



BEST PRACTICES

KKTM GOVT. COLLEGE, PULLUT, KERALA

Title of the Practice – Snehasparsham: the Touch of Love**Goal:**

An outreach program of the institution to facilitate an interface between the college and the community. The program aims to provide the community the services of the institution amalgamating the facilities and the expertise available with the institute. This Best Practice of the college is implemented under the direction of the National Service Scheme (NSS) in association with all the Departments of the college and various clubs like Nature club, Bhoomitra club and the College Students Union. IQAC of the college facilitates and supports the different activities under the Snehasparsham and ensure the best services of the college to the community.

The Context:

The prime obligation of any educational institution is to cater to the academic needs of its key stakeholder-the students. Apart from this primary duty, the institution owes its responsibility to other stakeholders majority of which are the general public which comprises the community surrounding the college. This is where Government institutions like our college can set the best examples. Through the extension activities of the college, the institute is providing its services to the society thereby realizing the actual Vision and Mission of the College- Enlightenment of the society and empowerment for a worthy global citizenship. Ultimate goal of any educational institution is to mould a sensible, educated and socially responsible citizen. Snehasparsham is a venture to inculcate social responsibility in students and also open up opportunities to overcome the regional socio-economic and educational backwardness.

The Practice:

Snehasparsham- includes many activities which are intended to be beneficial to the society, which in turn imparts life lessons to students to develop into responsible citizens who are able to respect the rights of others, who believes in gender equality, who can show environmental responsibility and overall empathy and reverence to fellow beings. Special activities that give emphasis on women empowerment and self- employment are carefully designed under this project. This gives thrust to getting to know our tradition and history. Regular campus cleaning, Reusing Plastic Waste, popularizing Triple R (Reduce-Reuse-Recycle), greening of the campus, celebrating various days related to environment etc. are

some of the best practices relating to this. Various activities under taken towards this venture are briefed.

- ❖ **Compassion to fellow being- Flood relief activities:** When the entire state of Kerala stood still during the massive flood which hit the state in August 2018, the whole fraternity of the college as a team including students, teachers, PTA and all staff members worked hard for extending a helping hand in all possible ways to the suffering community. NSS volunteers of KKTm Govt. College were the first to raise to the occasion. They donated food supplies to the rescue and relief camp started in the college campus.
- ❖ **Home to the destitute:** The college became home to the flood hit masses of Kodungallur. The campus worked as relief centre. After the flood disaster which spread havoc throughout Kerala, the students and staff especially the NSS units extended their services to the people. They helped in preparation and distribution of food in the relief camp. The campus became a collection centre for relief materials. The staff and students not only donated lavishly but also rendered their services in collecting, sorting and distributing relief materials to the needy. They worked day in and day out throughout the entire flood days.
- ❖ **Rebuild Kerala:** The college extended their services to the society and stood with the Government in all the initiatives to rebuild Kerala after the flood. Staff and students generously donated money to the relief funds. **All staff members donated salary** of two days and raised a commendable amount of money for Rebuild Kerala initiative. The amount raised was distributed to those who lost their homes during the flood.
 - ◆ The NSS volunteers raised an amount of Rs. 75,000/- towards rebuild Kerala and distributed the amount to two families from Poyya Grama Panchayath in presence of the Panchayath President.
 - ◆ The alumni of the college also contributed to the rehabilitation activities after the flood. They donated clothes and food items to the victims.
 - ◆ Staff and NSS volunteers actively participated in **cleaning of relief camps** including KKTm campus. NSS volunteers happily rendered their services for cleaning up yet another relief camp, St. Thomas UP School, Thuruthoor to make it ready for the academic activities post flood.

