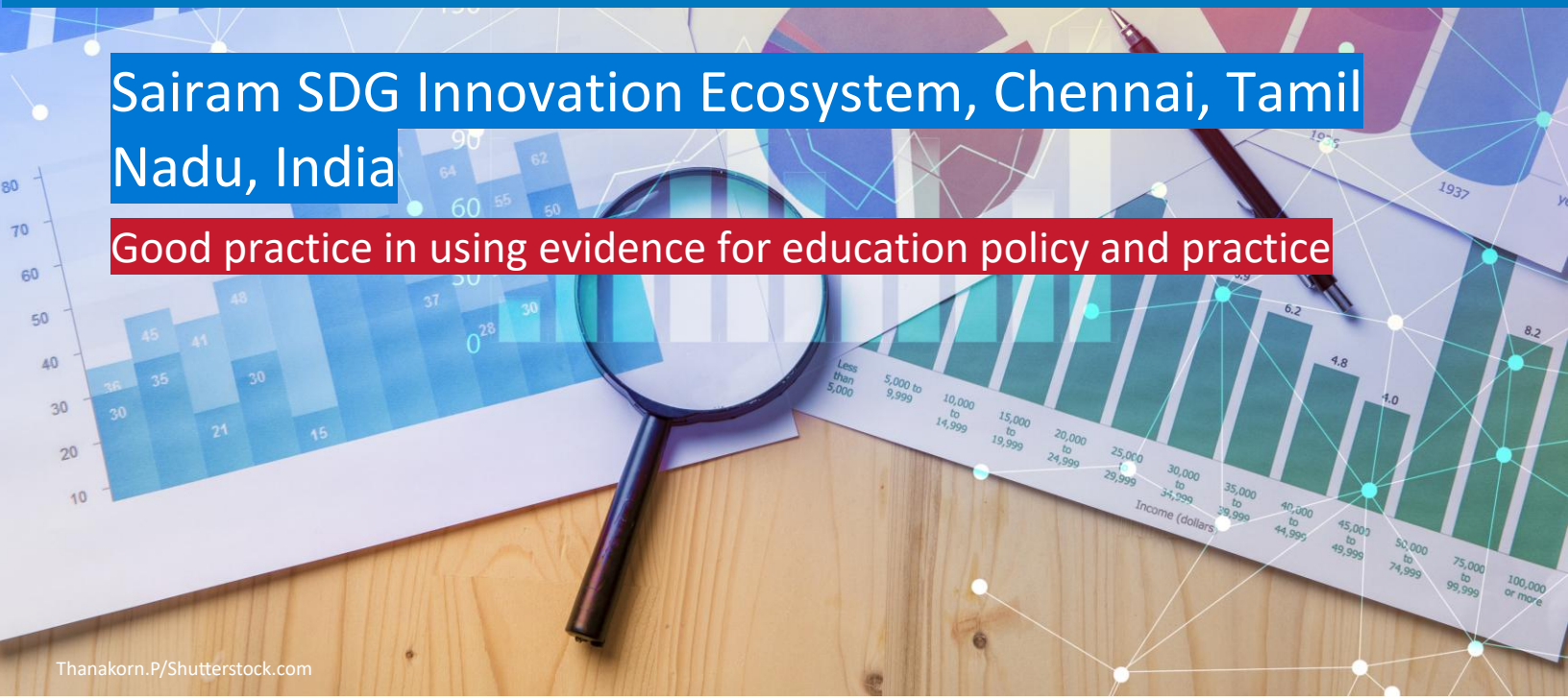
Sairam SDG Innovation Ecosystem, Chennai, Tamil Nadu, India

Good practice in using evidence for education policy and practice



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Overview

Summary

The Sairam SDG Innovation Ecosystem is a transformative educational paradigm integrated as a 16-credit, compulsory four-stage course across the entire four-year degree program. It was created to solve the critical challenge of students outsourcing or purchasing final-year projects, which undermined genuine innovation and graduate employability.

The program guides students through sequential stages—Ideathon, Solveathon, Innovathon and Inspirathon—moving them from problem identification aligned with UN Sustainable Development Goals to prototype development, patenting and startup commercialization. This structured, hands-on model fosters an entrepreneurial mindset and advances the vision of "One Student – One Startup."

