

During the 2016/2017 reporting period, TKM College of Engineering (TKMCE) undertook a number of activities that underscore its commitment to UNAI and its principles. The following examples stand out as particularly noteworthy:

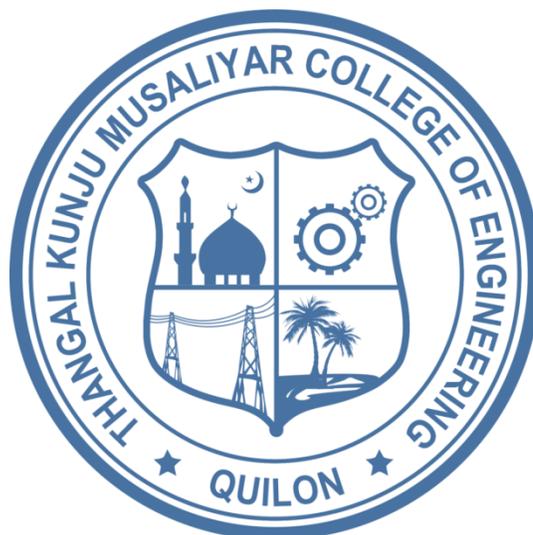
a. Tinkering Marathon:

TKMCE has taken up the initiative to conduct a Tinkering Marathon, at TKM Centenary Public School, as part of ATAL Tinkering Lab that was launched in collaboration with NITI Aayog and ATAL INNOVATION MISSION under Government of India.

This program comes under the 3rd , 5th and 6th basic principles of UNAI.

- Principle 3: A commitment to educational opportunity for all people regardless of gender, race , religion or ethnicity
- Principle 5: A commitment to building capacity in higher education systems across the world.
- Principle 6: A commitment to encouraging global citizenship through education.

By conducting a multitude of well planned activities, students from the school and the surrounding communities were encouraged to realise their abilities. The objectives of the Tinkering Marathon were to develop problem-solving skills, creativity and teamwork among students and help them get an intuitive grasp of STEM (Science, Technology, Engineering and Mathematics) principles so as to make them self-confident in choosing their career paths. The marathons consisted in several initiatives.





1. Ideation of designing: A ‘thinking series’ session was conducted based on ideating and design thinking process to stimulate the mind of students to think outside the box and develop creative ideas. These ideas were then explored and designed. The session was handled by Sarath Shaji, a 5th Semester Student from the Mechanical Department, on 16th July. The session was organised into three phases, in which the students of 8th, 9th, 10th and 12th students were encouraged to buliduo their ideas during the brainstorming phase.

2. Hour of “Tinkering”: A one hour cyclic session was organised for the students of 8th, 9th and 11th. The session was handled by Sarath Shaji, a 5th Semester Student from the Mechanical Department, on 16th July. In this session, the students were allowed to tinker and bring up their ideas to develop simple projects. The students were divided into teams of five, and were given an hour to create a project of their choice. The ideas of project brought up by the students were an extension of school curriculum, which could be technical solutions to real life issues. The projects were discussed among the students of different groups, inviting suggestions from them for the improvement of the project.

3. Techno Talk: A techno talk was organised based on Internet of Things (IoT),to discuss about the inventions of the millennium.The session was handled by AkhilAjith, a 5th Semester Student from the Electronics and Communication Engineering Department, on 28th July. The talk was organised with the intention to make the students familiar with the latest technology. The basic principles and applications of IoT were introduced to the students.



4. Workshops: Workshops were organised for the students of grade 11 and 12, based on IC engine, robotics &aeromodelling to engage students in developing key skills of tinkering and making.

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An **IC Engine Workshop** was organised for the students who were interested in the field of Mechanical Engineering Science. This workshop was handled by our volunteers Sreehari, Akhil Suresh and Harikrishnan; 5th Semester Students of Mechanical department, on 25th July. A detailed session about the basic design and structure of IC Engine was given to the students. The students were taken to the Thermal Engineering lab at TKM College of Engineering to give a hands-on experience. The various engine parts and their working were shown to them.



The **Aeromodelling Workshop** was organised for the students who were interested in aerodynamics. This workshop was handled by Ashish Damodar, a 5th Semester Student of Mechanical Department, on 27th July. A detailed session about the basic principle, design and structure of aero model's like gliders, quadcopters, tri-copters were given to the students. The students were asked to create their own aeroplane models using paper, and the merits and demerits of their models were discussed.



The **Robotics Workshop** was organised for the students interested in Robotics. The session was handled by Abhinand A S, a 5th Semester Student from the Electronics and Communication Department, on 29th July. A detailed session about the basic components, programming and controlling of robots using arduino were given to the students. The students

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were given hands-on experience on basic arduino programming.



b. Independence Day Celebrationa at Balabhavan & Balikabhavan

UNAI TKMCE decided to celebrate the 71st independence Day with inmates of balabhavan and balikabhavan, Kollam in remembrance of the disappointing event happened in UP naming the event GORAKHPUR, 71. The objectives of the events were to 1. to make students aware of their need in society to develop a good and fruitful nation 2. to make students aware of the need on considering every human being and 3. To motivate the children to unleash the potential within themselves 4. To import moral values and culture to the children by spending quality time with them.

