

# **MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING**

(A Unit of Rajalaxmi Education Trust®, Mangalore)

Autonomous Institute affiliated to VTU, Belagavi, Approved by AICTE, New Delhi

Accredited by NAAC with A+ Grade & ISO 9001:2015 Certified Institution

## **AICTE ACTIVITY POINT PROGRAM - REPORT**



**Activity Head:** Helping the local schools to achieve good result and enhance their enrolment in Higher/Technical/Vocational Education

Date: 26.08.2024 to 31.08.2024

## **Introduction**

The AICTE Activity Point Program (AAPP) undertaken by Mangalore Institute of Technology & Engineering (MITE) represents a major initiative in aligning technical education with community development. This program not only fulfils the requirements set by the All-India Council for Technical Education (AICTE) but also promotes social responsibility among engineering students by engaging them in real-world community projects. The recent implementation of AAPP in the Dakshina Kannada district, which focused on training schoolchildren in creative and design thinking, marks a significant milestone in MITE's commitment to societal impact. Over the course of several weeks, MITE faculty and students visited government schools across the district to conduct workshops aimed at enhancing creative thinking skills among young learners.

The central objective of this program was to introduce schoolchildren to the concepts of creative thinking and design thinking, thereby fostering their ability to approach problems innovatively and confidently. Through interactive workshops, MITE sought to empower the students to think beyond conventional methods, explore new ideas, and develop essential problem-solving skills. This report elaborates on the execution, outcomes, and broader impact of the AAPP initiative.

## **Creative Thinking: An Overview**

Creative thinking is recognized globally as crucial tools for solving complex problems in a rapidly evolving world. While creative thinking emphasizes generating new ideas and breaking away from established patterns of thought, design thinking provides a structured approach to problem-solving, focusing on user-centric solutions.

Creative Thinking involves thinking beyond the obvious, imagining different possibilities, and encouraging new ways of seeing challenges. In the context of education, it helps students develop their ability to think independently, make connections between concepts, and devise original solutions to problems.

Design Thinking takes this a step further by emphasizing a solution-based approach to tackling problems. It involves five key stages: empathizing with users, defining the problem, ideating potential solutions, prototyping, and testing. This process not only builds problem-solving skills but also fosters empathy, collaboration, and resilience.

## **Objectives**

The "Enhancing Creative Thinking for School Students" workshop was designed with the following key objectives in mind:

- To introduce school students to the concept of creative thinking and its importance in problem-solving and innovation.
- To encourage school students to think outside the box and approach challenges with a fresh, open-minded perspective.
- To equip school students with the tools and techniques needed to identify problems, generate innovative solutions, and evaluate their effectiveness.
- To enhance school students' ability to tackle complex situations by breaking them down into manageable components.
- To familiarize school students with the principles of design thinking, a human-centered approach that emphasizes empathy, creativity, and experimentation.
- To guide school students through the stages of design thinking, including understanding user needs, brainstorming, prototyping, and iterative testing.
- To create an environment where students can work together, share ideas, and learn from one another, fostering teamwork and collaboration.

To encourage school students to engage in peer-to-peer learning by presenting their ideas and receiving constructive feedback from their classmates.

Introducing these methodologies to schoolchildren at an early stage in their education is critical, as it nurtures a mindset that embraces curiosity, innovation, and flexibility attributes that are invaluable in the modern world. This program provided MITE students with an opportunity to teach these concepts to young learners, thereby enriching their education and preparing them for future challenges.

### **Permission and School Visits**

The program received strong support from the Department of Public Instruction, Dakshina Kannada district, which granted the necessary permissions for the workshops to be held in government schools. Faculty members from MITE visited 83 schools to secure approvals for conducting the creative thinking workshops. Out of these, 66 schools granted permission, reflecting widespread interest and cooperation from school authorities.

Subsequently, the workshop on "Enhancing Creative Thinking" was conducted in 31 schools across the district. These schools were selected based on their readiness to participate, student availability, and logistical feasibility. The program aimed to ensure that the maximum number of students would benefit from the initiative.

