



DIC IITH

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Funded by MoE

RESIDENTIAL INNOVATION
PROGRAMME

HCD Lab at School

**A design thinking & innovation curriculum
from DIC, IIT Hyderabad — taught inside
your school**

WHAT IT IS

A semester-long programme run in your school's own lab: a 5-day workshop, a 3-week mentored project and a jury. It runs every semester, so every student takes part.

WHAT STUDENTS DO

Find a problem → Research → Prototype → Test → Present

WHO DELIVERS IT

A school innovation programme by The Institute of Human-Centred Design, developed with the Design Innovation Centre (DIC), IIT Hyderabad.

GRADES 5–8

GRADES 9–12

NEP 2020 ALIGNED

hcd The Institute of
Human-Centred
Design

मानव-केंद्रित डिज़ाइन संस्थान

HCD School · The Institute of Human-Centred Design,
an outreach of DIC, IIT Hyderabad

hcd.institute · dic@hcd.institute



WHY IT MATTERS

Schools teach answers. This teaches questions.

Machines can now produce answers faster than any student. What they can't do is notice a problem nobody has named, ask a better question, or build something people actually need. HCD Lab at School trains exactly that. NEP 2020 asks schools for this kind of hands-on, experiential learning.

01

Think like a designer

People and systems before solutions.

02

Make like a maker

Colour, form, function, ergonomics — by hand.

03

Test like a scientist

Every idea is a hypothesis.

04

Act like an entrepreneur

Turn a tested idea into value.

WHY IT'S DIFFERENT

From a one-off workshop to a school-wide innovation practice.

PROVEN METHOD

The Design Concepts & Concerns (DCC) framework taught at the NIDs and IITs for decades, pioneered by Prof. M P Ranjan, with Stanford d.school practice.

DIC, IIT HYDERABAD

Developed with the Design Innovation Centre, whose faculty teach and monitor every cohort.

POLICY-ALIGNED

Built for NEP 2020. HCD Institute and DIC are part of the PM SHRI school innovation council.



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The DCC method in practice — students presenting system maps and concepts — DCC Archives, NID.

THE MODEL

A lab in your school — and a programme to run in it

ROUTE 01 · BUILD

A new design lab

No lab yet? DIC provides the know-how — lab design, equipment list and layout. The school funds the equipment and fit-out.

ROUTE 02 · ACTIVATE

Your ATL or existing lab

Already have an Atal Tinkering Lab or makerspace? We run the programme there and give it a year-round purpose.



Students around fabrication equipment in the DIC lab — DIC Archives.

WHO DOES WHAT

YOUR SCHOOL PROVIDES

- ✓ A lab — ATL, existing, or equipment & fit-out for a new one
- ✓ Timetable slots each semester
- ✓ Students, in cohorts of 30
- ✓ Teachers who join the 5-day workshop and co-mentor the project

HCD INSTITUTE & DIC PROVIDE

- ✓ The curriculum and course material
- ✓ DIC faculty to teach and monitor
- ✓ Lab know-how — design, equipment list, layout
- ✓ Mentoring, jury and two certificates
- ✓ Teacher development through co-teaching



Teacher commitment: school teachers join the full 5-day workshop and co-mentor the 20-hour project with DIC faculty — building the capability in-house.

THE SEMESTER

Workshop. Project. Jury.

Every semester, every student.

WHAT EVERY STUDENT DOES

Discover → Research → Frame → Ideate → Prototype → Test → Present

WEEK 1

5-day design thinking workshop

Foundations of design — colour, form, function, ergonomics — and the design thinking method. Each team chooses a real problem from its school or community.

3 WEEKS

Mentored project in the lab

20 hours of guided studio time to research, prototype, test and refine. About 7 hours a week, fitted into the timetable.

SEMESTER- END

Jury

Every team presents and defends its project before a jury.

OPTIONAL

Pre-incubation pathway

Selected projects are reviewed by HCD and DIC and may move to pre-incubation with incubators such as IIT incubation labs and NIDBI. Selection is competitive, not guaranteed.

30

Students per cohort

5 days

Workshop

20 hrs

Project, over 3 weeks

1 jury

Every semester

THE ENTREPRENEURSHIP THREAD

Problem → Insight → Concept → Prototype → Test → Value proposition → Venture / impact

TWO VERSIONS, ONE METHOD

UPPER PRIMARY

Grades 5–8

Hands-on and playful: observing, making and testing around problems in the classroom, home and neighbourhood.

HIGH SCHOOL

Grades 9–12

Deeper research, systems mapping and a value proposition — with the course book and the pre-incubation pathway.



