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CRISIL MI&A - Assessments

Impact Assessment of Siemens Scholarship Program Batch VI

Siemens India

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Overview of the STEM scholarships in India

Education is a fundamental driver of economic growth and social development, serving as a vital tool for individual empowerment and national progress. In India, a country with a burgeoning population and rapidly growing economy, education holds immense significance in equipping individuals with the skills and knowledge necessary to thrive in the workforce. According to the 2011 Census, approximately 19.1% of India's population falls within the 15 to 24 age brackets, presenting a significant demographic dividend that could propel the nation towards sustained economic development. However, access to quality education remains a significant challenge, particularly in science, technology, and engineering (STEM) fields such as engineering.

India's goal of increasing the share of manufacturing to 25% of GDP by 2025[1] underscores the urgent need for a skilled workforce, particularly technicians and engineers who can support the growth of this sector. Unfortunately, there is a substantial gap between the demand for skilled personnel and their availability, which could hinder India's growth trajectory if not addressed. Scholarships play a crucial role in bridging this gap by providing financial support to students from economically deprived backgrounds, enabling them to pursue higher education in engineering and related fields.

Throughout history, the Indian government has implemented various initiatives to advance educational objectives. These include the establishment of the first Education Commission in 1964, the introduction of the Sarva Shiksha Abhiyan (SSA) in 2001 aimed at universalizing elementary education, the implementation of the Right to Education Act (RTE) in 2009 ensuring free and compulsory primary education for children aged 6 to 14, and the launch of the National Education Policy (NEP) in 2020, aimed at transforming the education system to meet the needs of the 21st century. These initiatives demonstrate a commitment to improving access to quality education and fostering holistic development across the country. The Indian constitution recognizes the right to education under article 21-A and the government has prioritized enhancing the education sector. The total expenditure on education is estimated to increase from Rs.1,08,878 crores in 2023-24 to Rs.1,24,638 crores in 2024-25.[2]

Despite the constant efforts to improve the access to quality education, the Indian education system faces several challenges that hinder its ability to produce a skilled workforce capable of meeting the demands of the modern economy. Despite significant progress in expanding access to education, disparities persist in terms of quality, infrastructure, and outcomes. Technical education faces several issues, including outdated curricula, inadequate infrastructure, and a lack of alignment with industry needs.

In 2022, only 52% of engineering graduates in India were employed due to a lack of industry-relevant skills and competencies.[3] This highlights the pressing need for reforms in technical education to ensure that graduates are equipped with the knowledge and skills required by the industry. Moreover, financial constraints continue to be a significant barrier to higher education for many talented students, particularly those from financially disadvantaged backgrounds. This underscores the importance of scholarships in making higher education accessible to students who might otherwise be unable to afford it.

India has a range of scholarships aimed at supporting students in the fields of STEM. These scholarships are offered by the government, private sector, and non-profit organizations, each with specific eligibility criteria and benefits. Despite the availability of scholarships, several gaps persist in the education and scholarship system in India, hindering their effectiveness in promoting equitable access to quality education. Some of the key challenges include:

- **Limited Awareness and Access:** Many students, particularly those from rural and remote areas, are unaware of the available scholarships and the application process. This lack of awareness limits their ability to access financial support, thereby affecting their educational opportunities.

[1] National Manufacturing Policy, Government of India

[2] Union Budget 2024-2025, Government of India *https://www.indiabudget.gov.in/doc/bh1.pdf*

[3] P. Adinarayana Reddy (2014) Evaluation of UGC career-oriented courses on employability of the students in South India, S.V University, Tirupati *https://www.niti.gov.in/sites/default/files/2019-01/venkateshwara_0.pdf*

- **Insufficient Funding:** The demand for scholarships far exceeds the available funding, resulting in a significant number of deserving students being unable to access financial support.
- **Complex Application Processes:** The application processes for many scholarships are often complex and cumbersome, deterring students from applying. Simplifying the application procedures and providing assistance in the application process can help increase the reach and impact of scholarship programs.
- **Geographical Disparities:** Students from rural and remote areas face additional challenges in accessing scholarships due to geographical barriers, limited internet connectivity, and lack of information. Addressing these disparities is crucial to ensure that scholarships reach the most deserving candidates across the country.
- **Gender Disparities:** Female students face additional challenges in accessing education due to gender barriers, cultural norms and societal pressure. It is crucial to ensure that women get an equal opportunity to pursue career in STEM fields.
- **Inadequate Support for Holistic Development:** While scholarships provide financial support, there is often a lack of emphasis on holistic development, including mentorship, skill development, and industry exposure. Programs which incorporate mentorship and training components, serve as a model for addressing this gap and ensuring that students are well-prepared for their future careers.
- **Alignment with Industry Needs:** There is a difference between the skills imparted by educational institutions and the requirements of the industry. Scholarships should be complemented by initiatives that focus on skill development, internships, and industry collaboration to enhance employability.

In conclusion, while significant progress has been made in expanding access to STEM education, challenges persist in terms of quality, infrastructure, and financial barriers. Scholarships are crucial in addressing these challenges by providing financial support and fostering holistic development among students. To maximize the impact of scholarships, it is essential to address existing gaps in the education system. By doing so, India can unlock the full potential of its human capital, driving economic growth, innovation, and societal progress.

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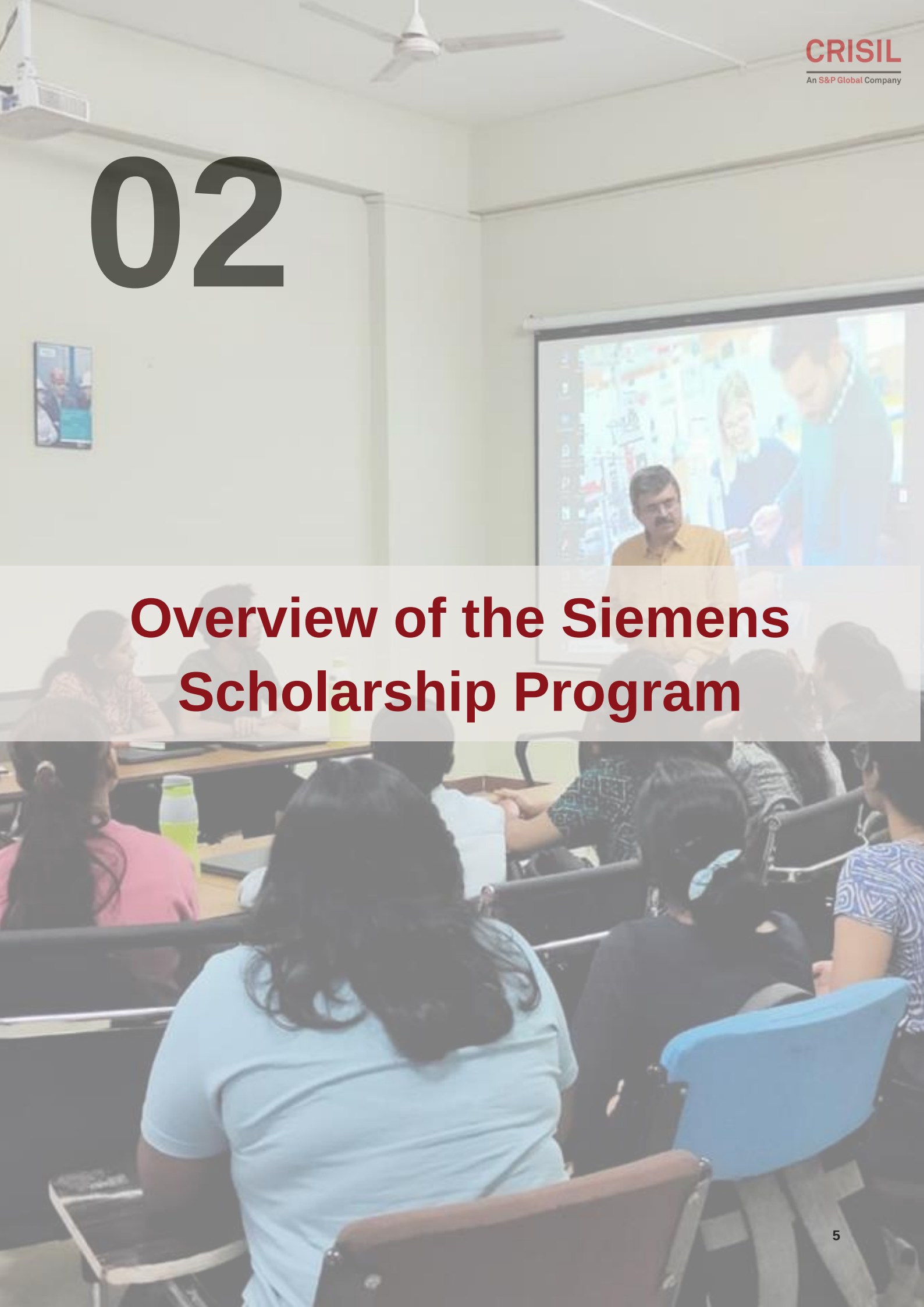