- ♦ **Cleaning of houses** flooded with mud and flood related debris as well as public spaces torn apart by the flood waters in regions of Thrissur district including Mala, Puttehenvelikkara and Thuruthoor, were taken up by the NSS volunteers of the college. They worked as surveyors in association with local self-governing bodies of Government of Kerala to assess the extent of damage caused by the flood.
 - ♦ NSS volunteers under the leadership of the program officers joined hands with the HORNBILL Association, an NGO, for rehabilitation activities post flood in Kerala.
 - ♦ The Department of Chemistry in association with Mathrubhumi Geo Blue took part in **Jalamithram 2019**- a Social survey on the purity of water in post flood wells of Thrissur. Around 30 students took part in this survey.
 - ♦ Department of Botany took initiative to organize the **Mukhamukham- Agroclinic, Scientist - farmer interaction program** of Kerala Agricultural University at the KKTM Govt. College campus to facilitate the farmers of Kodungallur an opportunity to assess the difficulties encountered in farming sector post flood condition. The Agro conclave was a success and provided a window for the farmers to have a personal discussion with the experts regarding the issues which rose after the flood and to seek probable solutions. The department also made facility for the farmers to have their fields visited and soil checked free of cost by the experts during the Agro conclave.
- ❖ **Hrudayapoorvam- Food package distribution** is a charitable programme regularly done by the students union. They collect food packets and distribute it to the needy and poor, especially the poor patients in government hospital in Kodungallur.
- ❖ **Love for Nature- Environment responsibility:** to inculcate environment responsibility among the students and spread awareness about conserving nature for sustainable development various activities are conducted throughout the year.
- ⇒ NSS led the **World Environment Day celebration** in the college on June 5, 2018. With the collaboration of Kerala Forest Department and Department of Botany, plants were distributed to students and trees were planted in the campus as part of greening of the campus. Tree saplings were also distributed among staff and interested public.

- ⇒ Department of Botany organized an awareness exhibition and competition on **Reusing of Plastic Waste** as part of the campaign for popularizing the “**Triple R**” -**Reduce-Recycle-Reuse concept**.
- ⇒ The college union conducted various programs in relation to World Environment Day which included poetry competition, awareness classes, quiz etc.
- ⇒ NSS Volunteers took part in the awareness rally organized at the district level as part of the World Environment Day celebrations.
- ⇒ The **Biodiversity Garden** established on the occasion of Gandhi Jayanthi (October 2nd) previous year, has been expanded and maintained by the NSS Volunteers as a living campaign for reminding the need for biodiversity conservation for environmental sustainability. The garden hosts many flowering plants and plants of medicinal importance.
- ⇒ IQAC, Department of Botany and Department of Zoology in association with Kerala State Council for Science, Technology and Environment (KSCSTE) celebrated **World Wet Land Day** on February 7, 2019.
- ⇒ An awareness lecture on “**Mangrove Conservation for Climate Change Mitigation**” by Ms. Preethy CM, School of Marine Science, CUSAT was conducted on the day. Painting competition for school children and Power point competition for college students on the theme “Wetlands and Climate Change” was organized during the occasion.
- ⇒ A **field workshop** was conducted as part of the venture where the staff and students along with the resource person and PTA members visited the mangrove vegetation associated with KKTM Govt. College at Chappara. The team studied the vegetation and found that the mangrove patch vividly bears the signs of unscrupulous human intervention. Students collected specimens and photographs for documentation. A detailed discussion was done following the field visit. A report was made with recommendations from the resource person and has been communicated to the authorities to take up immediate actions for preserving and conserving the Mangrove ecosystem.
- ⇒ Print media made reports on the **plight of mangrove vegetation** following the World Wet Land Day Celebration-2019 field visit reports from KKTM Govt.

College. Through their report they have called for the attention of the authorities for immediate action to preserve mangrove ecosystem especially those associated with the college and interdict further encroachment and destruction of mangroves.

⇒ The workshop and the reports and recommendation for the conservation of Wetland Ecosystem especially the Mangroves is of high significance in the wake of the recent natural calamities which has been creating havoc in the state in the form of cyclones and flood. The venture was an attempt at educating the next generation-the students to be ambassadors for spreading the message for biodiversity conservation for a sustainable future.