The Independence Day celebration with the inmates of Balabhavan & Balikabhavan belongs to 2nd and 6th basic principles of UNAI.

- Principle. 2: A commitment to human rights, among them freedom of inquiry, opinion, and speech.
- Principle 6: A commitment to encouraging global citizenship through education.

While the country was busy celebrating nationality with the tricolour as always and modern ways of expression, UNAI TKMCE decided to celebrate this 71st independence day with a few joyful enthusiastic future citizens of the country...from the CSI balabhavan and balikabhavan ,Kollam in remembrance of some of the that India lose in the disappointing incident that happened in UP naming the event GORAKHPUR'71.

The event mainly intended to invoke a sense of national responsibility to the young minds and motivate them towards achieving individual goals on a shorter run and servicing the nation through the same on long run. Various motivational and moral speeches were delivered by the members of UNAI encouraging the children to chase their dreams and move along the right paths to success. Moral values and ethical ideas too where conveyed to the young minds to move along steady and not get deviated while going about the path of rightness. Interaction with the children was also a great experience with the members in enriching their own persona by giving out their viewpoints on their own experiences in life.

Later come the most fun part of the program, the cultural section where all the members interacted with the children encouraging and helping them out with expressing themselves in front of an audience leaving them happy, and confident about themselves. They sang , danced,

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played, talked, and did all sorts of stuff freeing themselves out and relaxing out well with newly found friends in the UNAI members.

And to close it up, as intended by the title of the program, 2 minutes of silence was observed in remembrance of the 74 new born children lost from the country due to some disappointing malfunctioning from the part of hospital authorities. Recognising the fact that developing a socially responsible and reliable community ahead for the current citizens of the nation, UNAI was detrimental in conducting the program which did fulfil the cause it beheld successfully while also creating a long lasting feeling of positive energy in the minds of both the volunteers and children create memories to cherish rather than the thoughts of books and classrooms.

The volunteers departed from the Balikabhavan leaving behind the impressions of thought in the minds of the children and themselves also feeling great about such a good opportunity some of them terming it as the best day in their life yet, also hoping for similar programs in the near future ensuring higher participation.



c. Field Visit

To study about the present scenario of agricultural farms and about the living conditions of farmers. To familiarize about the whole process involved in cultivating paddy and to see what technical changes can be made to improve harvest.

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This field visit comes under the 7th and 9th basic principles of UNAI

- 7th principle: A commitment to advancing peace and conflict resolution through education.
- 9th principle: A commitment to promoting sustainability through education.

Agriculture has always been the primary sector of any society, India in particular. Kerala had once been the major producer of rice. However, nowadays the scenario is quite different. Skilled farmers are scarce and others are slowly migrating towards various other jobs, as farming has become unprofitable.

That being said, the residents of panchayat of Perinad, Kollam still live through paddy cultivation. The volunteers of UNAI, TKMCE Chapter visited the paddy fields on 12 Aug 2017. Contrary to what the volunteers had expected, they saw lush green paddy only a month away from cultivation. They had visited to familiarize themselves about the whole process involved in cultivating paddy and to see what technical changes they could make to improve the harvest.

They were greeted warmly by the residents. The session started with Mr. Anil, Panchayat President, who gave a short talk on how they managed to profitably harvest paddy. He also introduced the group to the local farmers. On being asked about the drop in farming sector, the farmers commented on the great support they receive from the Government of Kerala through subsidies and other benefits. A part of the harvest is collected, over a price, by the government and the rest is sold by the farmers themselves.

Later in the session, Mr. Sivadasan, a local farmer, guided the group through the processes involved in cultivation in detail. They were kind enough to let the volunteers help them, by uprooting the weeds. Regardless of the scorching heat all members enthusiastically took part in it. Once done, they showed how they kill the pest which drink the sap from the paddy crops. The farmers should certainly be appreciated because even a few hours on field took the breath out of the volunteers, but those farmers has left no land in Perinad panchayat bare this year; that accounts for a total of 6-7 hectares. Every single one of the volunteers spent some quality time in the field. Nothing can substitute experience. Volunteers learned a lot in those fields than what they had learnt inside the four walls of some room. The residents even brought them refreshments. They thanked them for sweeping weeds off the fields.

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Later that day, Mr.Sivadasan showed the group the equipment they use for cultivation including a tractor, and welcomed their expertise in improving them. The equipment had surely taken the toll on having used every season. The group certainly think that we can help them in improving them. They then visited the building where they store their equipment, harvest etc.