Overview of the Siemens Scholarship Program

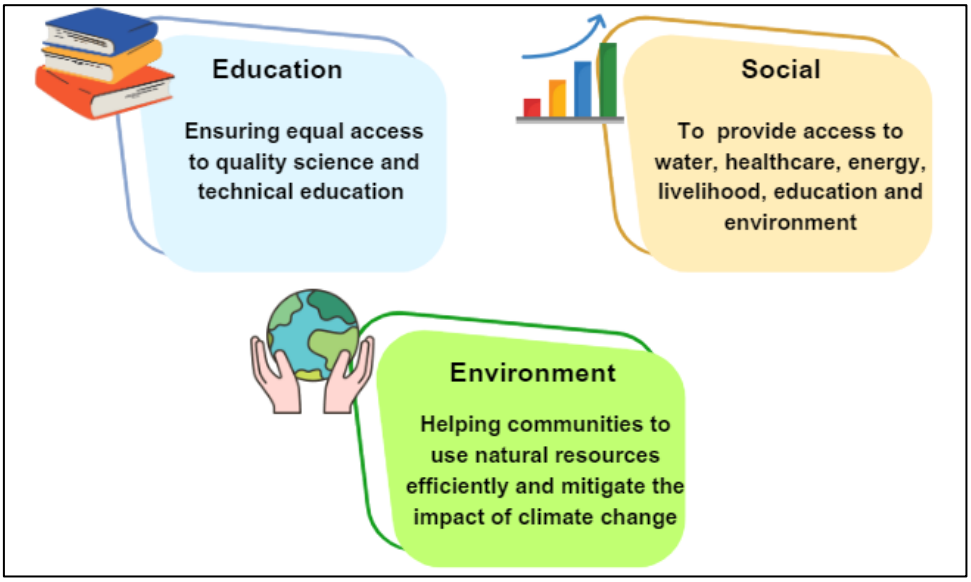
About Siemens

Siemens AG is a multinational conglomerate and a global leader in engineering and technology solutions. The company operates in several sectors, including automation, digitalization, electrification, and healthcare. With a presence in over 190 countries, Siemens is renowned for its innovation and commitment to sustainable development. The company's mission is to leverage technology to address some of the world's most pressing challenges, such as climate change, urbanization, and digital transformation.

Siemens' operations are divided into several business units, each focusing on different aspects of technology and industry. These include Siemens Smart Infrastructure, Siemens Digital Industries, Siemens Mobility, and Siemens Healthineers. Through these units, Siemens delivers cutting-edge solutions that drive efficiency, productivity, and sustainability across various sectors.

Siemens India, a subsidiary of Siemens AG, is a key player in India's industrial landscape. Established in 1922, Siemens India has been instrumental in bringing advanced technologies to the Indian market. The company operates in multiple sectors, including energy, healthcare, industry, and infrastructure. Siemens India's commitment to innovation and excellence has positioned it as a leader in providing solutions that enhance India's industrial growth and competitiveness. The company's operations are supported by a strong R&D infrastructure, with centres across India focusing on developing solutions tailored to the unique needs of the Indian market. Siemens India is also actively involved in supporting the government's initiatives, such as "Make in India" and "Digital India," by providing technologies that drive industrialization and digital transformation.

Figure 1: Focus areas of Siemens India CSR



Siemens India is deeply committed to corporate social responsibility (CSR) and aims to create a positive impact on society. The company's CSR initiatives focus on three key areas: education, social, and environment. By leveraging its technological expertise, Siemens India seeks to contribute to the social and economic development of the communities it operates in. It undertakes projects that focus on energy efficiency, healthcare, energy, livelihood, education and environment, aligning with its global vision of creating a sustainable future. Through these initiatives, Siemens India not only supports economic growth but also ensures that its operations and contributions are environmentally responsible.

About Siemens Scholarship Program (SSP)

Siemens Scholarship Program (SSP) is a pivotal component of Siemens India's CSR initiatives, designed to empower students from poor backgrounds through financial support and creating skilled engineers that are industry ready. The program is committed to ensure that girls have equal opportunity and support to thrive in STEM fields. A unique aspect of the SSP is its focus on holistic development focusing on soft-skills, specialized mechatronics training, cross-functional skills, placement training and industry exposure which contributes to their overall development and industry readiness.

Every year, a new batch of academically brilliant students from low socio-economic backgrounds graduate, many of whom are the first in their families to pursue higher education. SSP is not only creating industry ready engineers, but also empowering a generation of leaders who will break down barriers and pave the way for others to follow. The initiative started with 20 students in the Batch I and grew to 150 students in Batch VI.

This program targets first-year engineering students enrolled in government colleges and offers comprehensive support throughout their undergraduate studies. The program is specifically aimed at students pursuing degrees in Mechanical, Electrical, Electronics, Instrumentation, Electronics & Telecommunication, and Computer Science/Information Technology.

The key features of the Siemens Scholarship Program include:

- **Financial Support:** The program covers tuition fees and provides allowances for books, stationery, hostel expenses, and additional classes. Additionally, students availing of other scholarships must declare them, as the Siemens Scholarship will reimburse the remaining amount.

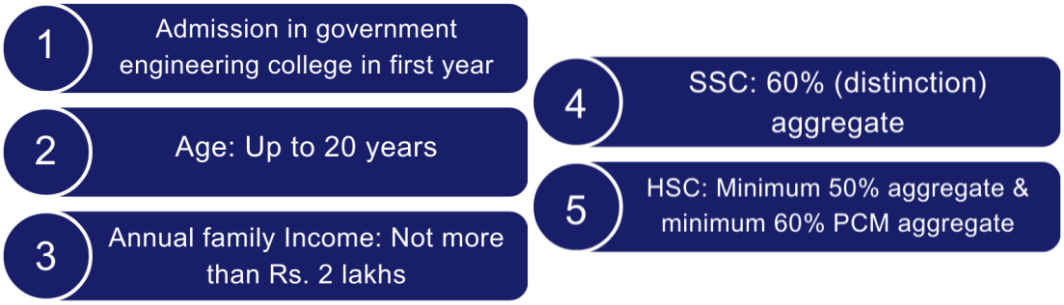
- **Holistic Development:** The program focuses on overall development of the scholars through holistic support. The program offers sessions on soft-skills, vocational training, technical knowledge building and mechatronics training along with various assessments, assignments, workshops and industry visits.

- **Training industry-ready engineers:** The aim of the program is to create industry ready engineers and address the issue of lack of industry-relevant skills and competencies which hinders the employability of graduated engineers and the need of skilled engineers.

- **Merit-Based Continuation:** Students must clear all subjects and maintain a first-class score to continue receiving the scholarship throughout their four-year degree program.

- **Gender Inclusivity:** The program reserves 50% of scholarships for female students, promoting gender equality in engineering education.