⇒ Post Flood, the Department of Botany took initiative to address one of the most calamitous issues- **waste management**. Flood created lots of waste materials including damaged clothes. Under the guidance and leadership of Dr. Nesy EA, Vice Principal and Head of Department of Botany, the waste clothes were transformed into beautiful hand-crafted flowerpots. Yet another venture to popularize the **Best of the Waste** notion. The hand-crafted flowerpots were exhibited during the “Marvels of Nature”- Lecture workshop cum Exhibition on 11 January, 2019. These flowerpots are being used by the Department to gift plants to visitors, guests, resource persons and winners as part of the **Gift a Plant Gift a Life** project for spreading the importance of plants-a **Green Initiative**

- ❖ **AIDS awareness** lecture is conducted by NSS in association with various organizations.
- ❖ Cleaning of campus and nearby places was done during the month of October, 2018 by NSS volunteers as part of Gandhi Jayanthi celebrations.
- ❖ Women’s cell takes initiative to conduct **health awareness campaign** especially those relating to women and children.
- ❖ **ABHAYAM- Home for the Homeless**, the initiative to provide home for the needy especially the most desirable ones from among our students, is a commendable lead of NSS of the college. NSS handed over the keys to the house for one of our students of Department of History. The construction of same was begun during 2017-18. Apart from this, financial support was given to an NSS volunteer of the college for rebuilding the house lost during the massive flood in Kerala.

- ❖ Inculcating moral values and good habits among students is also a part of Snehasparsham. **Vimukthi-Anti Drug Activity** is one such venture which is a drug eradication program conducted by the Excise Department of the State. NSS volunteers actively participate in the various program connected with this.
- ❖ Community services are extended in form of **Entry to Service**-a coaching program to face various competitive exams, **coaching for National Eligibility Test** etc are provided free of cost to students and public.
- ❖ **Student counselling** for both academic and non-academic purposes are undertaken by the faculty as per the need for not only the students of the college but also to students of other institutions.
- ❖ **Palliative Care** is yet another societal obligation activity taken up on a regular basis by NSS. Volunteers participated in various programs like rallies, seminars etc. in connection with Palliative care.
- ❖ **Sports training:** Tennis coaching to school students of the neighborhood of the college taken up by the Department of Physical Education in collaboration with the SkyHigh Tennis Academy, (Irinjalakuda) is continued during weekends and on holidays. AITA certified coach and the faculty of our college is in charge of the training program.
- ❖ **Women empowerment and skill development for self-employment** is yet another mandate of Snehasparsham. Trainings are conducted in various topics which would enable for starting of entrepreneurship and self-sustainability.
 - Under the guidance of Department of Chemistry a training in soap and detergent making was conducted on November 28, 2018.
 - A lecture was conducted on 11 January, 2019 on the topic “Splendid Opportunities In Agripreneurship: Pros And Cons”, to motivate the youngsters towards seeking self-employment and to acquaint them with the possibilities of entrepreneurship with agri horticulture related subjects.
 - Entrepreneurship Club (ED Club) of the college hosted a lecture on “Entrepreneurship Skills”, by the National Award Winner for NSS, Dr. Soni TL on January 16, 2019. To give a first-hand experience on the possibilities of taking up entrepreneurship, the ED club members were taken on an industrial visit to various enterprises like the Meat Technology Unit, Dairy Plant, Poultry

and Duck Farm as well as Agricultural Nursery of Kerala Agriculture University, Thrissur.

Evidence of Success:

The activities included under Snehasparsham has been successful in inculcating in the minds of the students a sense of ownership about the institution and the environment. They are ambassadors of environment education and spread the knowledge and information to the masses on the significance of biodiversity conservation. The opportunities that are given to them to learn leadership qualities and become sensible compassionate citizens are reflected in their behaviour during the most tiring times faced by the State- the Flood. The infrastructure and expertise available with the institution is put to use in the best manner possible for the service of the humanity and has been well appreciated for its attempts at building a strong and empathetic relationship with the society. Alongside being a centre of academic hub striving to educationally empower the students of the neighbourhood, the institution also relentless endeavour in strengthening the socio economic status of the community by training them for self-employment and entrepreneurship. Many students take up entrepreneurial ventures after their course which in itself is evidence of success of these activities.

Problems Encountered and Resources Required:

- First and the foremost problem encountered in executing these activities is the scarcity of funds. The financial constraints of the Government institution gets in the way and many a times prevents from being able to fully utilize the expertise in the service of community.
- If there is a provision made to sanction special funds for such extension activities much more could be achieved.
- The introduction of semester system has made it difficult to find the extra time needed for non-academic activities.