Each visit was carefully coordinated, with faculty mentors taking the lead in securing permissions and facilitating the workshops. The relationship between MITE and the local schools was strengthened through this collaboration, setting the stage for future engagements that would benefit both the institution and the community.

### Workshops for Faculty Mentors

In preparation for the school visits, MITE organized a series of workshops for faculty mentors, titled "Mentoring the Mentor," on 16th August, 19th August, and 24th August 2024. These sessions were designed to equip faculty members with the necessary knowledge and skills to guide engineering students in conducting creative thinking workshops.

A total of 45 faculty members participated in these sessions, which covered a range of topics, including creative thinking, design thinking, hands-on teaching methodologies, and effective communication strategies. The aim was to ensure that faculty mentors could effectively train engineering students to deliver the workshops in a manner that was engaging and accessible to schoolchildren.



Fig.1 Mrs. Deepthi Shetty, Assistant Professor, ECE, Dr. Bindhu Madawi, Assistant Professor, Aeronautical Engineering, Mr. Ranjith H.D, Assistant Professor, EC delivered a talk on creative thinking during the mentoring the mentor workshop

The sessions also emphasized the importance of fostering creativity in young minds and the role of faculty mentors in nurturing the next generation of innovators. By preparing faculty members to lead this initiative, MITE ensured that the program would be delivered with the highest standards of teaching and mentorship.

## **Training for Engineering Students**

Following the mentor workshops, the focus shifted to training the first-year engineering students who would be leading the creative thinking workshops in schools. This training took place on 26th and 27th August 2024, under the guidance of the trained faculty mentors.

### ***The training sessions involved several key components:***

- **Content Development:** Students were trained on how to develop presentation materials, including charts, visual aids, and other interactive tools that would help them communicate creative thinking concepts to schoolchildren.
- **Delivery Techniques:** Faculty mentors guided students on effective communication strategies, ensuring that their presentations would be clear, engaging, and suitable for the age group of the schoolchildren.
- **Teamwork and Coordination:** Students were divided into teams, with each team responsible for conducting workshops in a particular school. Faculty mentors worked closely with the students to foster collaboration and ensure that each team was well-prepared for the school visits.

### ***Student Team Formation***

As part of the "Enhancing Creative Thinking for School Students" workshop, the participating first-year engineering students were organized into small teams to facilitate better engagement and collaborative learning. Each team comprised 10 to 12 students, carefully selected to ensure a mix of skills and proficiency levels. Faculty mentors guided the formation process, with special attention to creating diverse teams where students could complement each other's strengths. The teams were tasked with preparing presentation materials, such as charts and visual aids, to effectively conduct the hands-on activities during their school visits. Furthermore, within each team, members who were fluent in local languages like Tulu or Kannada were identified and assigned specific responsibilities, ensuring clear communication with the school students. This structured approach to team formation not only fostered teamwork but also helped the students learn the value of collaboration and leadership in real-world problem-solving scenarios.

The students showed great enthusiasm during the training sessions, recognizing the unique opportunity to engage with younger learners and contribute to their educational development. These

sessions also provided engineering students with valuable experience in leadership, communication, and project management, all of which are crucial skills for their future careers.



Fig. 2. Dr. Jyothi, Professor & Head, Mathematics, Fig. 2. Dr. Ragavendra Sagar, Associate Professor & Head, Physics and Fig. 3. Ms. Kavyashree TM, Assistant Professor providing training to the students



Fig. 3. Student team is preparing the presentation stuffs along with his faculty Mentor Dr. Guru Prasad AM, Sr. Assistant Professor, Chemistry

## School Visits and Workshops

The highlight of the AAPP initiative was the series of workshops conducted in government schools across Dakshina Kannada district from 28th August to 31st August 2024. A total of 785 first-year engineering students along with faculty mentors from MITE visited 31 schools, where they engaged with 2,058 schoolchildren.