Figure 2: Eligibility criteria for SSP

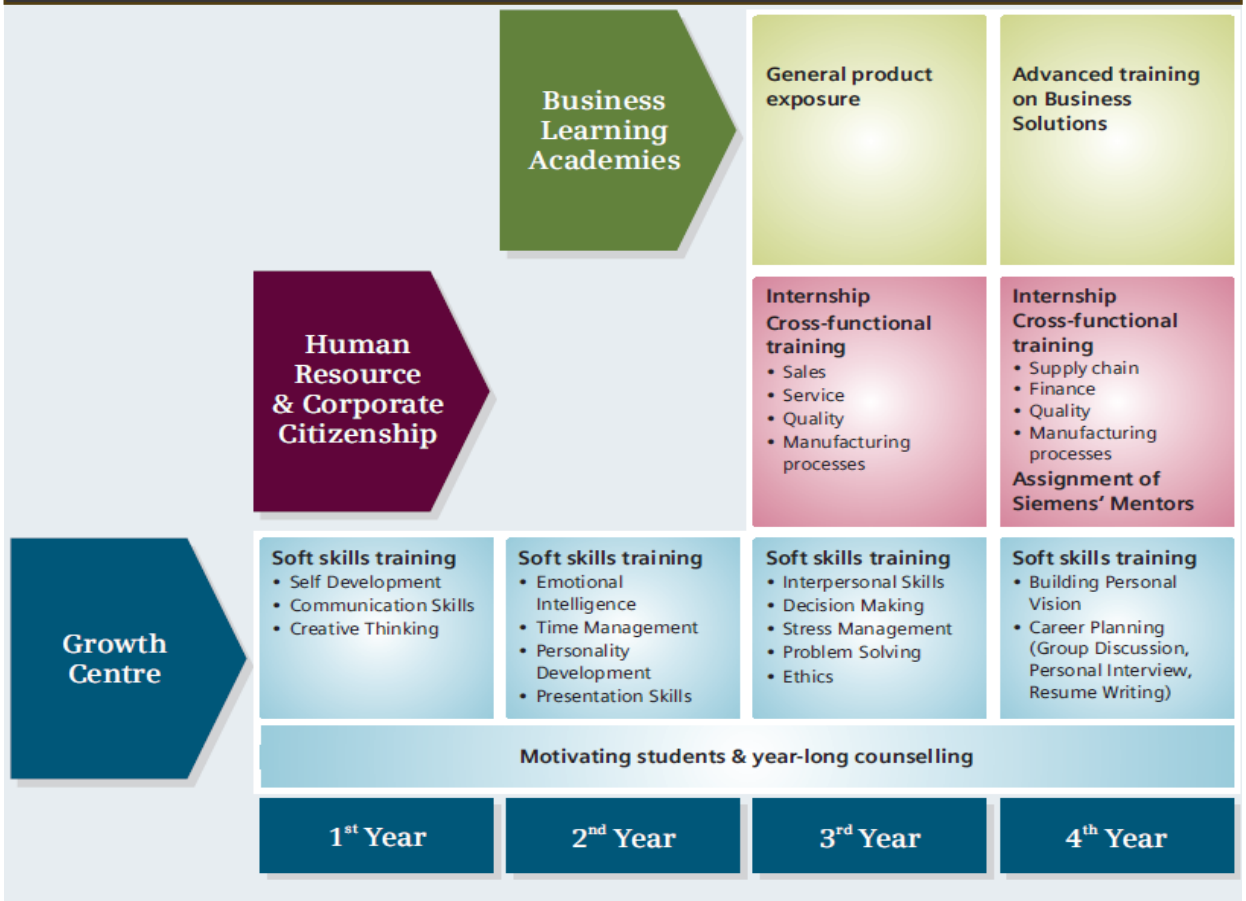


For shortlisting candidates, applicants are required to submit various supporting documents to verify their eligibility and ensure they meet the program's criteria. These documents include an authorized income certificate (indicating an annual income of less than 2 lakhs), a BPL card (if applicable), a school leaving certificate, mark sheets from SSC and HSC examinations, a State CET scorecard, a college admission letter, and fee receipts.

The recruitment procedure for the Siemens Scholarship Program involves several stages. Initially, information is sent to engineering colleges, and applications are invited through the Siemens website. Candidates are then shortlisted based on the specified criteria and are required to undergo an interest and technical test, followed by an interview. After conducting due diligence, the candidates are selected, inducted as scholars, and required to sign a contract. The scholars then embark on their journey of academic and professional growth, supported by Siemens' comprehensive development initiatives.

The scholarship program not only provides financial assistance to deserving engineering students but also emphasizes their holistic development to prepare them as industry-ready engineers. This includes a comprehensive development plan that focuses on soft skills, personality development, and technical training. Through Business Learning Academies, scholars are exposed to general product knowledge, advanced training on business solutions, and cross-functional training in areas such as sales, service, quality, and manufacturing processes. Soft skills training covers critical areas like communication, creative thinking, emotional intelligence, time management, personality development, and presentation skills. Additionally, scholars participate in internships, which provide practical exposure and enhance their understanding of real-world business operations. Moreover, to support their development, scholars receive ongoing mentoring from Siemens mentors, as well as guidance on building personal vision, career planning, and improving employability through group discussions, mock interviews, and resume writing workshops.

Figure 3: Holistic Development Plan of SSP *(source – Siemens SSP Document)*



The SSP initiative exemplifies Siemens India's commitment to fostering education and skill development among underprivileged students. Through financial support, mentorship, and specialized training, the program empowers students to become industry-ready professionals, thereby enhancing their career prospects and contributing to the broader goal of economic growth and social development in India.

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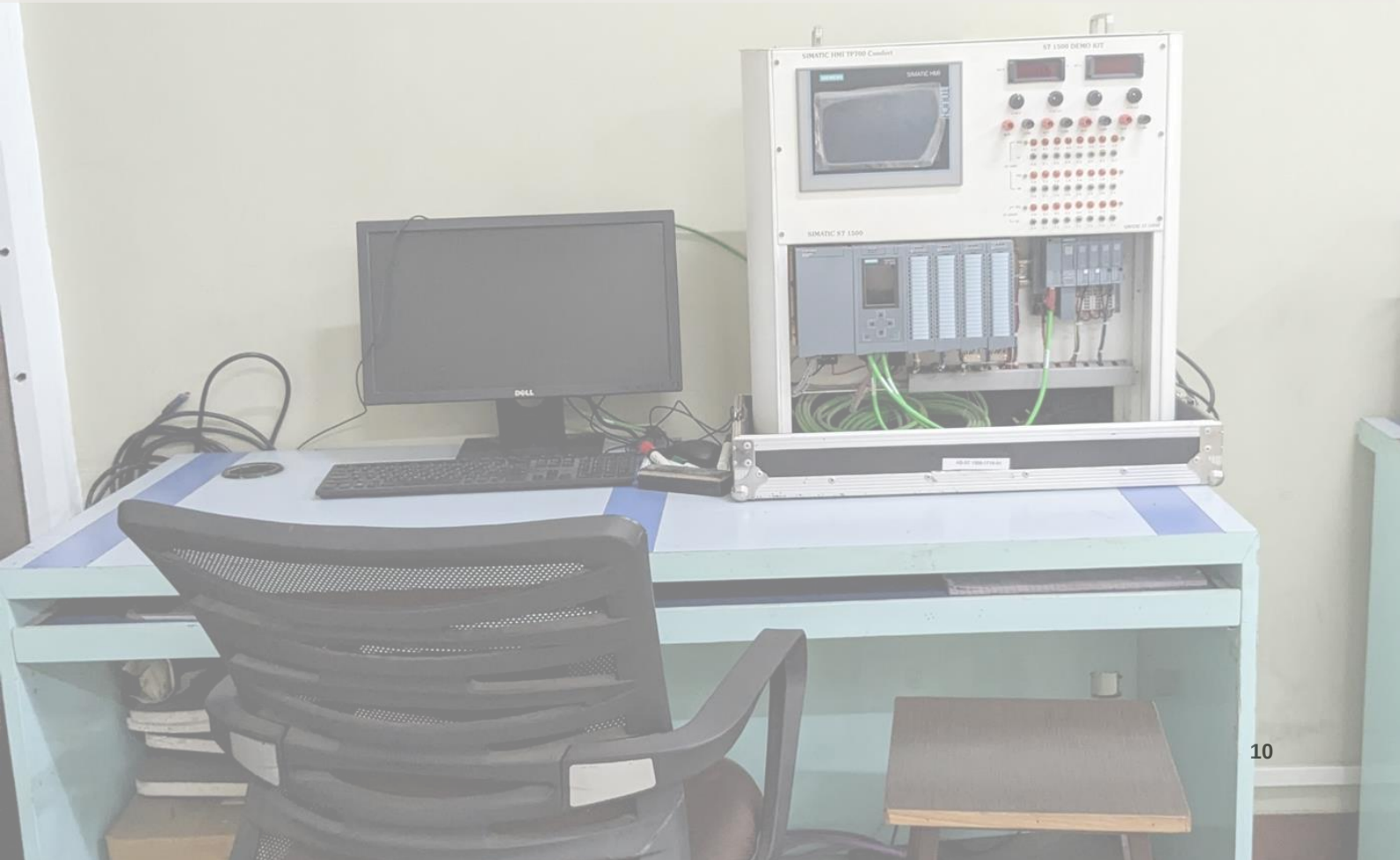
Study methodology



The study has adopted a concurrent mixed method design, in which quantitative and qualitative data are collected through the key program stakeholders. This approach will allow for a comprehensive assessment of the intervention by capturing quantitative evidence, backed by qualitative experiences. Key stakeholders considered for the analysis are as follows:

1. Scholars
2. Parents of Scholars
3. College officials
4. Employee Volunteers
5. Implementation Partners (Mechatronics Centre Team, Growth Centre Team, Ripe Team, SITRAIN Team, Smile Foundation Team)
6. Siemens CSR Team

Quantitative data was collected through a semi-structured survey questionnaire, administered to the direct participants (scholars). The survey focused on the impact and effectiveness of the program on their career and overall life. Qualitative data was collected through in-depth discussions with the scholars, parents of the scholars, and with other key stakeholders. The data focused on the experiences of the scholars regarding the impact of the program and on understanding the gaps in the intervention and challenges faced.

Findings from the quantitative and qualitative data are integrated to provide a comprehensive assessment of the impact of intervention. The integration involved comparing and contrasting the findings from the two data sources to identify any converging or diverging evidence.

The evaluation also maps the impact of the program with the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) framework to determine the merit of an intervention on the basis of six defined evaluation criteria – relevance, coherence, effectiveness, efficiency, impact and sustainability. We have also aligned the impact of the program with the United Nations Sustainable Development Goals (SDGs) and the contribution of the intervention to global efforts.

Sampling

The sampling was at 95% of confidence level, taking in account a 5% margin of error. The study population was Batch VI of Siemens Scholarship Program. The batch enrolled in academic year 2019-20 and graduated in academic year 2021-22.

