



**COMED KARES**  
INNOVATION HUB

# INNOVATION & DESIGN THINKING COURSE OUTCOMES

Banaswadi

2023



## IDT Course

In this course students will learn how to design and prototype their ideas. Through a series of lectures and exercises students will learn and practise different prototyping techniques. This prototyping course emphasises on rapid prototyping, using prototyping device and system user interfaces, design considerations and perspective for devices. This course has topics that include design methods, modelling and simulation, design, and customization. This course on a whole, enables student transition from ideas to prototyping.

Overall program Rating	5/5
Attendance	100%
Student Enrolled	13

## Highlights of Batch @Banaswadi

This program saw the participation of 3 students from Cambridge Institute of technology, Bangalore and Bangalore Technological Institute. The students partook in the program to come up with prototypes addressing various problem statements for their design challenge.

**4 Projects built** for the final line following design challenges



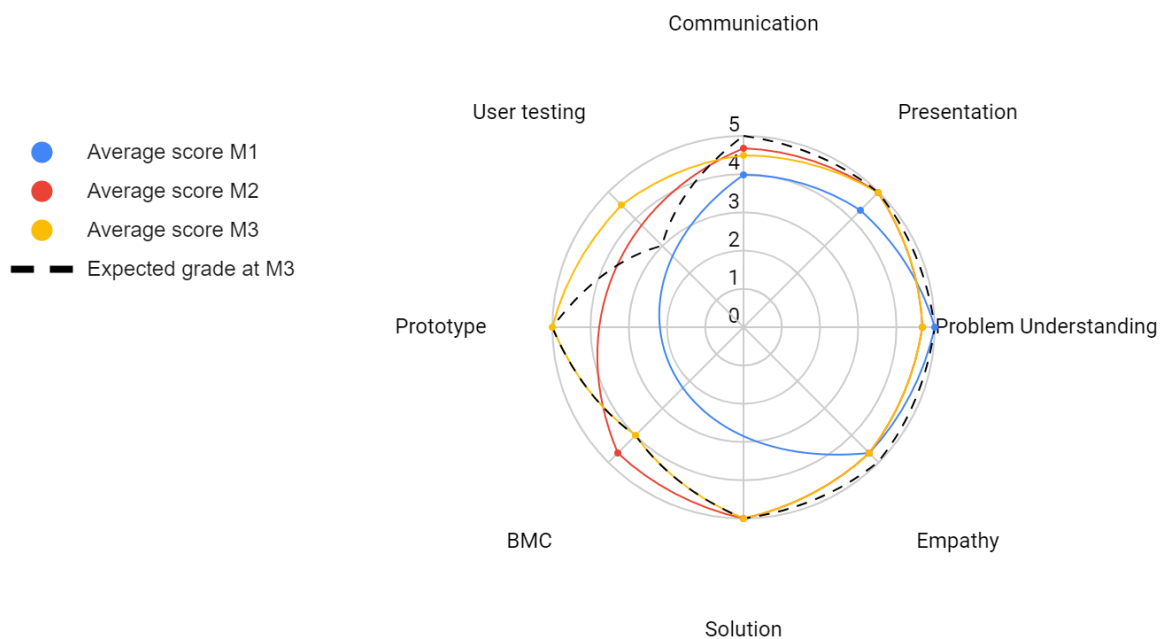
**14% increase in knowledge levels and performance** of students in the design challenge milestones



## Post Program Findings of our Courses

### IDT Course Assessment Report of Banaswadi

M1, M2 & M3 Grades VS Expected M3 Grade - Banaswasi



The batch of Banaswadi Innovation Centre in Bangalore has resulted in an **increase in knowledge levels as assessed in the milestones**. Based on the course outcomes a total of 8 areas were assessed in program milestones where students presented their progress in the design challenge.

### What our students had to say

1. *I love how the mentors are friendly and interactive here*
2. *It was a very interactive, informative and unique session. It was a session where I learnt something that I didn't even know*



## Final Project

### Sanitary pad incinerator

Bangalore Technological Institute/Bangalore / I Sem / AIML & CSE

PROBLEM STATEMENT	TEAM MEMBERS
Effective disposal of sanitary pads leading to environmental issues.	<ul style="list-style-type: none"><li>• Priyanka sahani</li><li>• Sanjana</li><li>• Shruthi T R</li></ul>
<b>IDEA &amp; RESULT</b> <p>The incinerator is an effective solution for an eco-friendly method for a proper disposal of sanitary pads. It is pot shaped to ensure the complete combustion of the sanitary pad. It is equipped with an arduino to ensure a safer disposal of the pad without contact. It is manufactured from sustainable materials, making it not only environmentally friendly but also cost-effective and scalable for widespread adoption in various communities, institutions, and public facilities.</p>	