The workshops focused on creative thinking and design thinking, with students leading hands-on activities that encouraged schoolchildren to think critically and solve problems innovatively. The sessions were designed to be highly interactive, with students using visual aids, games, and real-world examples to illustrate key concepts.

One of the standout features of the workshops was the emphasis on hands-on learning. Schoolchildren were encouraged to participate actively in the sessions, experimenting with new ideas



and working collaboratively to solve problems. This approach not only made the workshops more engaging but also helped to reinforce the learning outcomes, ensuring that students would retain the concepts introduced during the sessions.



Fig. 4. Our students delivering a talk on Enhancing the creative thinking @ DKZP Govt High School, Meenakaliya, Baikampady, DKZP Govt High School, Chitrapura & Govt PU College, Mudipu



Fig. 5. Hands-on training @ DKPZ Government High School Nellikar, Moodabidri, DKZP Govt PU College, Kinnikambala



Fig. 6. Schools children presentation @ DKZP Govt High School Dargudda, DKZP Govt PU College, Gurupura & DKZP Govt PU College, Kavoar & DKZP Govt PU College, Venoor

The impact of the workshops was immediately evident. Many schoolchildren expressed their excitement at being able to think creatively and approach problems in new ways. The workshops also

fostered greater confidence among the students, with many reporting that they felt more comfortable expressing their ideas and participating in group activities.

## **Outcomes**

The AICTE Activity Point Program has proven to be highly beneficial for both the engineering students and the schoolchildren. Some of the key outcomes include:

1. **Enhanced Problem-Solving Skills:** The workshops helped schoolchildren develop their ability to think critically and solve problems creatively, equipping them with essential skills that will serve them well in their future academic and professional lives.
2. **Increased Confidence:** Schoolchildren reported feeling more confident in expressing their ideas and approaching problems with a creative mindset. This increase in confidence was one of the most significant outcomes of the program.
3. **Leadership and Teaching Experience for Engineering Students:** The first-year engineering students gained valuable experience in leading workshops, developing content, and communicating effectively with younger learners. This experience has not only enhanced their leadership skills but has also given them a deeper understanding of social responsibility.

In addition, many faculty mentors and student teams contributed by sponsoring chocolates, ice creams, and other treats for the children in various schools, further enhancing the experience for the participants. This level of support from both the institution and individual team members reflects the deep commitment of MITE to community development and education.

## **Feedback analysis**

The feedback from school students, faculty mentors, and participating schools was collected to assess the overall effectiveness of the workshop. This analysis aims to provide an overview of participant satisfaction, key areas of impact, and recommendations for future programs.

### ***Feedback Methodology***

Feedback was collected using a combination of methods:

1. **Post-Workshop Surveys:** Distributed to school students to gauge their understanding of creative thinking concepts, satisfaction with the hands-on activities, and overall workshop experience.



2. **School Administration Input:** School principals and teachers were invited to share their feedback on the overall coordination, impact on students, and their observations during the sessions.

### ***Summary of Feedback***

#### ***Student Feedback***

##### Participation & Engagement:

- **90%** of the students indicated that they were actively engaged during the workshop and found the hands-on activities helpful in understanding creative thinking.
- **85%** of students felt that the practical activities such as brainstorming, prototyping, and team-based problem-solving were highly beneficial.

##### Understanding of Creative Thinking:

- **87%** of students reported an improved understanding of creative thinking techniques after participating in the workshop.
- Students particularly enjoyed the "think-outside-the-box" activities and mentioned that they learned new ways to approach problems.

##### Content & Delivery:

- **80%** of the students rated the content and delivery of the workshop as "very good."
- Some students expressed a need for more time to complete hands-on activities, particularly in the areas of prototype building and idea presentation.

##### Suggestions:

- A common suggestion from the students was to increase the duration of the workshop to explore more topics in creative thinking.
- Some students also mentioned they would like more one-on-one interaction with the mentors during the sessions.