Stakeholders	Sample	Data collection tool
Scholars	117	Semi-structured survey
Scholars	22	In-depth interview
Parents	6	In-depth interview
College officials	4	In-depth interview
Employee volunteers	11	In-depth interview
Mechatronics trainers	3	In-depth interview
SITRAIN team	1	In-depth interview
Growth Centre team	2	In-depth interview
Ripe Consulting team	2	In-depth interview
Smile Foundation team	2	In-depth interview
Siemens CSR team	2	In-depth interview

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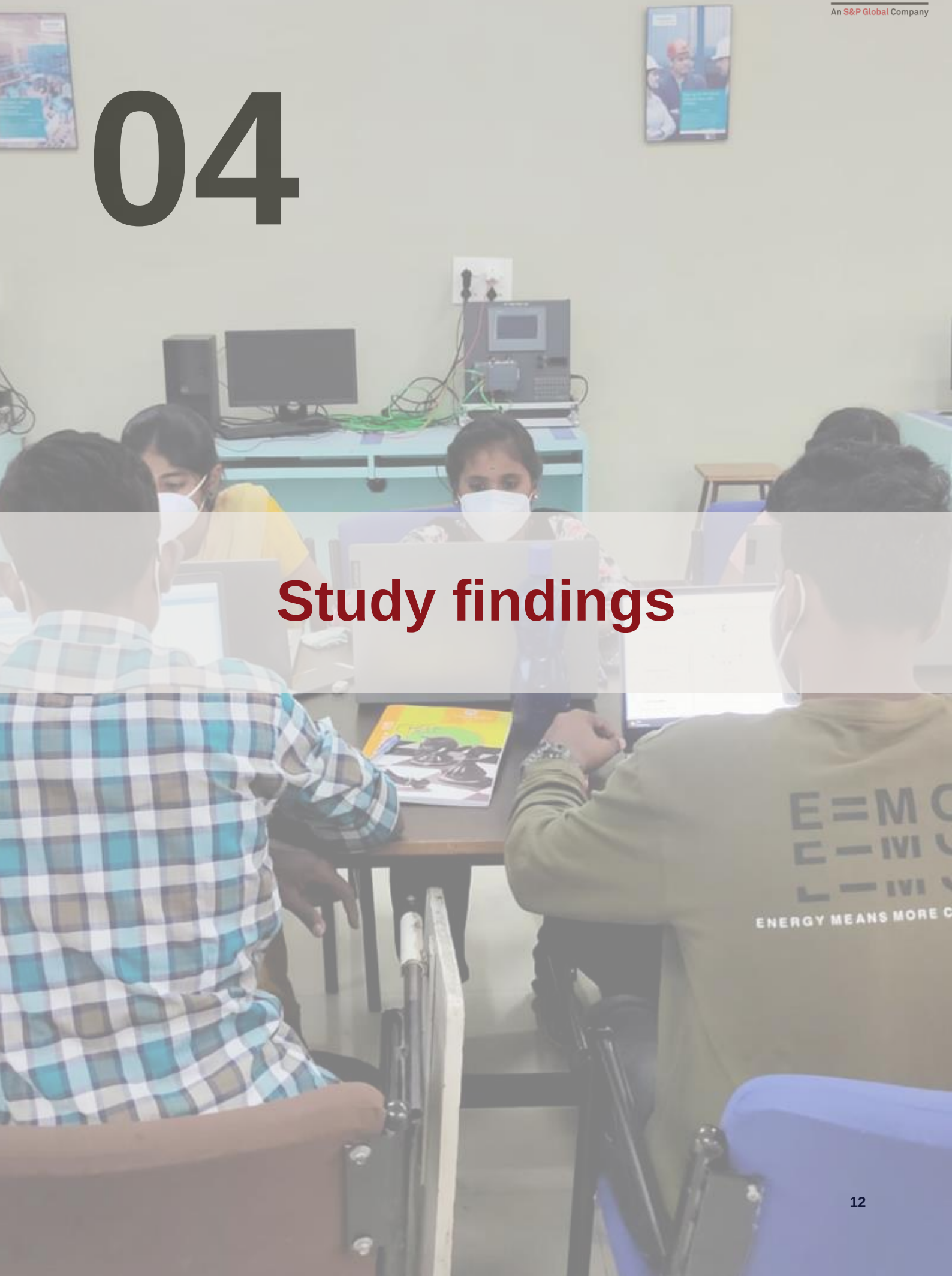


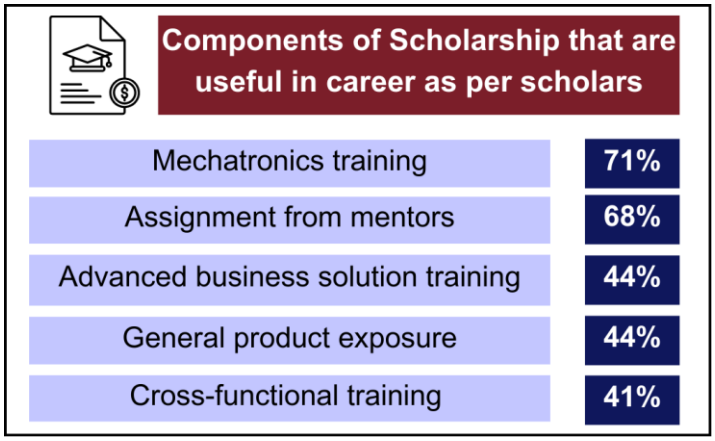
Study findings

The impact assessment captures the holistic impact of the initiative on the scholars. The study involved diverse sample of 117 scholars, which provided a valuable insight into the impact and reach of SSP. The sample consisted of 52% male scholars and 48% female scholars from 16 different states. This section covers the key findings highlight the impact of the program on various aspects of the scholar's life.

Technical Skill Development

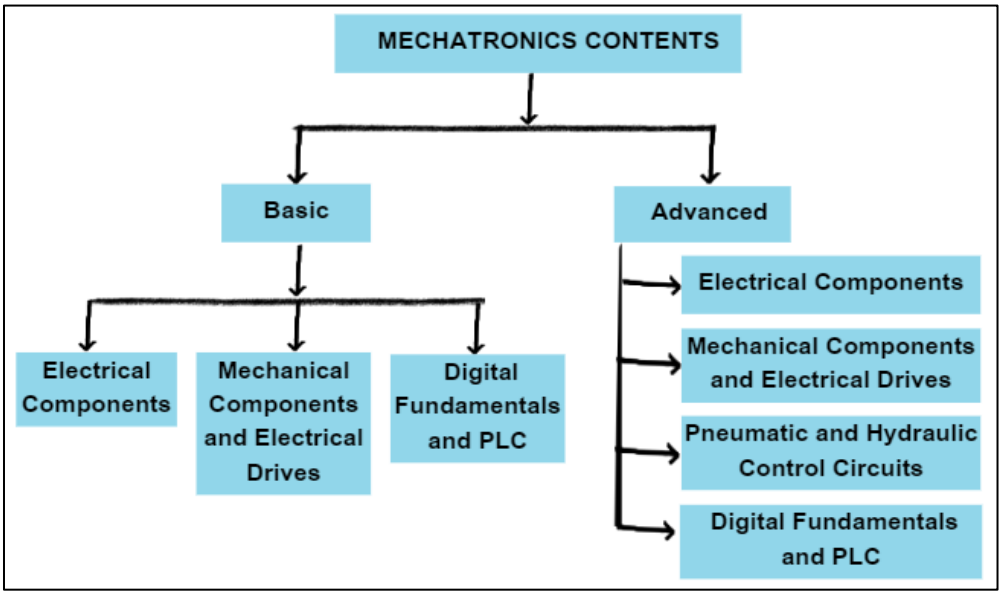
The scholars were provided with a strategic holistic development plan for the 4 years of engineering which focused on building their technical as well as soft skills. The program facilitated a series of workshops, industry visits, and hands-on projects tailored to enhance the technical capabilities of the scholars. These activities were curated to engage scholars in real-world problems, encouraging them to apply their theoretical learning to practical situations. For the projects, scholars were assigned mentors who played a pivotal role in guiding them. These mentors provided support in developing critical skills such as analytical thinking, critical problem-solving, and effective decision-making, which are crucial for career development.

Figure 4: Components of technical training



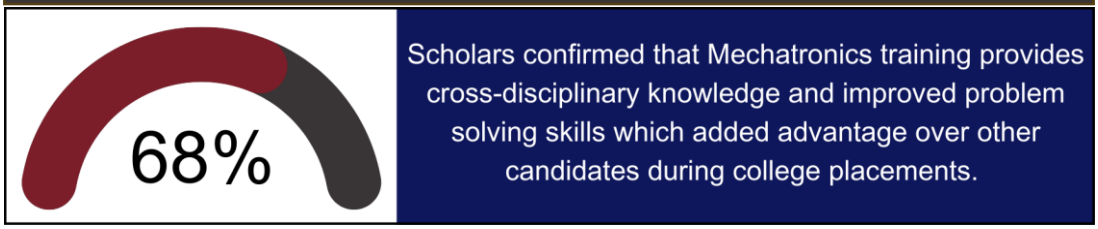
A significant aspect of the program was the integration of mechatronics training, which provided scholars with a multidisciplinary understanding of advanced technological domains. This training included topics like automation, robotics, and smart technologies, all essential for Industry 4.0.