Its designation as a good practice is supported by clear, quantifiable outcomes, including a substantial increase in patents (from 3 to 126), the establishment of 50 student-led startups and a significant rise in institutional NIRF Research and Professional Practice scores (from 7.7 to 18.65). The initiative has also demonstrated measurable impact on student career outcomes, with notable improvements in employability, including an increase in TCS recruitment from 177 to 568 students.

Organization (Relevant Website)

Sri Sairam Engineering College, host institution of the Sairam SDG Innovation Ecosystem (https://innovation.sairamgroup.in/)

SDG 4 target(s)

4.3 Equal access to technical/vocational and higher education; 4.4 Relevant skills for decent work; 4.7 Education for sustainable development and global citizenship; 4.a Safe, inclusive and effective learning environments

Thematic area(s)

TVET / skills for work; Alternative education and learning; Curriculum and learning assessment; STEM / STEAM education; Youth engagement; Teachers, teaching and the teaching profession

Policy stages(s)

Policy Implementation; Policy monitoring; Policy evaluation

Timeframe

The policy, known as the Sairam SDG Innovation Ecosystem, was formally developed and implemented in phases beginning in the academic year 2020-2021 and continuing through to 2025.

Development and initial Implementation commenced with the first cohort in the 2020-2021 academic year *(Ideathon 1.0)*.

Under the 2.0 Series, the structured four-stage model was implemented according to the following timeline:

- Ideathon 2.0: Inaugurated on 20 December 2021
- Solveathon 2.0: Implemented from 15 September 2022 to 21 April 2023
- Innovathon 2.0: Implemented from 19 October 2023 to 20 March 2024
- Inspirathon 2.0: Implemented from 4 July 2024 to 21 February 2025

Context

The Sairam SDG Innovation Ecosystem was conceptualized to address a critical limitation in traditional higher education: the widespread practice of students outsourcing or purchasing their final-year projects. This practice significantly compromised the authenticity of learning, widened the gap between academic training and industry needs and ultimately contributed to graduate unemployability.

This challenge was rooted in the existing curriculum structure, which required students to begin their projects late in the program (typically in the sixth or seventh semester). At this stage, students faced intense pressure to secure job placements, clear academic arrears or prepare for overseas opportunities. As a result, engagement with innovation was often minimal, stifling creativity and limiting the development of market-ready solutions and patentable intellectual property (IP).

The core objective of the program was to transform students from passive learners into proactive job creators by instilling an entrepreneurial mindset from their first year onward and embedding innovation as a compulsory, credit-bearing component of the curriculum. The initiative aimed to nurture ideas aligned with the UN Sustainable Development Goals (SDGs) into viable startups and patented technologies, advancing the vision of "One Student, One Startup."

The primary beneficiaries of this policy are youth (college-age students), who transition from learners to entrepreneurs. Secondary beneficiaries include the Sairam Institutions (through enhanced NIRF ranking and IP output), Industry Partners (through collaboration and access to market-ready talent) and the Broader Community, which benefits from SDG-aligned, socially responsible solutions.

Description of the good practice

Evidence used

The policy, recognized as a good practice, relied primarily on empirical and outcome-based evidence collected internally by the institution to justify its development and to assess its effectiveness.

What Evidence Was Used and Why Was It Selected

The evidence base consisted mainly of quantitative data supplemented by anecdotal insights, highlighting the limitation of the existing curriculum in producing skilled and employable graduates.

- Anecdotal Evidence of the Problem (Situation Analysis): Faculty experience – particularly observations from a senior faculty member with 23 years of teaching experience – highlighted a pattern of "minimal seriousness" among students in their final years. This included frequent instances of students outsourcing or purchasing final-year projects, which served as a primary justification for the policy intervention.
- Outcome-Based Evidence of Systemic Gaps (Agenda Setting): Institutional performance indicators revealed weak innovation outcomes, including low patent filings and poor NIRF Research and Professional Practice (RP) scores (7.7 in 2020). These indicators demonstrated a clear gap between curricular intent and actual innovation output.
- Measurable Performance Data (Monitoring and Evaluation): The effectiveness of the new ecosystem was assessed using concrete performance indicators, including a substantial increase in patents (from 3 to 126), improvement in NIRF RP scores (from 7.7 to 18.65) and enhanced placement outcomes (TCS recruitment increasing from 177 to 568). These metrics were central to ongoing policy monitoring and evaluation.