Notes:

Government institutions like our college could be a centre of excellence striving to empower the citizens if given appropriate financial support and administrative self-sufficiency.

Title of the Practice – Promoting Science Education**Goal:**

As part of the Strategic Development Plan of the College, “**Promoting Science Education**” has been identified as one of the Best Practices of the institution. Headed by the Department of Botany at KTTM this is an ongoing project collectively executed by the Science departments of the college. The project envisages to Popularize Science among the students and the public. It has been designed with an aim to motivate students to take up Science education and select science as a choice for career. For the success of the project various activities like Interactive lectures, hands-on practical training, motivational workshops, conferences/ seminars and symposia, industrial/research centre visits, vegetation study and field trips/workshops are arranged on a regular basis. Students are given ample opportunities to be a part of these conferences/ seminars and symposia organized by various science departments with external funding (DCE, UGC, KSCSTE etc.). This is done with an intent to provide a chance to students to better understand the progress in the field of science and technology. Apart from this, these youngsters also get opportunities to converse and interact with the eminent scientists and academicians during such events. With a goal to boost up the scientific temper of the students, the Science Departments motivates and creates opportunities even for UG students to present papers and posters based on their project works during such seminars.

The Context:

The project “**Promoting Science Education**” started as a humble initiative under the Educational Innovation Scheme of the UGC. The Department of Botany associated with Shiksha Trust, Hyderabad and Inspire Learning Classrooms Pvt. Ltd., (Kerala), to initiate this enthusiastic program envisaging it as an extension activity venture of the college in order to extend the services of the institute to the society. At inception the major aim was to Promote Science Education among the School students of selected Govt. Schools in and around Kodungallur. It was planned as an inclusive method of dissemination of scientific knowledge where the students of Department of Botany would themselves act as ‘Student Tutors’ during these training program for school children- practice of the motto followed by the department: TEACH TO LEARN. The vision behind such an idea was to help the students of the department to hone their skills in various science activities. In turn the project participation would also result in immense boosting up of their self-confidence and team spirit.

The Practice:

Even though the project started as a part of the strategic plan of Department of Botany, after its official inauguration by veteran educationalist and motivational speaker **Dr. T P Sasikumar**, the chairman of **Shiksha Trust** and Founder Director of Destination IAS on February 19, 2015, all the science departments joined together to take this forward as a Best Practice of the institution. As part of the scheme, various programmes are organized by the Science departments all through the year.

- ❖ To foster academia-industry interface and enhance/open up opportunities for national and international collaborations, it is a practice of the college to invite eminent academicians and scientists of national and international repute as resource persons during Seminars, Workshops and Conferences. These are some of the routine methods for Popularizing Science adopted by the Science Departments of the college. They also organize thematic and awareness exhibitions on various scientific topics.
 - Department of Chemistry organized a Seminar on Energy Environment And Climate Change on 27 September 2018.
 - National Seminar on 'Analysis and its Applications' was organized on 10-11 October 2018 by the Department of Mathematics.
 - December 12, 2018 Department of Chemistry organized yet another One day National Seminar on Advanced Materials for Energy Applications.
 - MARVELS OF NATURE was the topic chosen by the Department of Botany to conduct the Lecture Workshop cum Exhibition on 11 January 2019. The event was an attempt at celebrating the Decade of Biodiversity and showcased the diverse and curious world of Plant Science. Through the Lecture on the “**Splendid Opportunities in Agripreneurship: Pros and Cons**” by Ms. Sachana PC, (College of Horticulture, Mannuthy) the participants were given an opportunity to understand the possibilities of entrepreneurship and self-employment in studying the various aspects of Plant Science. The lecture was very useful and motivated the Botany student community, followed by a very active interactive session.
 - For spreading awareness on the judicious use of water resources and effective utilization of water for sustainable agriculture, a hands on workshop on Drip Irrigation was conducted by Department of Botany. Students and staff were given training on the scientific method of drip irrigation.