#### **School Administration Feedback**

##### Impact on Students:

- Headmasters and teachers across all 31 participating schools praised the initiative, and mentioned the workshop as "impactful" for their students.

- Several school administrators commented on the positive changes in students' attitudes towards problem-solving after attending the sessions.

### ***Coordination & Support:***

- Schools appreciated the detailed planning and coordination of the workshop, noting that the materials provided by MITE (chart papers, pencils, etc.) were of great help.
- The inclusion of local language speakers (Tulu/Kannada) as part of the mentoring teams was seen as an important factor in bridging the communication gap and making the sessions more relatable for students.

### ***Suggestions for Future Programs:***

- Some schools suggested more frequent follow-up sessions or a continuation of the workshop across multiple terms to reinforce the concepts learned.
- There were requests to include more advanced topics like technology-driven innovation or creative digital tools in future workshops.

### **Support and Sponsorship**

The success of the AAPP initiative was made possible by the generous support of the MITE management. The institution sponsored essential materials such as chart papers, pencils, and chocolates for the schoolchildren, ensuring that the workshops were well-equipped and enjoyable for the participants.

### **Conclusion**

The AICTE Activity Point Program, focusing on creative and design thinking, has been a resounding success in the Dakshina Kannada district. By engaging over 2,000 schoolchildren and providing them with valuable problem-solving skills, the program has made a lasting impact on the community. The enthusiastic participation of MITE's faculty and students, coupled with the strong support from the institution's management, has ensured the success of this initiative.

This program has not only benefited schoolchildren but has also provided first-year engineering students with a unique opportunity to develop leadership, communication, and teaching skills. The success of the AAPP initiative demonstrates the importance of community engagement in education and highlights MITE's ongoing commitment to fostering a sense of social responsibility among its students. The institution looks forward to continuing its efforts in bringing about positive change through education and community development.

## **Report on Computer Donation and Support Activities: AICTE Activity Points Program**

### **Introduction**

As part of the AICTE Activity Points Program (AAPP) and in alignment with Mangalore Institute of Technology & Engineering (MITE)'s commitment to community engagement, an impactful initiative was undertaken to enhance digital literacy and support basic educational needs in government schools across Dakshina Kannada district. This initiative included the donation of 50 computers to 25 schools to improve access to technology for school students. Additionally, MITE provided sports tracksuits to nine students in Kenjar Government School, aiming to promote both digital and physical development in local schools. This report highlights the planning, execution, and outcomes of the computer donation program as well as the sportswear support, both of which complemented MITE's larger commitment to student-centric activities through the AAPP.

### **Objective of the Initiative**

The primary objectives of the computer donation and sportswear support initiative were to:

- **Bridge the Digital Divide:** Provide students with access to computers, thus increasing digital literacy, enabling research-based learning, and familiarizing students with essential computer skills.
- **Empower School Teachers:** Support teachers by providing them with digital resources that can enhance teaching methodologies and classroom engagement.
- **Promote Holistic Development:** By donating tracksuits to students involved in sports activities, we aim to emphasize the importance of both physical fitness and academic performance in student development.

### **Planning and Execution**

Following the AICTE's AAPP, the institution organized a workshop focused on enhancing creative thinking and problem-solving skills, which involved visits to various government schools. During these visits, the need for digital resources in many schools was observed. To address this need, MITE facilitated the donation of 50 computers, carefully coordinating with local school authorities to identify schools where access to technology was limited.

MITE partnered with the Department of Public Instruction, Dakshina Kannada, for both permissions and logistics. Faculty mentors and students worked together to transport and set up the computers in 25 government schools, ensuring that each school received adequate support to integrate these systems into their learning environments.