The evidence was selected because it was direct, measurable and closely aligned with both academic quality indicators (patents, NIRF rankings) and graduate outcomes (employability and startups).

Evidence Access and Adaptation

- Who Provided the Evidence: The evidence was primarily internal, generated by faculty and academic staff who identified the shortcomings of the existing system and by institutional management, which systematically tracked patents, NIRF scores and placement data.
- Access Challenges: No significant challenges were reported in accessing this internal evidence. The data (patents, NIRF scores, placement numbers) were quantifiable and centrally tracked by the institution.
- Relevance and Adaptation: The evidence was highly relevant to the local context. By focusing on Indian national metrics such as the NIRF ranking and addressing the common issue of outsourced projects, the Sairam SDG Innovation Ecosystem was directly adapted to solve a localized academic integrity and employability challenge. The solution—making innovation a

compulsory, credit-bearing course starting in the first year—was a direct response to the identified problem.

Stakeholder engagement

The Sairam SDG Innovation Ecosystem operates through a strong multi-stakeholder partnership that ensures a continuous exchange of expertise, resources and real-world problem statements. Institutional leadership, led by Dr. C.R. Rene Robin (Dean – Innovation), provides the vision, policy framework and full financial sponsorship for the compulsory 16-credit innovation course.

Faculty members serve as key implementers, acting as mentors, conducting capacity-building workshops and tracking outcome metrics such as patents and NIRF contributions. External collaborators—including IITM Research Park, LTI Mindtree, Startup TN and SIRD&PR—function as knowledge partners by offering industry mentorship, funding pathways, market access and authentic social problem statements.

Students remain the primary beneficiaries, evolving from passive learners to active innovators, with more than 50 becoming startup founders and patent holders. The ecosystem's most effective collaboration strategy is the structured two-way flow of information enabled through mandatory engagement programs. External agencies supply real, native problems through immersion initiatives (such as SIRD&PR and FORGE), ensuring student innovations address community needs.

In return, these partners gain market-ready solutions and validated student startups, completing a full innovation cycle that transforms student projects into impactful economic and social outcomes.

Process of using evidence in policy development or implementation

The policy development and implementation of the Sairam SDG Innovation Ecosystem followed a structured, evidence-based approach, directly using observed shortcomings in the traditional curriculum to drive institutional change.

The process began with Situation Analysis/Agenda Setting, where the core evidence was faculty observation and anecdotal data revealing that students were outsourcing or purchasing projects due to high-pressure final-year factors (job placements, academic arrears and other commitments). This empirical failure informed Policy Formulation/Planning, where quantitative evidence of low patent output (3 in 2021) and poor performance in the NIRF Research & Professional Practice (RP) score (7.7 in 2020) necessitated the shift to a compulsory, credit-bearing, four-year innovation mandate.

Policy Implementation was directly shaped by this evidence. To overcome final-year pressure, the policy introduced a mandatory, credit-bearing, four-year course (Ideathon, Solveathon, Innovathon, Inspirathon) beginning in the first year. Finally, Policy Monitoring and Evaluation relies on continuous tracking of quantifiable outcomes – such as patents increasing to 126, NIRF RP score rising to 18.65 and TCS recruitment increasing from 177 to 568 – to validate and refine the ecosystem.

Resources and Challenges

The project's financial requirements were fully met by the Sairam Institutions Management, which sponsored the ecosystem, including prototyping and mentorship, thereby removing financial barriers for students. Human resources included the Institutional leadership, faculty members and extensive engagement from Industry experts (e.g., IITM Research Park) to provide guidance.

The main challenge was achieving a paradigm shift—convincing stakeholders to move from an elective, late-stage project model to a mandatory, credit-bearing innovation mandate starting in the first year.

This was addressed through strong sponsorship commitment and institutional sponsorship, and was quickly validated by the measurable increase in patents and placement outcomes.