- A seed museum with a collection of over 100 variety seeds of plants is established in the Department of Botany which will be a repository of knowledge for the students and public interested in plants.
- In the series of seminars, Department of Zoology organized an International Seminar on Exploring New Horizons in Medical Research on 17 January 2019.
- ❖ All the science Departments has Associations which work together for disseminating knowledge of Science among the students as well as motivate them to take up scientific activities. The programs in these association activities are organized by students thereby giving them opportunity to learn science as well as leadership and team work. Motivational lectures are arranged as part of the Association activities.
 - “Life in the Universe-Past, Present & Future” by Dr. Shaju KY, Associate Professor of Physics, Christ College, Irinjalakuda was conducted by Physics Association on 23 October 2018.
 - To give life examples of the success stories of scientific research Dr. CL Joshy, Associate Professor (St. Thomas College, Thrissur) associated with Chemistry Association and came up with a lecture on Nobel Laureates in Chemistry on October 24, 2018.
 - Lieutenant Jaison Jacob (Assistant Professor of Mathematics, St. Aloysius College, Elthuruth) enthralled the students and faculty of Mathematics with his talk on Exploding Dots on 29 October 2018.
 - To ignite passion for science, Zoology Association organized a motivational lecture on “Being Passionately Curious”. The lecture was rendered by Dr. Bijoy C, Assistant Professor of Zoology (Christ College, Irinjalakuda).
 - Botany Association arranged a lecture on “Variety Gardens” by Dr. Jacob Kundara (Associate Professor of Botany, Bharat Mata College, Kochi) on 29 November 2018 to give an idea on the possibilities in Horticulture and chances for self-employment and entrepreneurship.
- ❖ Institution always keeps plans for strengthening the research culture among the faculties and the students alike. As much as it promotes faculty development programs for capacity building, it also envisages to build up the infrastructure facilities needed for creating a right scientific research atmosphere in the college. To realize the goal the college applied for the **DBT Star College Scheme** for infra structure elaboration.

- ❖ For promoting research aptitude in UG and PG students, the students are given guidance to apply for research support under the **Scheme for Promoting Young Talents in Science (SPYTiS)** under the Kerala State Council for Science Technology and Environment (KSCSTE) and Student project scheme (for PG Students) program. Previous year eight proposals got approved and fund released for the same for the SPYTiS II Program for the UG students. The projects were completed successfully and reports submitted. This year one proposal from Botany got approved under the scheme and the research is going on.
- ❖ Eligible candidates are made to apply for the special scholarships meant for science students like the ASPIRE fellowship and the Pratibha Scholarship.
- ❖ Inspiration to take up Science and boost up their self-confidence the students are encouraged to take part in various competitions. Vaishnav and Akshay PD of Physics Department participated in Quiz competition held at St. Thomas College, Thrissur and secured 4th position among the 12 teams. They also participated in quiz competition held at Christ College during February 2019.
- ❖ Group discussions on various current topics and General Knowledge quiz are conducted monthly among the students in class by Department of Computer Science.
- ❖ To impart Science education to students is not only the aim of the institution, but to use Science for the betterment of society and humanity is also a mandate. The expertise and facilities in the institution is utilized for providing services to the society in collaboration with various academic and scientific bodies. This year on December 5, 2018 an **Agro Clinic Farm Advisory Conclave** was organized by the Department of Botany in association with the Kerala Agriculture University, Mannuthy. This program was an attempt at facilitating the farmers to converse with the scientists and experts to discuss on the issues which arose in farming sector as a result of the massive flood which hit the state in the month of August.
- ❖ As much as the efforts of the faculty of the college is always to encourage and motivate the students to take up science as a medium for academics and career, the college also makes use of the experts from outside the college to disseminate knowledge on science and other related matters for the overall development of the students. External mentors of the Walk With Scholar (WWS) and Scholar Support Program (SSP) also renders various awareness class on different topics of science as well as job opportunities in research centres and industry. Our students are given training in soft skills and computer applications, alongside language skills and training to prepare and attend competitive exams and interviews.