Figure 5: Components of Mechatronics Training



Through the exposure to such advanced field, the program aimed to enhance their skills, efficiency, and adaptability in the evolving engineering world. The training enabled scholars to not only secure internship opportunities but also gain a competitive edge in college placements. This interdisciplinary approach ensured that scholars were well-versed in both the theoretical and practical aspects of engineering, making them attractive candidates to potential employers.

Figure 6: Feedback on mechatronics training



The mechatronics trainers also highlighted that, initially, scholars showed reluctance towards this broad approach, as it deviated from traditional, single-discipline training. However, as they gained more exposure and insight into how these skills would directly impact their career prospects, their engagement and focus increased significantly. The training emphasized how integrating knowledge from different engineering fields could lead to innovation and efficiency, essential traits for success in today's fast-evolving technological landscape.

Due to the Covid-19 lockdown, the students were given team projects which were mentored by the employee volunteers from Siemens. The discussions with employee volunteers highlighted the supported provided by them to the scholars in their projects. The employee volunteers provided technical guidance in completing the assessment by covering critical topics such as project designing, phased implementation, etc. Some of the employee volunteers also provided training to the scholars on safety highlighting the need for and importance of customer safety, behavioural safety, home safety, industry safety aspect according to target audience. Another important training that was covered in the session was functional training which helps in acquiring essentials skills and competencies related to the jobs such as knowledge about changing machinery, safety protocols, understanding of SOPs, etc.

The discussions suggest that the projects were in raw stage when the scholars were connected with the employee volunteers, however, during the course of mentorship the students worked really hard and upskilled themselves with much enthusiasm. They completed the projects maintaining all the guidelines, collecting information and choosing and utilizing the correct technologies for the project. The volunteers also observed a positive shift in the confidence as well as critical and analytical thinking of the students during the course of the mentorship. However, the lack of face-to-face interaction during online sessions and unstable internet connection was challenging and hindered the smooth completion of the mentorship.

The scholarship program's focus on lifelong learning and adaptability has ensured that scholars are not only prepared for present industry demands, but also equipped with the mindset to continue learning and growing. By instilling habits of lifelong learning and openness to new ideas, the program has prepared scholars to thrive in a dynamic work environment where change is constant, and adaptability is essential.

The focus on building and enhancing technical skills during the scholarship program has proven beneficial in providing scholars with the skills necessary to succeed in the engineering field. The amalgamation of hands-on experience, mentorship, and exposure to advanced technology has contributed greatly to the professional preparation, establishing a strong foundation for their future careers. Given the strategic and overall approach, this program has instant long-term abilities not only for students to prepare for immediate employment opportunities, but also to grow and achieve success in rapidly changing industries.

Soft Skill Development

The program recognized the need of equipping the scholars not only with technical skills but also with essential soft skills that are vital for personal and professional development. To ensure holistic development, the program introduced a series of training sessions and workshops focusing on essential soft skills, which are critical for both personal and professional success. These sessions, conducted by Growth Centre and Ripe Consulting, were spread across the scholars' academic journey and provided continuous support.

The training was designed to build self-awareness, confidence, and effective communication by focusing on key areas such as communication skills, creative thinking, and comprehension. By improving these competencies, the scholars gained a deeper understanding of their personal strengths and weaknesses, which in turn helped them confidently articulate their ideas and thoughts in both academic and professional settings.

Figure 7: Recall of soft skills topics

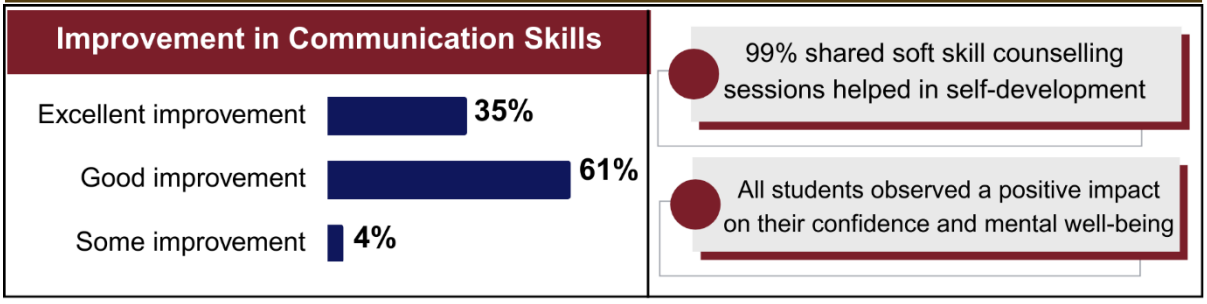
Self-development/ Personality development	96%	Interpersonal skill	90%
		Stress management	87%
Communication skills	99%	Problem solving	91%
Creative thinking	83%	Career planning	82%
Emotional intelligence	96%	Negotiation skills	71%
Time management	97%	Teamwork & leadership skills	88%
Presentation skills	95%	Verbal and comprehension skills	87%

Moreover, the sessions addressed a wide array of soft skills that are integral to career growth. Topics like time management, career planning, stress management, collaboration, teamwork, leadership, negotiation, and presentation skills were covered extensively. These skills not only aided the scholars in performing well in interviews, internships, and job placements but also empowered them to handle workplace challenges effectively. The inclusion of pre- and post-assessments allowed trainers to identify key areas for improvement and monitor the progress of each scholar over time, ensuring tailored development for each individual.

97% of the scholars found soft-skills training beneficial and has helped them in their career

The impact of this initiative is evident in the feedback from scholars. An overwhelming majority (99%) found the soft skills counselling support instrumental in their personal growth. The scholars highlighted that these sessions significantly boosted their confidence, enabling them to handle academic pressures and professional

Figure 8: Impact of soft skills sessions



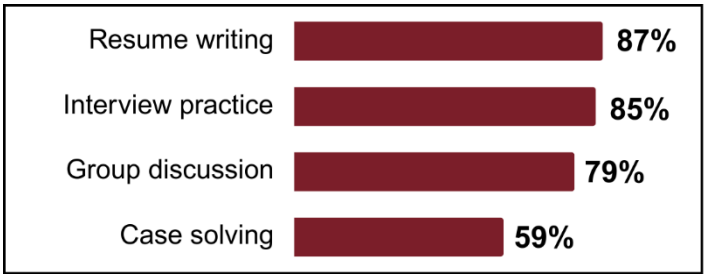
interactions with ease. Additionally, they highlighted the positive influence of soft skills training on their mental well-being, helping them manage stress more effectively.

Furthermore, the scholarship program, through its focus on self-development, has created lasting effects on the scholars' overall competence, contributing to their success in academics, job placements, and internships. By enhancing their soft skills, the scholars not only became more adept at managing their responsibilities but also grew as confident individuals poised to excel in their future careers.

Professional Development

The scholarship program has been instrumental in getting scholars ready to integrate successfully into industry and the job market. This section explores the impact of the program on various aspects of professional development.

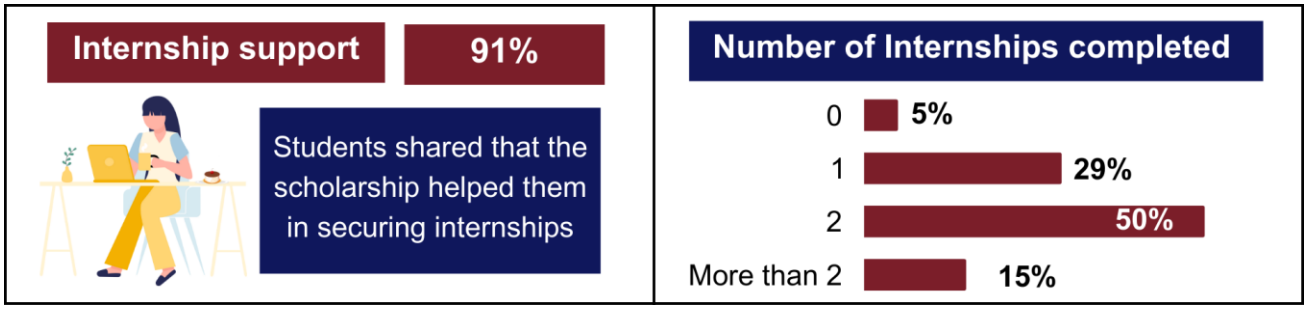
Figure 9: Placement preparation



To prepare the scholars for the job market, the program provided in-depth training sessions and workshops focusing on essential employability skills, such as resume writing, interview preparation, group discussions, and case study analysis. The sessions were designed to not only equip the scholars with technical details but also to build their confidence and communication abilities, ensuring they could present themselves effectively in competitive job markets. By modifying their resume to reflect their strengths and tailoring their interviews to demonstrate their capabilities, scholars were better prepared to meet the expectations of potential employers. The scholars emphasized that the mock interviews and case-solving sessions were instrumental in helping them successfully clear their placement interviews.