Outcomes and insights

Results and impact of the evidence-based policy - 5Capacity and sustainability

The Sairam SDG Innovation Ecosystem has produced concrete, quantifiable outcomes that validate its success as a best practice, particularly in contributing several SDG 4 targets.

Concrete Results and Outcomes (Quantifiable Data)

The practice led to a significant jump in institutional and student performance, reversing the trend of minimal seriousness and project outsourcing:

- Startup Creation: The program has supported the creation of 50 student-led startups and entrepreneurs, with many securing funding through incubation grants, investor and institutional investments.
- Intellectual Property (IP): Patent filings increased dramatically from 3 in 2021 to 126 in 2024.
- Institutional Excellence: The initiative improved the institution's score in the national NIRF Research and Professional Practice (RP) parameter from 7.7 (2020) to 18.65 (2024).
- Employability: Placement outcomes showed substantial improvement, with TCS recruitment rising from 177 students in 2023 to 568 in 2025.
- Innovation Volume: The ecosystem generates approximately 2,700 innovative SDG-aligned ideas annually.

Impact on SDG 4 Targets

The practice directly supports the following targets under Sustainable Development Goal 4 (Quality Education):

- SDG 4.4 (Relevant skills for decent work): The program's focus on hands-on innovation and commercialization equips students with relevant skills to become job creators and secure decent work, as reflected in improved placement outcomes.
- SDG 4.7 (Education for sustainable development and global citizenship): By requiring all ideas to address challenges aligned with the UN SDGs, the policy strengthens education for sustainable development and social responsibility.
- SDG 4.3 (Equal access to technical and higher education): By making the innovation process a compulsory, credit-bearing component of higher education and absorbing all costs through management sponsorship, the program ensures equal access to high-quality technical education and skills development for all students.

Measurement and Assessment

The results and impact are measured through both internal (institutional) and external (national) assessment frameworks:

- External Measurement: Performance is benchmarked against the National Institutional Ranking Framework (NIRF), where the rise in the Research and Professional Practice (RP) score serves as a third-party validated indicator of the policy's impact on innovation output.
- Internal/Industry Measurement: Success is measured through the quantifiable increase in patents filed, the number of student startups funded, and changes in placement rates with major recruiters such as TCS.
- Process Measurement: The policy's effectiveness is also assessed by achieving its core process goal: eliminating the outsourcing of projects and replacing it with a structured, mandatory four-stage innovation process.

Capacity

The Sairam Institutions' policy-makers demonstrated a high capacity to interpret and apply evidence, largely because the evidence used was internal, quantifiable and directly aligned with the institution's primary goals (NIRF ranking and graduate employability).

- Necessary Skills and Knowledge: Key policy-makers, led by Dean (Innovation), Dr. C.R. Rene Robin, possessed the expertise required to interpret institutional performance data (e.g., patent counts, NIRF scores, placement statistics). They were able to link anecdotal evidence of students purchasing outsourced projects (the core problem) to measurable indicators of low innovation output (limited patent and weak NIRF performance), and to formulate a decisive structural response through the compulsory four-stage innovation ecosystem.
- Resources for Application: Policy-makers also secured the critical resource necessary for effective implementation: full financial sponsorship from institutional management. This removed typical resource constraints and enabled immediate execution of the policy, including investments in infrastructure and expertise such as faculty-led workshops and industry immersion programs.

Institutional Support for Evidence-Based Policy

The institution has strongly supported evidence-based policy by embedding the practice into its core academic structure and processes, ensuring continuous data generation and validation:

- Structural Integration (Mandate): The most significant support is the creation of the Sairam SDG Innovation Ecosystem itself, which is not an extracurricular activity but a compulsory, 16-credit course spanning all four years. This structural mandate ensures 100% student participation and compliance, making the policy scalable and enforceable.
- Process for Continuous Data and Research: The four-stage model (Ideathon, Solveathon, Innovathon, Inspirathon) functions as a built-in mechanism for continuous data collection and research.
- Data Availability: The final stage, Inspirathon, is designed to generate measurable outputs, specifically tracking patents filed and the launch of registered startups (e.g., contributing to the rise from 3 to 126 patents).
- Validation: Results are externally validated through improvement in the NIRF Research &

Professional Practice score, alongside measurable gains in employability figures (e.g., 568 recruits hired by TCS).

