Capgemini

Independent Impact Assessment by consultivo ADVISORY • RESEARCH • TRAINING

Executive Summary

Project Title

Tinker Coding Project- STEM Capgemini

Implementation Agency

SRF FOUNDATION

Project Locations

40 schools spread across 4 states: Chennai, Bengaluru, Noida and Hyderabad

Financial Assistance

₹ 6.43 cr

Programme Duration

27-July-2021 to 30-September-2024

Courses Offered

Integrated model of Future Skills STEM Education, Tinkering & Coding

Total Candidates Enrolled

24000

Children in Government Schools (focus on girl students)

Demographic Insights

Gender Distribution

53.9% male

46.1% female

Education Level

Most respondents were students from Classes **VIII to X**

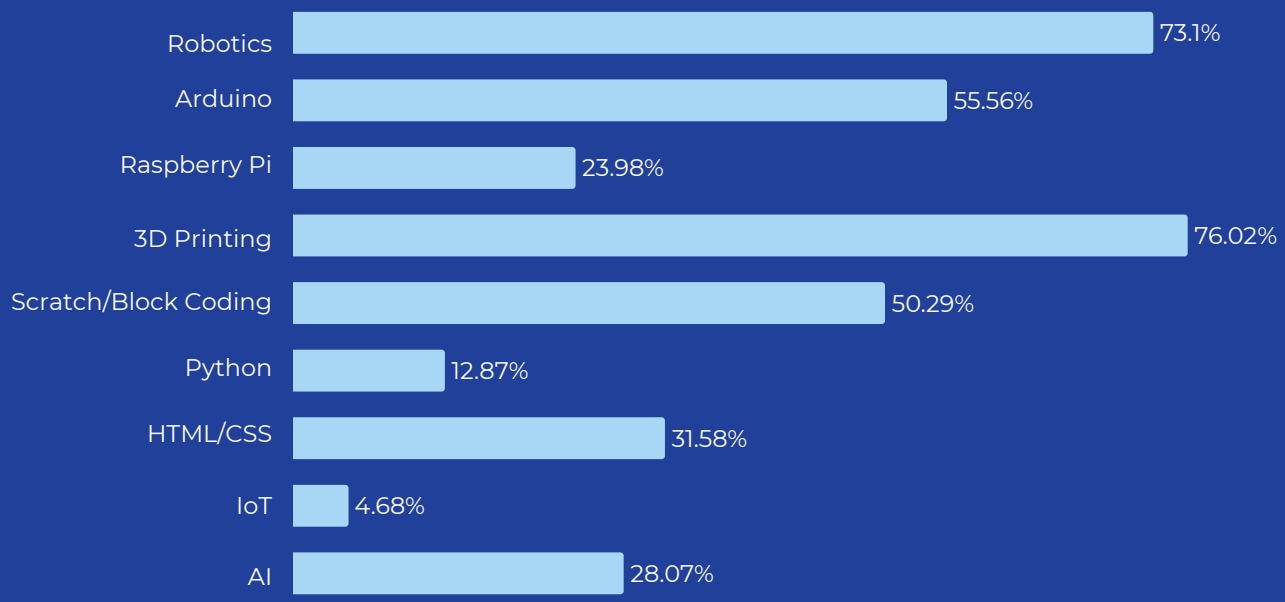
Key Findings

Functional status of the labs

~70.76% of students regularly attended the Tinker Coding lab sessions, indicating that the labs were functional and accessible, and that the programme achieved high levels of student participation and engagement.

Exposure to Technology Modules

Students reported exposure to a wide range of technology modules through the lab sessions, reflecting learning opportunities in emerging technologies and foundational coding skills.



Participation in Competitions and Exposure Activities

- More than 80.70% of students actively participated in school-level competitions and others. **Over 5500+ students** showcasing their projects and technology innovations. These activities contributed to experiential learning and exposure to real-world problem-solving.
- **From them paricipants, around 3% approx students received formal recognition**, including **prizes, certificates, and recognised awards** in school-level and external competitions.
- Approximately 78.36% of students reported developing projects, including prototypes such as robots, IoT-based safety systems, smart city models, environmental solutions, and assistive technologies, demonstrating hands-on learning and the practical application of STEM concepts.

Technical Skill Development

- During the primary survey conducted, it was stated by the respondents that the programme strengthened technical competencies, with

66.08%
able to independently write basic code.

91.23%
has improved their understanding of sensors and electronics

92.40%
has gained the ability to build working prototypes with guidance

98.25%
of students believe that girls and boys can equally succeed in technology. This reflects a perception of gender equality in STEM fields.

~60–70%
of schools reported implementing mainly the "**Hub" model**, while the full Hub & Spoke collaboration with nearby schools is still limited.

Soft Skill Enhancement

- A large proportion of students reported improvements in

problem-solving	presentation skills	confidence in using technology tools	teamwork abilities
90.06%	**90.64%**	**95.91%**	**95.91%**

Increased Academic Engagement

- The programme contributed to increased academic engagement. Approximately 89.47% of students reported greater interest in STEM subjects, 96.49% reported improvement in Science and Mathematics marks, and 91.81% reported increased participation in school activities.
  About 90.64% reported discussing technology-related topics at home, while 56.73% reported applying their skills outside school in projects or community contexts.

Influence on Career Aspirations

- The programme appears to have influenced students' academic and career aspirations, with 81.87% expressing interest in STEM careers, 83.04% planning to pursue the Science stream, 78.36% reporting that the Tinker Coding lab influenced their career decisions.

- **~75–80% of teachers** reported that they are now able to conduct STEM/TinkerCoding sessions independently , though many mentioned that **occasional guidance or technical support is still helpful.**

- **~80–85% of teachers** observed noticeable improvements in students' logical thinking, coding ability, and participation, suggesting that the teacher training and STEM facilitation have been effective overall.

Key Learnings/Limitations

- **3–5% of students reported occasional infrastructure issues**, such as computer display problems and unstable internet connectivity in the lab.
- **Students reported irregular access or reduced participation (2-3 sessions every week)** due to high student strength.
- **~10% of students indicated limited practice of STEM skills after sessions**, largely because of academic workload and time constraints.
- **~15% of teachers indicated that they still require additional training or support**, particularly for **advanced coding, robotics, and managing larger groups of students in the lab and more capacity-building opportunities,** including **refresher trainings, more frequent STEM faculty support, and practical exposure to new technologies.**

Recommendations

- **Increase the frequency of STEM sessions and faculty support** to ensure that a larger number of students can participate regularly and receive adequate hands-on learning opportunities.
- **Expand access and scheduling of sessions** by integrating STEM activities more regularly within the school timetable so that all interested students can benefit consistently.
- **Introduce complementary learning components**, such as soft skills training, presentation skills, and innovation-based activities to enhance overall student development.
- Provide **continuous teacher training and mentorship support** to sustain effective STEM instruction and maintain the quality of lab-based learning.