Fig. 7 Donated tracksuits to the students, Government High School Kenjar



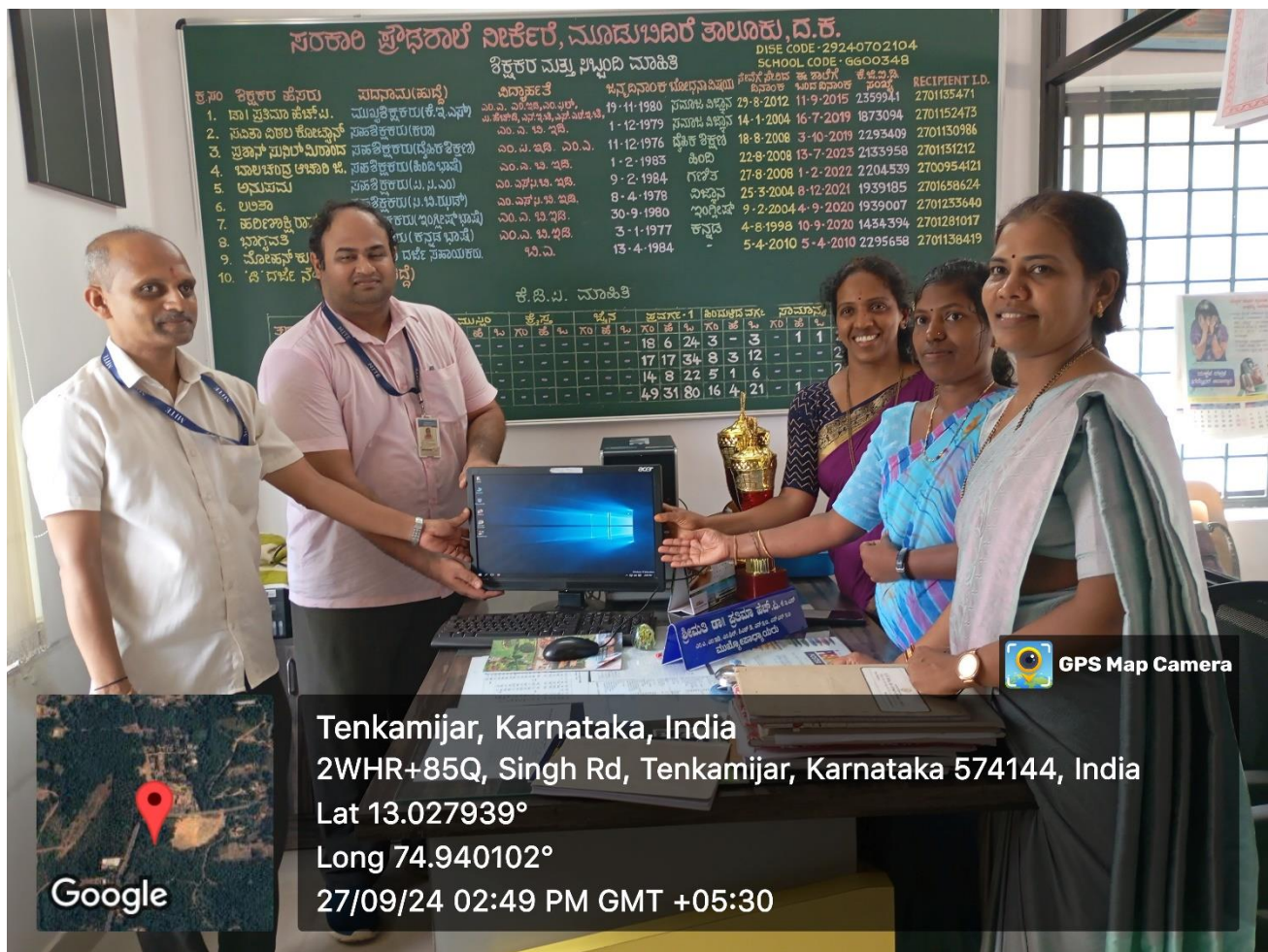


Fig.8 Donated computers to Govt. High School, Neerkeere





Fig.9 Donated computers to Govt. High School, Govt. PU College, Kurnad

**List of Schools received the computers/printers/desk/tracksuits**

<b>Sl. No.</b>	<b>Name of the School</b>	<b>No. of Computer Donated</b>	<b>Name of the Faculty Mentor visited</b>
1.	Government High School, Manchi	03	Dr. Jayaprakash MC
2	Karnataka Public School Mijar	02	Dr. Ganesh Mogaveer
3	M.Shree Kuvempu Centenary Upgraded Govt Model Higher Primary School, Nalyapadavu	03	Ms. Deepthi Kotian
4	Government High School, Nalyapadavu, Shaktinagar	03	
5	Govt PU College, Kavur	02	Mrs. Reshmi Praveen
6	Government High School, Kodmannu, Bantwal	03	Mr. Shivaprasad TK
7	Governement PU college, Kurnad	03	
8	Govt. High School Sujeer, Bantwal	01	
9	Govt. High School, Adyapady	02	Dr. Amrutha HP
10	Govt. High School, Daregudde	03	Ms. Prathvi
11	Govt. High School, Neerkeere	03	Dr. Vignesh Nayak
12	Govt. High School, Balanja	03	Mr. Ranjith HD
13	Govt. High School, Guruvanyankere	02	Ms. Prathiksha G
14	DKZP High School Aliyoor	03	Dr. Jyothi
15	Govt PU College High School Section, Venur	03	Dr. Aveen KP
16	Government High School, Kenjar	03	Ms. Deepthi Shetty
17	Govt. High School, Chitrapura, Kulai	01	Ms. Anwitha
18	Govt. High School, Katipalla -5 <sup>th</sup> block, Krishnapur	01	
19	Shri Narayan Sanil Govt. PU College (High School section) – Haleyangady 574146	01	
20	Govt. High School, Baikampady, Meenkaliya	02	
21	Govt. High School, Kakkinje	02	Mr. Akshyakrishna
22	Govt. High School, Bokkapatta, Mangalore	1+1 printer	Dr. Guruprasad AM

23	Govt. High School, Mudushedde	1+1printer	Mr. Santhosh S
24	Govt. High School, Mulki	1+1 Printer	Dr. Nagarjun Prabhu

### **Distribution and Impact**

The donation of 52 computers, 3 printers and the provision of nine tracksuits in Kenjar Government School were implemented as follows:

1. Computer Distribution: The selected 24 schools were each equipped with two computers, allowing approximately 750 students to access digital resources within their school environment. The faculty mentors provided initial training for school teachers to incorporate basic digital tools into their lesson plans, promoting an interactive learning environment.
2. Tracksuit Donation: Recognizing the role of physical fitness in academic performance, MITE provided sports tracksuits to nine students at Kenjar Government School. This contribution supported students participating in sports activities, encouraging them to continue with their extracurricular pursuits.

### **Outcomes and Student Feedback**

The computer donation program generated an overwhelmingly positive response. Teachers expressed their appreciation for MITE's efforts, noting that the availability of computers was a significant step toward more engaging and modern teaching methods. Students reported that having access to computers fostered curiosity and excitement toward learning, especially in areas such as creativity, and project-based activities. The tracksuit donation was similarly appreciated, as it demonstrated MITE's investment in the all-round development of young students.

### **Connection with the AICTE Activity Points Program**

This donation aligns closely with the goals of AAPP by emphasizing active societal engagement. The participation of MITE students in both the setup of the computers and the provision of basic training allowed them to gain hands-on experience in community service. By bridging the digital divide, MITE's students understood the transformative role technology plays in education and learned valuable lessons in empathy and social responsibility, key elements of AAPP.

### **Conclusion**

The computer and tracksuit donation initiative represents MITE's dedication to fostering an educational environment that goes beyond traditional boundaries. By empowering students and teachers alike, this initiative contributes to a more inclusive and holistic educational framework. The success of this initiative is a testament to MITE's vision to engage meaningfully with the community, paving the way for a future where education is both accessible and comprehensive.