- Capacity Building: The institution ensures the policy's effectiveness by investing in human resources, including faculty-led capacity-building workshops and engagement with key external partners (such as IITM Research Park and LTI Mindtree) for professional mentorship and technical expertise.

Sustainability

The Sairam SDG Innovation Ecosystem is designed for long-term sustainability and continuous expansion, achieved through structural integration, financial autonomy and outcome validation.

Plan for Continuing and Expanding the Practice

The prospect for continuing and expanding the good practice is high due to its mandatory integration and measurable success:

- Structural Continuation: The program is sustained automatically as a 16-credit, compulsory course integrated into the core curriculum across all four years. This academic mandate ensures continuous participation by every student cohort, making it an indispensable part of the educational process rather than a temporary initiative.
- Vertical Expansion (Depth): The model is self-sustaining in its goal to create job creators. With over 50 student-startups already established and funded, these ventures create a perpetual alumni network that mentors and invests in new cohorts, generating a flywheel effect for innovation. The success of the IP Clinic (increasing patents from 3 to 126) ensures a continuous output of intellectual assets, further strengthening the institution's innovation profile.
- Horizontal Expansion (Reach): The policy is designed for expansion across multiple domains, encompassing 35 sectors including AI, AgriTech and FinTech. This broad scope allows the practice to adapt to emerging technologies and collaborate with a diverse range of industry partners.

Measures for Sustaining the Policy Over Time

The institution has implemented or will implement the following measures to ensure the policy's longevity and impact:

- Financial Autonomy: The ecosystem is fully sponsored by institutional management, providing stable internal funding independent of fluctuating external grants. This financial certainty enables long-term planning for infrastructure and capacity building.
- Outcome-Based Validation: Sustainability is secured through verifiable, progressive results. Continuous improvement in NIRF Research & Professional Practice scores and substantial increase in employability rates serve as clear evidence of the policy's value, ensuring ongoing leadership support and resource allocation.
- Partner Integration: Formal collaborations with major entities such as IITM Research Park, LTI Mindtree and Startup TN ensure the ecosystem remains relevant, receiving mentorship, technical guidance and external funding opportunities over the long-term.

- Capacity Development: Faculty-led workshops and the continuous upskilling of internal faculty maintain the human capital necessary to implement the program effectively for future cohorts.

Lessons learnt

The core lesson from the Sairam SDG Innovation Ecosystem is that innovation cannot be an optional, last-minute activity; it must be a structural, credit-bearing commitment enforced early in the academic journey.

What Worked Well and Why

The greatest success was the structural integration of the ecosystem: making the four-stage model (Ideathon-Inspirathon) a 16-credit, compulsory course starting from the first year. This eliminated the option for students to outsource projects and ensured 100% participation and continuous engagement before final-year pressure (placements, arrears) set in. Complete financial sponsorship by management was a critical enabler, removing all financial barriers and allowing students to focus entirely on innovation, which led to the surge in patents and startup formation.

Challenges and Obstacles

The primary challenge was overcoming the paradigm shift: resistance from stakeholders (including students and, initially, some faculty) to move from an elective, final-semester project to a mandatory, four-year commitment. This was addressed through strong sponsorship and leadership mandate from the CEO and Dean and later validated by tangible outcomes such as improved NIRF scores and higher placement rates. Another challenge was ensuring the quality and social relevance of ideas, which was addressed by mandating alignment with the UN SDGs and using immersion programs (SIRD&PR, FORGE) to focus on native, real-world problems.

Recommendations for Adoption

For institutions intending to adopt this model, the key recommendations are:

- Mandate It: Integrate innovation as a compulsory, credit-bearing course (not extracurricular) from the very first year.
- Ensure Sponsorship: Secure full financial backing from management to cover prototyping and initial incubation costs, making the program free for students.
- Validate Outcomes: Use quantifiable metrics (patents, startup registration, national rankings such as NIRF) to demonstrate policy efficacy and secure sustained support.
- Emphasize Relevance: Ensure that ideas address local or native problems (SDG alignment) through structured industry and social immersion programs.

This practice offers a proven, structural method to address the widespread challenge of low graduate employability and limited authentic student innovation across technical institutions.

Additional information

https://innovation.sairamgroup.in/