



SGT UNIVERSITY

SHREE GURU GOBIND SINGH TRICENTENARY UNIVERSITY
(UGC Approved) Gurugram, Delhi-NCR

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Presentation of Best Practice No-01

1 Title of the Practice

“Synergetic (Mindful) Multidisciplinary Young Innovations”

S Systematic
Y Yield
N Novel
E Energetic
R Radical
G Gravity
Y Yearly

2 Objectives of the practice

“Synergy”– a three-day-long yearly Techno-Festival of SGT University, is one of its best practices. It aims to synergize young minds in creativity and orient students towards multidisciplinary research and innovation across different faculties in developing prototype models of proposed solutions to challenges arising in daily life through workable scientific applications.

The technical extravaganza is intended to demonstrate projects in science, technology, and models from medical sciences, management, humanities, arts, fashion, and culture. Establishing industry linkages, patent filing, and entrepreneurial skills development are simultaneously encouraged as an outcome of Synergy. Synergy highlights participation in competitions with innovative ideas to attract and involve the audience.

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3 The Context

In Synergy projects are aligned with solution-centric applications deployable in healthcare, life science, journalism, urban development, agriculture and farming, food and nutrition, transportation and delivery of commodities, disaster management, and many more. Here the students find the right platform to showcase their creativity, coding, and problem-solving skills in building the proof of concept models. These interdisciplinary and technology-driven projects go beyond the regular framework of studies and curriculum of the students. It is also an opportunity for them to network with exponents and professionals from various industries, and official dignitaries during this technical festival of competitions and award-winning opportunities. The Synergy projects are classified into segments, like:

- (1) "Health and well-being" for an individual, families, and communities,
- (2) "Education & Society" – having educational aspects with no boundaries,
- (3) "Technology and Innovation" facilitating process improvement and new product development,
- (4) "Sustainable R&D" to create sustainable products.

4 The Practice

"Synergy" enables students to improve research and development activities with institutional support, which acts as a catalyst to motivate students for research and knowledge creation.

As a part of its uniqueness, contemporary social and other human welfare-related issues are explored by the students with an open-minded approach. The proposals are reviewed and shortlisted by subject experts for a simple solution feasible with the given framework that can be presented to a larger audience in a manner that is relatable and convincing in portraying models.

The open and fair hand-holding discussion with faculties and other cross-functional in-house experts makes the Synergy preparatory platform unique by sharing research ideas, and adhering to quality processes – irrespective of the complexities involved. The process also visualizes futuristic supports through the availability or setting up of incubation centers, proper policy implementation for consultancy by local entrepreneurs, and case building approach for extramural funding of research projects.

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The projects are reviewed and shortlisted by subject matter experts considering the present and ever-increasing future of the industrial world relating to the industrial sector and encourage conceptualization and design thinking skills.

SGT University, as an HEI, facilitates proper infrastructure, allocates research grants and intramural funds, smooth administrative support, accessibility to e-resources, high-speed internet facilities, etc. The institute provides a separate and dedicated team to look after project activities including financial activities and procurement, thereby shouldering accountability for the project's progress and allowing students to focus on development.

In Synergy students improvise projects streamlined into outcomes areas like (1) Innovative Agricultural Practices, (2) Healthcare Challenges, (3) Resource Management, (4) Alternative Energy Usage, (5) Waste Management, (6) Communication Technology Applications, (7) Gadgets for differently-abled people, (8) Environmental Concerns, (9) Eradication of Poverty & Hunger, (10) Efficient transportation and (11) Computerized diagnosis of human diseases.

The seeds of Synergy were sown in the year 2017 and were rolled out with an aim to synergize young minds to be creative and innovative by supporting students and faculty members for research and innovation. In a learning environment, our students explore and experience the numerous possibilities in the world today. The university invites students from various other educational institutions from Delhi-NCR to this technical feat to witness. Synergy held in 2017, 2018, 2019, and 2022 were visited by thousands of students from more than 300 schools and colleges in Delhi, at the SGT University campus, Gurgaon.

5 Evidence of Success

Synergy was conceptualized to collaborate innovative concepts and fresh ideas that students can stage and demonstrate through their technical abilities. It is designed for students to think out of the box solutions to address challenges in the real world. Eminent personalities and judges from reputed universities like DU, NSIT, and industry leaders from IBM, Apple, Honda, and DRDO grace the judges panel.

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In Synergy 2022, Haryana Governor Sh. Bandaru Dattatreya was the chief guest of the concluding ceremonies. Dr. Subhas Sarkar, Union Minister of State for Education and Sh. Atul Kothari National Secretary, Shiksha Sanskriti Utthan Nyas, were the guests of honor in the 3-days event.

It hosted over 22,000 students from 180+ schools and over 40 colleges across the Delhi-NCR region. In this magnum-techno-fest, rich technical innovations like MRI Gloves, Forensic Drones, Electric Bike, Electric Cycle, Electric Go-Kart, and Electric Vintage Car were displayed. Students also showcased various projects in the domains of robotics, electric vehicles, supplementary healthcare tools, and related gadgets.

The Synergy results and outcome envisage possibilities and conceptualizations of start-ups, new research initiatives, and readiness for extramural funding with the availability of prototypes – all with an attempt to make education employment and research-oriented, as oriented in the New Education Policy (NEP-2020). It also ensures quality education to students through hands-on exposure beyond the regular curriculum, thereby playing a significant role as an HEI and supplementing the amalgamation of technology, innovations, and research for wading towards 'Atmanir bhar Bharat'.

6 Problems Encountered and Resources Required

In this modern era of fast technological development, strengthening the research environment is important. SGT University is constantly striving to level such R&D needs for its students to facilitate

- (1) practical learning (communication, writing, presentation, filtering study materials),
- (2) mentoring opportunities to connect to industry experts having specific skills and knowledge,
- (3) value-added support to researchers for first-hand experience with research projects
- (4) instrument sharing with cross-faculties in time-division
- (5) sustainable research result repository as a ready reference of experimental results, set-up, etc.

Implementation of Synergy, with such existing issues, tries to enable the resources through adequate funding, and provisioning of required logistics and infrastructure. Such initiatives by SGT University align with the vision of NEP-2020 of multidisciplinary research culture as the

need of the times, bridging the academics, industry-oriented research, innovation, and digital transformation required in higher education in today's context. Participants across educational fraternities with diverse academic backgrounds attended the technical festival to substantiate enhanced research scope among the students.

7 Notes (Optional)

SGT University is passionate about grooming the nation's youth into good human beings and excellent professionals with an aim to make our students innovative, inclusive, and extraordinary. In Synergy, students are encouraged to share ideas and best practices to promote cooperative action by sharing and caring, timely delivery, strengthening collaboration and removing implementation hurdles, develop an appropriate knowledge repository for reference to research-oriented results.

It also enables the students to experience connecting and collaborating with industries to understand new or improved products, provide enhanced services and productivity, public engagement and community reach out, and align research output to spawn an opportunity (growth, start-up, social cause). The three-day-long technical festival trends to promote and develop a research ecosystem to explore new functional and operational ideas of such a research ecosystem.

In general, Synergy strengthens the inquisitiveness of students towards sustainable research & development, and grooms them with technology and innovation, for new product development.


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