#### PROTOTYPE IMAGE



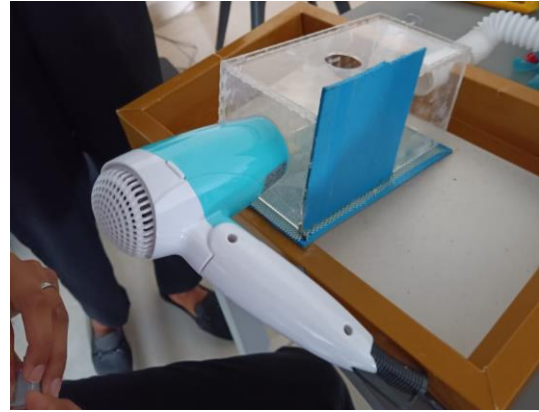
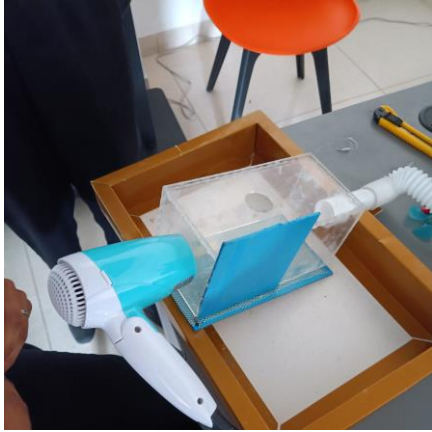


## Grain Collector

Cambridge Institute of technology, Bangalore / 3 Sem

PROBLEM STATEMENT	TEAM MEMBERS
<p>How might we help the farmer and labourers to simplify the traditional winnowing methods by building a grain dispenser order to reduce the pressure of manual work.</p>	<ul style="list-style-type: none"><li>• Jhanavi S</li><li>• Ritam patra</li><li>• Arundathi B</li></ul>
<p><b>IDEA &amp; RESULT</b></p> <p>Creating a vibrating base there the millet particle and dust particle are separated by the rapid movement of the plate. The fan will be attached to adjacent side of the suction funnel which will blow off the dust particles to outside as a result millets remain in the plate then eventually fall off to collecting area</p>	

PROTOTYPE IMAGE



## Loading and unloading machine

Cambridge institute of technology, bangalore (east)/ 4th Sem /ECE

PROBLEM STATEMENT	TEAM MEMBERS
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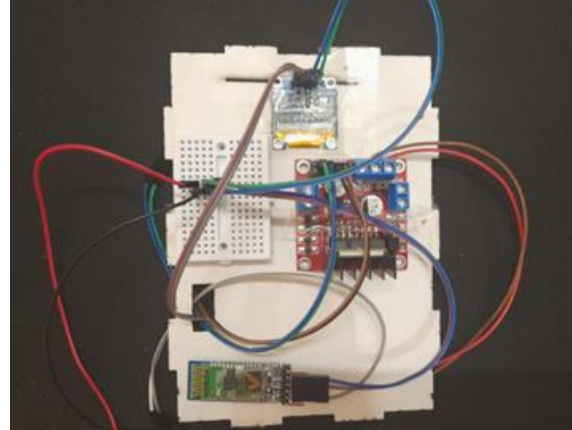
How might we help labours to load, unload and carry heavy sacks from traditional manual labour to equipping them to a much easier to use accessory that would help them carry those load efficiently despite them not being able to work on complex machine.

- Keerthi Gowda HN
- Kartik dhyani
- Deekshit gowda

#### IDEA & RESULT

Zip lines attached on the ceiling of buildings that works can operate by motors.

#### PROTOTYPE IMAGE



## Grain Separator

Cambridge Institute of technology, Bangalore / 3 Sem





PROBLEM STATEMENT	TEAM MEMBERS
<p>How might we help the workers to separate dust from grains to make them clean &amp; ready to use despite having machines which are unable to do so.</p>	<ul style="list-style-type: none"><li>• Syed Shahbuddin</li><li>• Noorain Fatima NB</li><li>• Dev Tarun</li><li>• Tasmiya Riyaz</li></ul>
<p><b>IDEA &amp; RESULT</b></p> <p>The computer controls the robot by rotating individual stepper motors connected to each joint(some larger arms use hydraulics or pneumatics). Unlike ordinary motors, stepper motors move in exact increments. This allows the computer to move the arm very precisely, performing the same movements over and over.</p> <p>We have used the first layer as a mesh and below that we placed the dust collecting part, through the funnel the grain will pass. Here we have placed the fan to separate light weight and heavy weight particle</p>	

#### PROTOTYPE IMAGE