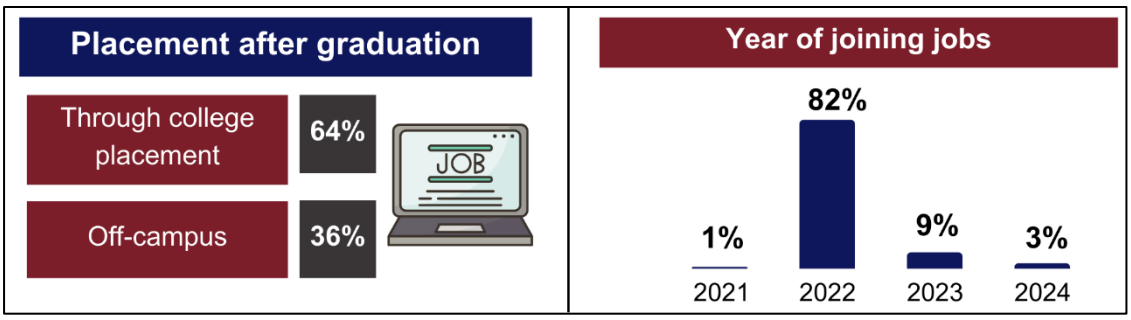
The program follows the principles of German Dual Education, which recognizes the need of real-world experience and promotes learning through industry experience during graduation. The scholarship program provided valuable internship opportunities during the end of 2nd and 3rd academic year. These internship experiences were integral to the scholars' development, providing them with industry exposure and practical experience that complemented their academic learning. The findings indicate that 91% of the scholars' secured internships through the scholarship program, underscoring the program's effectiveness in connecting students with relevant industry opportunities. Moreover, 50% of these scholars completed two internships during their academic journey whereas 15% were engaged in more than two internships in their academic year.

Figure 10: Internship support through SSP



Internships were a crucial opportunity for scholars to apply theoretical concepts in real-world situations, thus deepening their understanding of industrial processes, work culture and the operational aspects of engineering roles. The hands-on experience gained from these internships was highly valued by the scholars, with 98% agreeing that it contributed significantly to their understanding of professional environments and helped them make informed decisions about their career paths. Internships not only clarified their career goals but also gave them the confidence and skills they need to excel in their chosen fields. The discussions with college officials indicated that even though SSP internships are 45 days or 60 days, which exceeds beyond the 30-day internship break provided to the scholars, the college supports the on-hands training and industry exposure opportunity and provide extra class support to cover for missed sessions.

Figure 11: Impact of SSP on placements for respondents



The impact of the scholarship program extended beyond training, as highlighted by the impressive job placement results achieved by the scholars. A notable 64% of scholars in the sample secured employment through on-campus recruitment drives, demonstrating the program's effectiveness in preparing them to meet the demands of employers. The remaining 36% of scholars that were a part of the study were able to secure positions through off-campus initiatives, further highlighting the versatility and preparedness of the students.

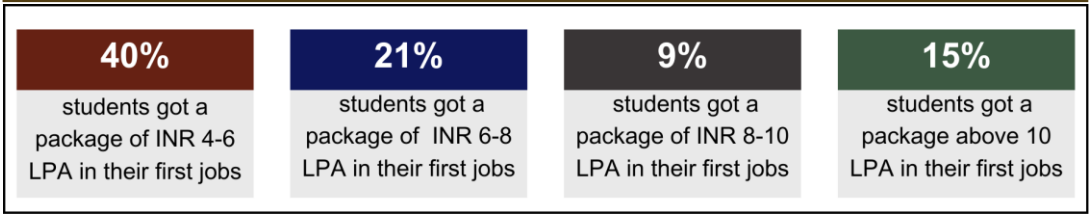
The college officials also highlighted that the SSP graduates were well-prepared for their interview with their advanced technical knowledge and expressive soft skills.

The holistic training not only changes their outlook about the industry but also gave them confidence which will surely help them in building a successful career. Majority of the scholars started their job in 2022 after graduating from college. However, few opted for higher education or certification and joined post completion of the same.

As per the records, the 88% placement rate for the batch is an indication of the program's success in aligning the scholars' skills with need of the industry. Not only were the scholars able to secure a job, but secured roles that aligned with their skills and career aspirations. This connect between education and employment is crucial for job satisfaction, career growth and long-term success. The findings suggest that scholars are highly valued in the industry and that employers recognize them as skilled professionals who are ready to contribute to their organizations.

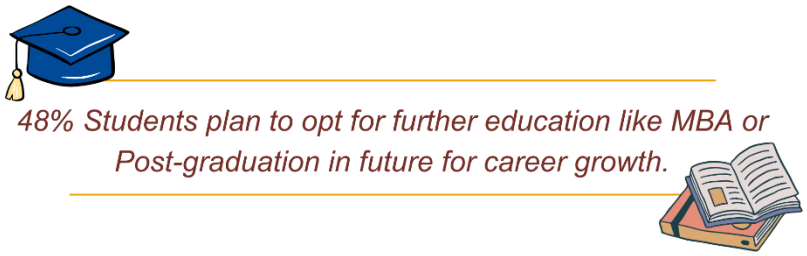
The impact of the placements on financial outcomes is quite impressive, the placement packages of the respondents reflect the demand and value of the scholar's skills. The focus on developing both advanced technical skills as well as soft skills helped the scholars in securing competitive salary packages. 40% of the scholars in the sample were offered packages ranging from INR 4-6 LPA (Lakhs per annum), while 21% received offers between INR 6-8 LPA, 9% secured offers between INR 8-10 LPA and an additional 15% were able to negotiate packages exceeding INR 10 LPA. These figures highlight the value of the comprehensive training provided by the scholarship program. It was 10% of the scholars were able to secure package below INR 4 LPA.

Figure 12: Impact of SSP on placement offers secure by scholars



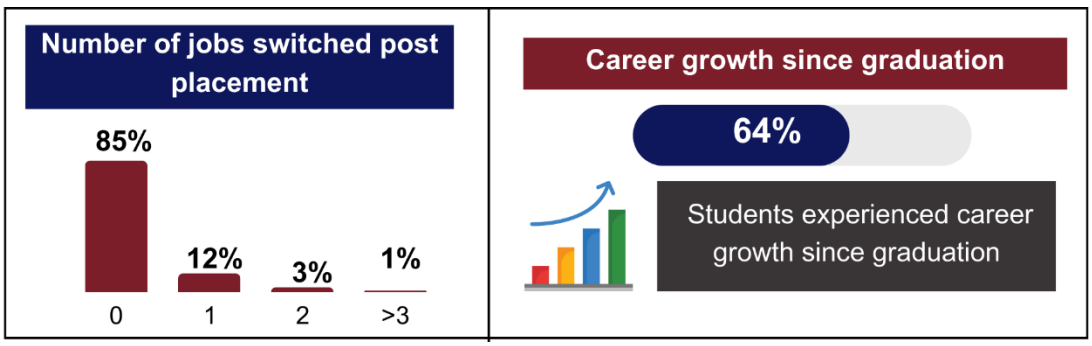
The scholars in the sample evaluated have demonstrated a strong commitment to continuous learning and professional development, beyond their placement. 48% of the scholars expressed aspirations for further education, indicating plans to pursue advanced degrees such as an MBA or a master's degree in the near future. This is reflective of the scholars' desire to continue enhancing their skills and advancing their careers.

The program has effectively instilled a growth mindset in the scholars, encouraging them to seek opportunities for self-improvement and career advancement.



For a sustainable and successful career development initiative, career satisfaction is a key metrics. The data suggests that 64% of the scholars are satisfied with the career growth they have experienced since graduation. This level of satisfaction can be attributed to the comprehensive support provided by the scholarship program, which prepared scholars not just for their first job but for a sustained and fulfilling career.

Figure 13: Job satisfaction



The stability in job is another key indicator of the success and sustainability of the initiative. Only 16% of the scholars have changed jobs since graduation, this low rate of turnover suggests that the placements not only provided scholars with roles that matches their skills and aspirations but also provided satisfying work

environments. A high proportion of scholars remain with their first employers indicates a high level of satisfaction from job and alignment with their professional goals.

This stability is another testament to the scholarship program's effectiveness in preparing professionals for long-term success in the workforce.

Socio-Economic Impact of SSP

The socio-economic impact of the scholarship has been profound, particularly in transforming the lives of the meritorious students from low socio-economic and vulnerable backgrounds. The selection of students based on their academic potential and provided them holistic support through financial assistance, comprehensive trainings, resources and career-building opportunities has made it possible for these scholars to achieve success and financial independence as well as uplift and empower the families economically.

The sample shows that a significant portion of the students come from large families and lower-income households where resources are limited and stretched. With over 77% of students reporting families larger than 4 members, this scholarship helps to bridge the economic gap by providing financial aid, thereby enabling access to education that might otherwise be out of reach.

The discussions with scholars and their parents highlighted that they were struggling financially and many of them were engaged in daily wage labour or physically demanding jobs. The parents feel proud and grateful that their children have now secured stable and well-paying jobs. In fact, a significant number of scholars are now primary earners for their families allowing their parents to retire from physically strenuous work, creating a ripple effect of economic upliftment and improved quality of life for their entire household.

