too admirably.

5. EVIDENCE OF SUCCESS

The YAT programme has achieved considerable success in their bid to spread and sustain the awareness against human trafficking. Since its inception in 2016 there have been more collaborative efforts with the NGO MARG and the frequency of various awareness drives have considerably risen. Taking a cue from YAT of St Joseph's College, other colleges and schools have started to participate in such drives as also organize them. Another pointer of their effectiveness has been the fact that various governmental organizations like Darjeeling Police and the judiciary have taken notice of them, have started to organize such awareness drives themselves where YAT members feature as invitee participants. The College has also been collaborating with the Darjeeling Police and recently created twelve (12) PSA films on social issues. They were viewed by the students, public and high ranking police officers including the DG on 11th November, 2019. These short films, the police will be using in their various campaigns. The public too now admit that trafficking is present in the region, and that's its growing menace has to be combated. MARG has also reported that as of now Goa which used to be the 'destination' for humans trafficked from Darjeeling has not registered any new rescues of people from Darjeeling. It would not be pompous perhaps to add that YAT too has contributed to that success even if it be in a minor way. The results indicate not only the success of YAT but also of the fact that given the opportunity and the space, students can become effective agents of change.

6. PROBLEMS ENCOUNTERED AND RESOURCES REQUIRED

YAT programme encountered many problems which were natural hence expected. They were problems of identifying the menace of trafficking, accepting it and creating a general will to combat it. There were also problems of generating interest and sustaining it. The other problem was the limitation of YAT as a pressure group as ultimately the governmental organizations too would have to take up their due roles and as usual enthusiasm in these quarters is always sluggish. It has also been found that resources and infrastructure in these areas are much to be desired. What has come as sustenance here is the sheer determination

and doggedness that is also one of the characteristics of youth. The institution has also tried to match with ever present encouragement and logistical support.

7. NOTES

YAT programme has become a successful force of social action and it is in the better interest of the society that it be replicated in school and colleges. It has not only the potential to channelize their energy but also make them socially responsible as it gives them the sense of being stakeholders in society building. Early initiation into such social action programmes, collaborations with NGO's could also pave the way for activism in later life. While initiating YAT in other institutions caution should be practiced in absolute replication as the programme would be more beneficial if it is tailored to be institution/place/situation specific.