Table B 5.5.1: Innovations by Faculty Members in Teaching and Learning

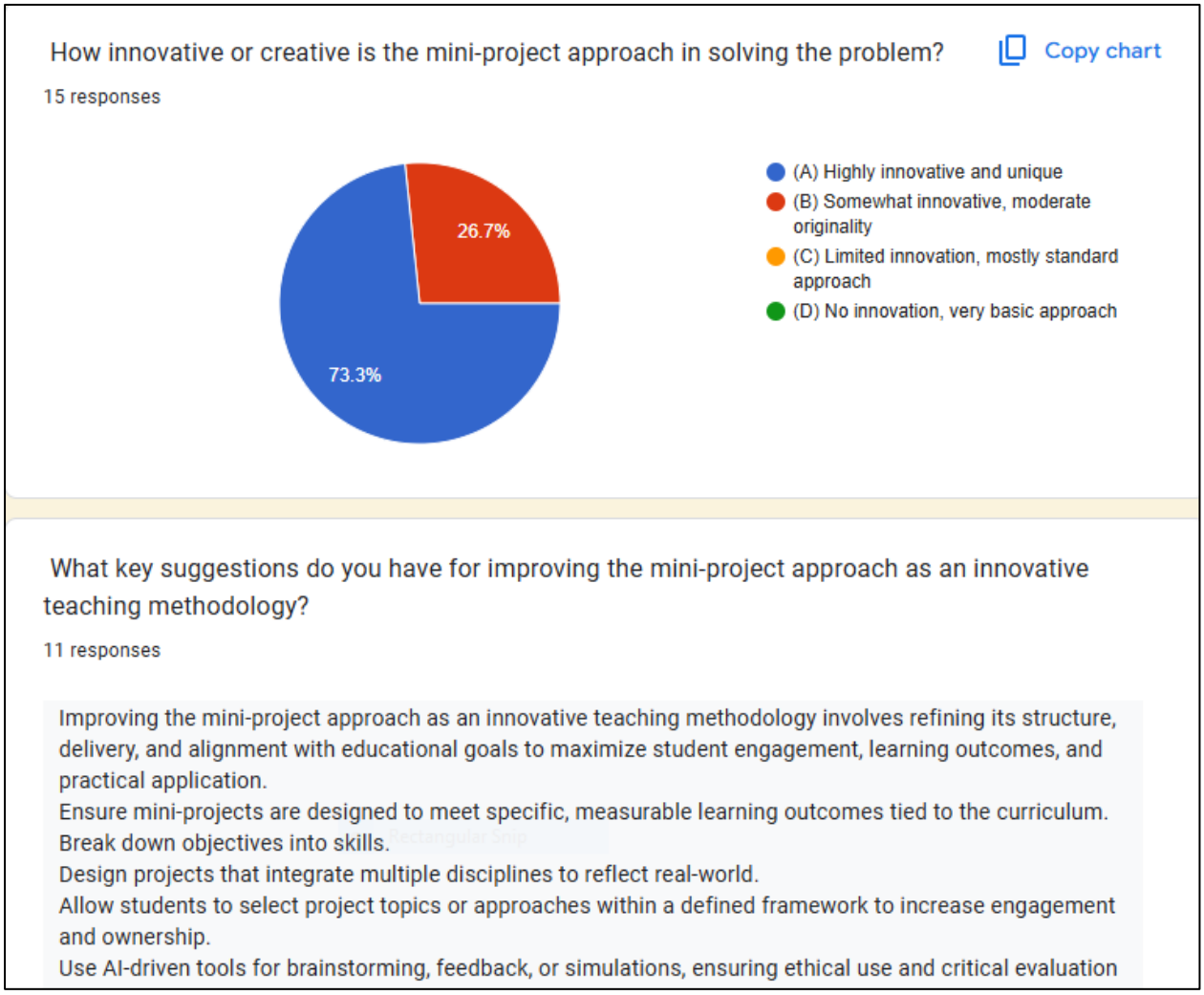
Innovative Practices	Goals	Context
Mini Project-Based Learning in Blockchain	To enhance engagement, conceptual understanding, and practical application of blockchain through hands-on projects.	Projects simulate real-world scenarios (e.g., supply chain, voting systems). Students use tools like Solidity, Truffle, and MetaMask to build DApps. Faculty guides teams through ideation, implementation, and demo phases.

Table 5.5.1 B:I Innovative Practices

S.N.	Name of Faculty	Subject	Innovative Practice
1	Dr. N. M. Kandoi	Blockchain Fundamentals	Concept-to-Prototype: Mini Project-Based Learning

Peer Review and Critiques (Table 5.5.1-c)

Subject	Teaching Method	Peer Review Feedback	Actions Taken/Planned
Blockchain Fundamentals	Mini Project-Based Learning	• Projects improved engagement but needed clearer rubrics for evaluation. • Suggested adding industry mentorship. https://forms.gle/hxXnHvYZsE7sXN8w8	✅ **Rubrics standardized** for milestones. ✅ **Industry talks** planned for next semester.



Sample responses collected with Google form

Work Reproduced by Other Scholars

Title of Work	**Faculty Conducting Original Work**	**Faculty Reproducing/Developing Work**	**Actions for Reproduction/Development**
Mini Project-Based Learning	Dr. N. M. Kandoi	Dr. J. M. Patil	Expanded to include **cross-disciplinary** IoT projects.

Categorized Outcomes (Sample)

Level	**Project Examples**
Basic	• Blockchain Transaction Simulator • Blockchain Visualization with Merkle Tree Tampering Detection
Intermediate	• Decentralized document verification using IPFS.
Advanced	• Supply chain DApp with consensus mechanisms.

Statement of clear goals, use of appropriate methods, significance of results, effective Presentation and reflective critique

The following innovative practices have been adopted for the subject *Blockchain Fundamentals*:

Department: Computer Science & Engineering

Semester: VII (CGS)

Subject Code: 7KS05

Subject Name: Blockchain Fundamentals

Subject Teacher: Dr. N. M. Kandoi

Title of Innovative Teaching Method: Concept-to-Prototype: Mini Project-Based Learning in Blockchain Fundamentals

Component	Details
Goals	• Foster student engagement through active learning. • Deepen conceptual understanding of blockchain principles. • Develop practical skills via hands-on mini projects. • Simulate real-world blockchain applications to bridge theory and practice.
Methods	• Mini project reports and GitHub repositories submitted by teams GitHub repository link - https://github.com/ishangawande55/LogiTrack • Video recordings/screenshots of project demos YouTube video link - https://youtu.be/SeV9Lzpgh6E?feature=shared • Student feedback form summary
Significance of Results	• Improved Conceptual Understanding: 90% of students demonstrated correct understanding of blockchain mechanisms in assessments. • Enhanced Practical Skills: Students deployed working DApps by end of semester. • Increased Engagement: Positive feedback from students about learning through real-world scenarios
Effective Presentation	• Projects conducted in phases: ideation, development, demonstration. Regular submissions via GitHub. • Live demos of deployed DApps using Solidity, Truffle, MetaMask. • Use of real-world scenarios and visual aids. • Evaluation based on technical performance and peer feedback.
Reflective Critique	**Strengths:** • High engagement and practical skill development. • 90% successful DApp deployments. • Positive student feedback. **Improvements Needed**: • Standardized rubrics and clearer milestones. • Include industry mentorship and guest sessions. • Add peer-review checkpoints for early feedback.
POs Mapped	PO1, PO2, PO5, PO12.

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