When asked about their contingency plan had they not been selected for the SSP, 65% of scholars reported they would have taken out educational loans to fund their studies. Some planned to borrow money from relatives, while others were considering selling or mortgaging their assets. Worryingly, 17% admitted they might have been forced to drop out of their educational pursuits altogether. This highlights the critical role of the scholarship in preventing these students from leaving their studies unfinished, thereby playing a pivotal role in enabling them to complete their education and positively altering the course of their futures through economic empowerment.

Figure 14: Alternate plan to fund education

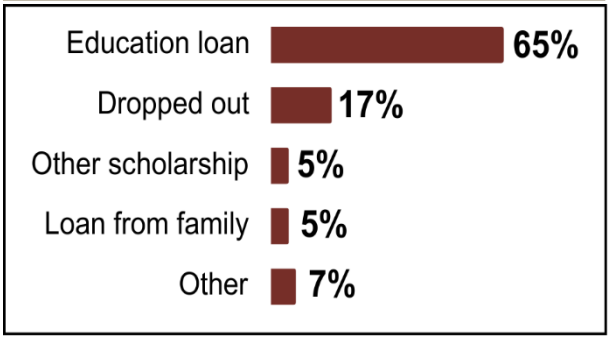
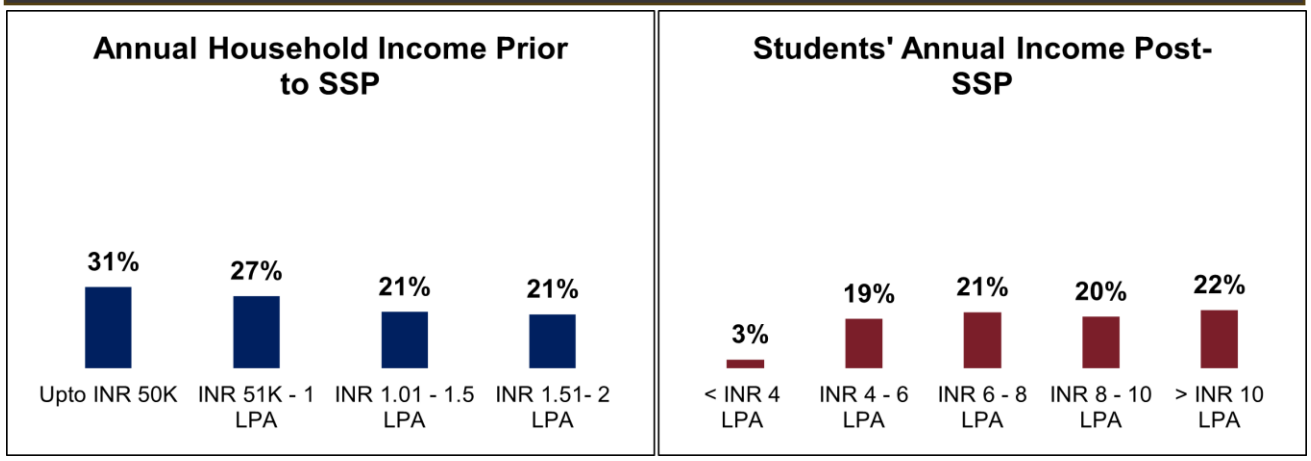
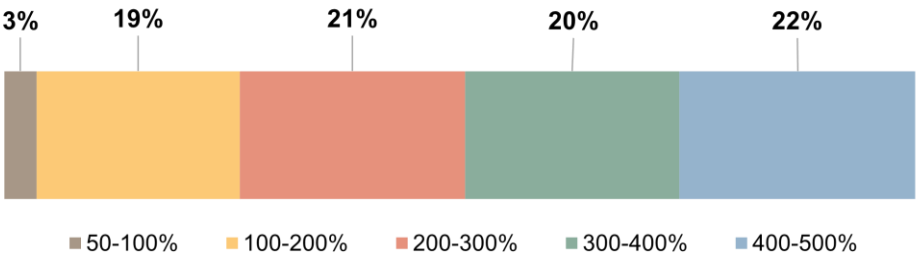


Figure 15: Financial impact of SSP



The data indicates a significant positive shift in the lives of scholars and their families, from economic upliftment to enhanced career growth and social mobility. The data presented in these figures illustrates a significant socioeconomic impact resulting from the SSP program. Prior to the scholarship, a large portion of scholars came from households with annual incomes below INR 50,000, indicating a low-income background. Post-SSP, scholars have experienced a substantial increase in their annual income, with 22% earning more than INR 10 LPA. The majority of the students now earn above INR 6 LPA, showing a dramatic financial improvement and social mobility.

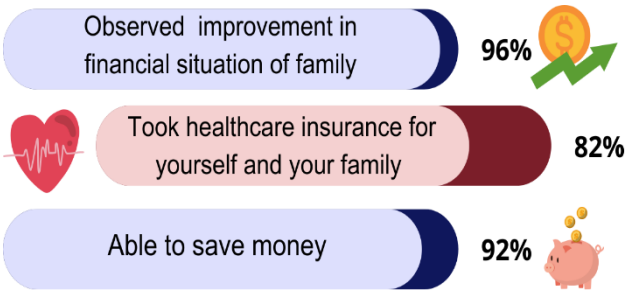
Figure 16: Growth in income post SSP compared to pre-SSP family income



The comparison in growth rates post-SSP demonstrates a considerable income uplift for scholars' families. Nearly 22% of families saw their income grow by 400-500%, which not only signifies personal success for the scholars but also transforms their household's financial status. This vast improvement highlights how the scholarship empowers individuals to secure well-paying jobs, contributing to breaking the cycle of poverty and enabling long-term financial stability for their families.

Additionally, the scholarship has significantly reduced the financial strain on families. For 98% of the households, the money that would have been spent on their child's education was instead directed towards better healthcare, supporting the education of siblings, or saving for future needs. The economic ripple effect extends beyond immediate needs; families now report improved financial stability, increased access to healthcare services, and the ability to save for the first time in years.

Figure 17: Socio-economic Impact of SSP



Socio-Economic Impact as per Parents	Indicators
	Positive change in social standing of the family and their reputation
	Parents, once overlooked, are now respected for their children's achievements and are frequently approached by others for advice on education and careers.
	Transformative impact on the social mobility of families from marginalized backgrounds, especially for girls.
	Communities that traditionally discouraged women from pursuing engineering now celebrate their success, serving as role models for others and challenging long-standing societal norms

Overall Satisfaction and Benefits

The table presents a comprehensive overview of satisfaction levels of the scholars with various aspects of the scholarship program. Overall, the findings suggest a high level of satisfaction among the students, with some of the areas showing slight dissatisfaction, which can be further explored for improvement. The program has been largely successful in meeting the needs of the scholars with respect to mentoring, internship, workshops, soft-skill training, mechatronics training and financial impact. The slight dissatisfaction highlights the scope for improvement, particularly in providing more personalized support and aligning opportunities more clearly with the expectations and need of the scholars. Some of the reasons for dissatisfaction were:

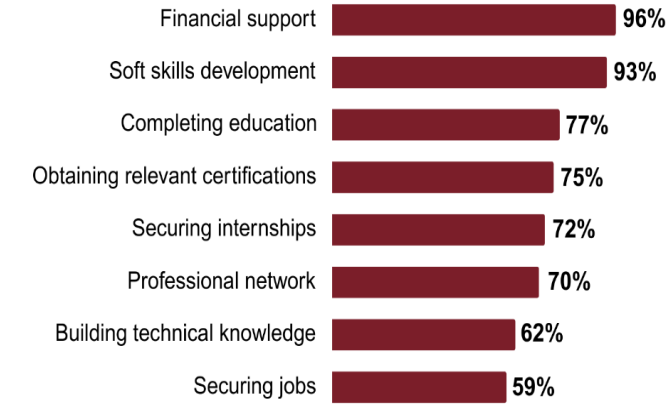
1. Mechatronics trainings were not aligned with their course or career plans.
2. The projects they were given were not as per their expectations.
3. They required more support in soft skills like communication skills, presentation skills, learning English as majority came from regional language schools.
4. Personalized support with respect to their resume, guidance on which roles align with their interest and skills.

Figure 18: Overall satisfaction from the program

Statement	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
Overall scholarship program	78%	18%	2%	0%	3%
Mentorship/support during scholarship	68%	27%	25	0%	3%
Internship opportunities	52%	34%	8%	1%	5%
Workshops	59%	37%	2%	0%	3%
Soft-skills training	79%	19%	0%	0%	3%
Mechatronics training	56%	33%	5%	3%	3%
Financial impact	82%	15%	1%	0%	3%

The data highlights the key benefits of the SSP, showing the significant positive impact it has had on the scholars. The most notable benefits were financial support, soft skills development, opportunity to complete education, and professional opportunities. These findings underscore the SSP's comprehensive approach, which addresses both financial and developmental needs, ensuring that students are not only able to complete their education but are also well-prepared for future professional challenges.

Figure 19: Key benefits of SSP



05

Alignment with OECD framework

The OECD DAC framework provides guidelines to determine the worth of an intervention on which evaluations are made. Under its ambit, the study will analyse the key components of the overall program.