WHAT STUDENTS GAIN

By the end of the semester, students can...

EVERY STUDENT FINISHES WITH

A real problem researched → a solution designed → a prototype built → the solution tested → the work presented to a jury

Skills: research · systems thinking · ideation · prototyping · teamwork · communication · entrepreneurship

UNDERSTAND

- Human-centred design
- Systems & problem framing
- Design research

MAKE

- Sketch
- Prototype
- Build & test

THINK

- Question assumptions
- Generate alternatives
- Use evidence

ACT

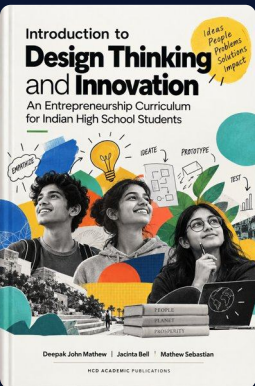
- Work in teams
- Present & defend
- Spot opportunities

CERTIFICATION

- ✓ A certificate from DIC, IIT Hyderabad
- ✓ A certificate from The Institute of Human-Centred Design
- ✓ A documented project for the student's portfolio

WHAT THE JURY ASSESSES

- ✓ Research — did they understand people and context?
- ✓ Problem framing — is the problem sharp and real?
- ✓ Ideation — did they explore alternatives?
- ✓ Prototype & testing — what did users teach them?
- ✓ Presentation — can they explain and defend it?



THE COURSE BOOK

Introduction to Design Thinking and Innovation — An Entrepreneurship Curriculum for Indian High School Students

Deepak John Mathew · Jacinta Bell · Mathew Sebastian
Published by DIC Academic & The Institute of Human-Centred Design · ISBN 978-81-689910-4-0

Every high-school student receives a copy. Grades 5–8 use age-adapted activity material from the same curriculum.

Research-backed: DIC PhD scholars study how design thinking affects students' aptitude over time, feeding India's innovation-curriculum strategy. Data is collected only with parental consent and ethics approval, under India's DPDP Act, 2023.

INTERNATIONAL & FLAGSHIP PROGRAMMES

Beyond the classroom. Onto a global stage.

HCD Lab at School students and DIC alumni are invited into the flagship programmes of DIC and HCD Institute — to present their work, meet practitioners and see design and innovation at international scale.

JANUARY 2027

**Early
Jan**

DIC · IIT HYDERABAD

Global South Design Summit

An international gathering of designers, educators and policymakers from across the Global South, hosted at the Design Innovation Centre, IIT Hyderabad.

Showcase

Talks & workshops

Global network

JANUARY 2027

**Early
Jan**

CINEMA · STORYTELLING

Indian Cinema Panorama

A showcase of Indian cinema and storytelling — where students see how design, narrative and technology come together on screen.

Screenings

Storytelling

Meet the makers

AUGUST 2027

**Early
Aug**

TECHNOLOGY · INNOVATION

Mobile Congress 2027

Where the future of mobile and digital technology is presented — a chance for students to see products, platforms and start-ups up close.

Technology

Start-ups

Industry exposure

82

Design Innovation Centres across the nation

In India's leading IITs, NITs and IIMs — a national network students can keep drawing on as DIC alumni.

★ **Selected projects travel.** Outstanding student projects from the semester jury may be invited to present at these programmes.

Dates are indicative. Participation is by invitation and subject to selection, availability and parental consent.



IIT Hyderabad campus — host of the Global South Design Summit.

BRING HCD LAB TO YOUR SCHOOL

One MoU. One year. A culture of innovation.

YOUR SCHOOL GETS

- A working design lab, used every semester
- A structured, NEP-aligned innovation programme
- Teachers trained alongside DIC faculty
- A growing portfolio of student projects
- A partnership with DIC, IIT Hyderabad

PARTNERSHIP TERMS

- From 100 students per school, in cohorts of 30
- One programme fee — workshop, project mentoring, materials, course book, jury, certification and lab know-how included
- Investment shared in the meeting, based on cohort size and lab route

FIVE STEPS TO LAUNCH

01 · MEET

A 30-minute conversation with your leadership team.

02 · ASSESS

We review your lab or ATL, or plan a new one.

03 · DESIGN

Grades, cohorts and the first semester calendar.

04 · SIGN

MoU between the school, HCD Institute and DIC.

05 · LAUNCH

Begin the first cohort and establish the HCD Lab programme.

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Pre-incubation and admission pathways are selective and not guaranteed outcomes of participation.