- ❖ Industrial visits and Research centre visits are a regular routine in all science department curriculum meant to give the youngsters a feel of the scientific advancements in our country. These are done to provide them an opportunity to converse with the experts in the field of science and technology to inspire them and show them the scientific wealth of our country.
 - This year the WWS- motivational visit was to VSSC space museum, planetarium and various software companies in Technopark. The visit helped the students to interact with scientist/ faculties of these institutions and explore different streams of scientific knowledge. The visit also paved way for familiarizing with the modern technologies and gather information about the possibilities for higher education and placement.
- ❖ **National Science Day** is celebrated every year during February to Promote Science Education. This year the day was celebrated on February 27, 2019 with the financial support from KSCSTE. Under the theme **Science For Humanity**, awareness lectures were conducted.
 - **Dr. AP Ananthapadmanabhan** (Associate Professor of Chemistry) led class on **Basic concepts in Chemistry- Applications in Daily life (Food Adulteration Detection)**.
 - **Dr. Pravas K** (Assistant Professor of Mathematics) gave a lecture on **“An Introduction to Desmos”**.
 - The celebration also included a Science quiz competition for high school students on General Science. Dr. Shihabudheen AS (Assistant Professor of Zoology) led the competition as the Quiz master.
 - An elocution competition for High School and College students on the topic Science and Human Development was also conducted as part of the Science Day celebration.
 - The Departments of Botany, Zoology, Chemistry and Physics arranged special demonstration workshops for school teachers and students on various aspects. The participants were given first-hand experience on different Chemical reactions and electronic concepts in the physics lab.
 - Physics-Exhibition depicting various physical phenomena through simple experiments were arranged. Holograms, refraction, interference experiments were shown. Various school children visited and were inspired by the demonstration of

- phenomena which were familiar to them via text books only. Optic experiments were demonstrated to explain the concepts of Light.
- The functioning of sophisticated scientific instruments and equipment used in Life Science research and study were introduced to the students and teachers by the Departments of Botany and Zoology.
 - Special **demonstration workshop on Plant Tissue Culture** was conducted by the Departments of Botany as part of the National Science Day celebration.
 - Demo and lecture on “Know your Apps” by Department of Computer Science drew greater enthusiasm among the audience.
 - The short movie on ‘Apps in Daily life‘ grabbed public attention. The event was a big success as many school students and common people could know more about various apps that are helpful in the daily life of a common man.
- ❖ The National Service Scheme, NSS units of the college joins hands with the Science Departments to Promote Science Education and popularize the importance of Science in Human life.
 - They organized an awareness lecture Food safety on 12 March 2019.
 - A Class on Basic Life Support was organized by NSS on March 26, 2019.
 - ❖ The **Electronics Club** of Department of Physics is a hobby group which aims to help the students to understand the electronic gadgets in the world today. It also train them in developing their own devices. They are trained in making LED bulbs.

Evidence of Success:

A good number of participation from different schools and colleges for the National Science Day quiz competition and elocution competition and a great crowd for the awareness theme lectures itself is a sign of success of the efforts the institution takes towards Popularizing Science. The efforts for inculcating research aptitude is taking students to right direction as is seen by the proposals being accepted and funds released for the UG projects from agencies like KSCSTE. The efforts for faculty development for capacity building and the programs like seminars, conferences and workshops conducted by the science departments are always a well sort after opportunity by the faculties, researchers and students of other colleges as is evidenced by the increasing number of participants. The great number of paper presentations in national and international seminars organized by the institution is yet another sign of success.

Problems Encountered and Resources Required:

- Under the semester system, project works have been made mandatory. But there is not enough time kept aside for carrying out research activities. This is a very big limitation as far as scientific research is concerned, especially experiments in life sciences which needs ample amount of time.
- The non-availability of funds for infra structure development for the advanced area of scientific research is a hindrance in the way to success. Special schemes like DST-FIST, KSCSTE-SARD etc are allowed only for PG and research departments. Recurring funds for maintenance and consumables as well as technical help is an impediment. Also the nuances of administrative and legal binding for fund utilization is yet another major problem encountered.

Notes:

Separate time slots to be included in the curriculum for serious research projects for students even at the under graduate level. Inclusion of UG departments for various state and national funds for research infra structure development would boost up the research culture and help identify the young talents in science. Catching them young would provide a chance to tune them and mould them into better scientist and researchers.