During the ending session, the farmers thanked the group for the visit and offered to help the group regarding their queries in the field of agriculture. Appreciation should also go to Mr.Anil, Panchayat President and Mr. Saiju, Regional Agricultural Officer for their support and efforts to bring the farmers to the fore front. They assured that the agriculture is not non profitable, provided the Government backs them up. The visit to Perinad was something to be remembered. It certainly gives the volunteers the urge to do more for the society.

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The visit to Perinad transpired to be a fruitful experience for the volunteers. It can be exemplified through the words of Heraclitus, 'No man ever steps in the same river twice, for it's not the same river and he's not the same man'.

d. Anti-ragging awareness session

As part of the International Youth Day, UNAI TKMCE has planned to conduct an anti-ragging awareness session to the students of first year classes so as to set up a better atmosphere within the college campus. The mission of the session was to create anti-ragging awareness among the students of first year classes, thus creating better individuals who respect every person alike, irrespective of their age and also to Develop a new kind of attitude that breaks the existing stereotypes and to eliminate the unnecessary ego among the students.

The anti-ragging awareness program belongs to the 2nd , 3rd, 4th and 7th basic principles of UNAI.

- Principle 2: A commitment to human rights, among them freedom of inquiry, opinion and speech.
- Principle 3: A commitment to educational opportunity for all people regardless of gender, race, religion, or ethnicity.
- Principle 4: A commitment to the opportunity for every interested individual to acquire the skills and knowledge necessary for the pursuit of higher education.
- Principle 7: A commitment to advancing peace and conflict resolution through education.

The future of the nation lies in the hands of current youth and identifying a need of inspiring and enriching fresh thoughts in the minds of few, UNAI TKMCE took initiative for giving up an INSIGHT to the society. It is achieved through an informative interaction session with Ajeetha Beegam IPS.

The program was organized on 14th August, 3:30pm in Jubilee Hall , where UNAI volunteers and several first year students of the college participated.

In the absence of Principal, Dr. Usha Devi, UG Dean in charge of the academic section of students delivered the presidential address on the occasion giving the chief guest a better idea regarding the college and its functionalities in

how TKMCE stands out better than the other colleges in social servicing with organizations such as NSS and STEPS, along with the UNAI unit now functioning very actively conducting a variety of programs across Kollam.



Mrs. Ajeetha Beegam IPS later addressed to a very receptive crowd talking about a range of topics from the application of laws that are for the youth and its effectiveness on a long run and how important it is to be aware of the amendments and rules for living life in a better fashion. Students also interacted with her imbibing some knowledge and courage in chasing their dreams without fluctuations in path. Also identifying the case of drug abuse and hateful incidents of ragging, she essentially expressed her thoughts of being friends and not creating separate strata between the juniors and seniors.

The vote of thanks was delivered by Prof. Maneesh , coordinator of anti-ragging cell TKMCE thanking all the invitees for addressing the students at the occasion. He also encouraged the students to coexist together without ego but on a helpful basis outsourcing to create better relations and friendship

e. Anti-drug Campaign

As a part of the International Youth Day, UNAI TKMCE has planned to conduct an anti-drug campaign to the students of junior classes so as to create an awareness about the harmful effects of drug usage. The vision of the event was to build up a liquor abuse free society and eradication of drug abuse to ensure a happy, peaceful and prosperous society. The objectives of the campaign were to empower students to make informed decisions related to use of alcohol and other drugs and emphasize an awareness of choice, personal responsibility, and understanding of consequences in deciding to use alcohol and other drugs, as well as encourage the campus community to prevent alcohol and drug-related incidents.

This anti-drug campaign comes under the 7th and 10th basic principles of UNAI.

- Principle 7: A commitment to advancing peace and conflict resolution through education.
- Principle 10: A commitment to promoting inter-cultural dialogue and understanding, and the “unlearning” of intolerance, through education.

An antidrug campaign was conducted under the banner of UNAI,TKMCE to the students of junior classes to create an awareness about the harmful effects of drug usage. This program is arranged in corporation with ‘vimukthi’-an awareness program by Kerala State Excise Department.

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The session began at 3pm in the Jubilee Hall within the college campus. The chief-guest , State excise commissioner ,Mr. Rishiraj Singh IPS inaugurated the function and interacted with the students about the importance of campus community to prevent alcohol and drug related incidents. An awareness class against drug abuse was given to the students. Students were advocated to stand against alcohol and drugs by explaining the harmful effects of drug usage. A pledge against drug usage is took by students, which is led by State excise deputy commissioner Mr.suresh Babu.

The chief guest was presented a momento by Prof. Usha Devi,the principal-in-charge, as a token of gratitude of presiding the program. The program ended by 4:30 pm with the vote of thanks by Prof. Maneesh.

Links: <http://tkmce.ac.in/>