Relevance

Relevance is defined as the extent to which the intervention responds to the beneficiaries, global, country and partner/institution needs, policies and priorities, and continues to do so if circumstances change. Evaluating relevance helps in understanding and assessing the alignment of the goals and implementation of the program with the needs and priorities of the beneficiaries and other stakeholders.

The Program addresses critical challenges within India's education landscape by targeting economically disadvantaged engineering students. With the Indian government aiming to increase the manufacturing sector's contribution to GDP to 25% by 2025, there is a pressing need for a skilled workforce. However, a significant gap exists between the demand for skilled technicians and engineers and the availability of such personnel, due largely to financial constraints and limited access to quality education.

The relevance of the Siemens Scholarship Program is underscored by its alignment with national goals and its focus on STEM (Science, Technology, Engineering, and Mathematics) fields such as mechanical, electrical, electronics/instrumentation, electronics & telecommunication and computer/information technology. The emphasis on STEM fields aligns with India's need for a skilled workforce to drive industrial growth and innovation. The initiative also addresses the issue of lack of employable engineers by getting industry-ready engineers who are skilled as per the current industry-requirements. By providing financial assistance and holistic development opportunities, the program ensures that talented individuals from marginalized communities can pursue engineering education and contribute to India's economic growth. The emphasis on reserving 50% of scholarships for female students further enhances the program's relevance by promoting gender equity in technical fields, where women are historically marginalized.

Coherence

Coherence is defined as the compatibility of the intervention with other interventions in a country, sector, or institution. It assesses and connects the intervention with the global, national and state-level programs/policies, as well as institution-level policies, and tries to understand the impact that the intervention is creating in the lives of target beneficiaries. The alignment with global goals such as SDGs or national policies can also be considered coherence.

This initiative is designed to complement and enhance existing educational initiatives in India. It aligns with government efforts to improve access to quality education, such as the Right to Education Act and the National Education Policy 2020, which aim to make education more inclusive and aligned with the needs of the modern economy. By focusing on students from government engineering colleges, the program ensures coherence with public educational institutions and leverages existing infrastructures to maximize its reach and impact.

The program's integration of financial support with holistic development initiatives, such as mentoring, internships, and soft skills training, provides a comprehensive approach that distinguishes it from other scholarship programs. This approach not only addresses the financial barriers to education but also prepares students to meet industry demands effectively. Additionally, Siemens' collaboration with industry stakeholders fosters a coherent ecosystem that supports the program's objectives and amplifies its impact.

Efficiency

Efficiency is the extent to which the intervention delivers, or is likely to deliver, results in an economic and timely manner. It is an indicator of whether an intervention's resources can be justified by its results.

The efficiency of the intervention is demonstrated through its streamlined implementation process and effective use of resources. The implementation partner is Smile Foundation helps in outreach of SSP in various colleges, selection process and coordination with students' post-selection. They also coordinate with other partners,

mechatronics training centres, Growth Centre which overlooks soft-skill training and Ripe Consulting which provides training in spoken language for the trainings. The Smile foundation also helps the students with internship process, acting as a link between the recruiters, Siemens CSR team and students.

The application and selection process is established with well-defined eligibility criteria, such as a minimum aggregate score and family income threshold, the program efficiently targets students who are academically capable but financially disadvantaged. The recruitment procedure, which includes shortlisting candidates, conducting visits and interviews, and performing due diligence, ensures that the selection process is rigorous yet efficient. The process also utilizes SECC rural and urban scale to understand the social and economic vulnerability of the household. Once selected, the students along with their parent are given orientation and understanding of the program. The Smile foundation manages the logistics for all the travel, boarding and catering for the students during orientation, trainings and workshops.

The program's phased implementation and expanding based on response and feedback, allows for efficient allocation of resources and optimal utilization. The dashboard provides a transparent reporting system and provides updates on progress to all the stakeholders including the contributing partners. The program efficiently utilizes technology, students can access the schedule for their trainings, workshops, assignments, etc. on the credential-specific dashboards which helps in smooth functioning of the program.

Effectiveness

Effectiveness indicates the extent to which the intervention has achieved or is expected to achieve, its objectives and results, including differential results across groups, if any.

This program effectively achieves its objectives by providing comprehensive support that extends beyond financial assistance. By offering scholarships to meritorious engineering students from vulnerable backgrounds, the program ensures that talented individuals can pursue their education without financial burdens. The program's emphasis on holistic development, including soft skills training, internships, and mentoring, enhances its effectiveness by preparing students for successful careers in engineering and related fields. The program's focus on specific engineering disciplines addresses the skills gap in critical sectors, aligning with India's economic development goals. By reserving scholarships for female students, the program effectively promotes gender diversity and inclusion in STEM fields. The success of the program is further demonstrated by the achievements of its scholars, who receive industry-relevant training and mentorship, leading to improved academic performance and career prospects.

The integration of cross-functional training, exposure to Siemens' business operations, and interaction with industry professionals ensures that scholars gain practical insights and skills that enhance their employability. The program's effectiveness is measured by the successful placement of scholars in industry roles, contributing to India's skilled workforce and technological advancement.

Impact

Impact is the extent to which the intervention has generated, or is expected to generate significant positive or negative, intended or unintended higher-level effects.

The impact of this program extends beyond individual beneficiaries, contributing to broader social and economic goals. By enabling access to quality engineering education for students from marginalized communities, the program supports social mobility and reduces educational inequalities. The program's impact is amplified by its focus on holistic development, which equips scholars with the skills and knowledge needed to excel in their careers and contribute to their communities. As graduates enter the workforce, they bring diverse perspectives and innovative solutions that drive technological advancement and economic progress. The inclusion of female scholars promotes gender diversity in technical fields, challenging stereotypes and inspiring future generations.

The initiative also strengthens industry-academia collaboration, as scholars are exposed to real-world challenges and industry practices through internships and mentorship. This collaboration fosters a culture of innovation and problem-solving, enhancing the overall impact of the program on India's education and industrial

sectors. Moreover, the integration of holistic development components, such as business learning, soft skills development and mentorship, maximizes the return on investment by equipping scholars with skills and experiences that enhance their employability. This comprehensive approach ensures that the program's resources are used efficiently to produce well-rounded graduates ready to contribute to the workforce.

Sustainability

An intervention is said to be sustainable when the net benefits continue or will continue, even after the intervention has ended. The impact created by sustainable interventions continues and sometimes grows to provide benefits to the beneficiaries.

The sustainability of the Siemens Scholarship Program is ensured through its strategic design and long-term commitment to supporting engineering education in India. By focusing on first year engineering students and providing support throughout their degree programs, the program builds a foundation for sustained academic and professional success. The ongoing mentoring and development initiatives ensure that scholars are equipped with skills that remain relevant in a rapidly evolving industry landscape.

The program's phased implementation and expansion strategy allow for adaptability and responsiveness to changing needs and contexts. By continuously evaluating and refining the program based on feedback and outcomes, Siemens ensures that the scholarship program remains relevant and effective in achieving its goals. In addition, the program's alignment with national education and economic development objectives reinforces its sustainability by contributing to India's long-term growth and competitiveness. The program's emphasis on creating industry-ready graduates supports the development of a skilled workforce that can drive innovation and economic progress, ensuring a lasting impact on society and the economy.

Snapshot of Alignment of the SSP initiative with OECD DAC Framework

Criteria	Rationale for strengths	Rating
Relevance	• Emphasis on STEM fields aligns with India's need for a skilled workforce to drive industrial growth and innovation. • By providing financial assistance and holistic development opportunities, it ensures that individuals from marginalized communities can pursue engineering education. • Emphasis on reserving 50% of scholarships for female students further enhances the program's relevance by promoting gender equity in technical fields. • Addresses the issue of lack of employable engineers by getting industry-ready engineers who are skilled as per the current industry-requirements.	
Coherence	• Integration of financial support with holistic development initiatives, such as mentoring, internships, and soft skills training, provides a comprehensive approach that distinguishes it from other scholarship programs. • Additionally, Siemens' collaboration with industry stakeholders fosters a coherent ecosystem that supports the program's objectives and amplifies its impact.	
Efficiency	• Phased implementation and expanding based on response and feedback, allows for efficient allocation of resources and optimal utilization. • Efficiently utilizes technology, students can access the schedule for their trainings, workshops, assignments, etc. on the credential-specific dashboards which helps in smooth functioning of the program.	
Effectiveness	• Integration of cross-functional training, exposure to Siemens' business operations, and interaction with industry professionals ensures that scholars gain practical insights and skills that enhance their employability. • The successful placement of scholars in industry roles, contributing to India's skilled workforce and technological advancement reflect the effectiveness of the program.	
Impact	• By enabling access to quality engineering education for students from marginalized communities, it supports social mobility and reduces educational inequalities. • Inclusion of female scholars promotes gender diversity in technical fields, challenging stereotypes.	
Sustainability	• By focusing on first year engineering students and providing support throughout their degree programs, the program builds a foundation for sustained academic and professional success. • Implementation in phases and expansion strategy allow for adaptability and responsiveness to changing needs and contexts.	

06

Alignment with SDGs

The United Nations introduced the Sustainable Development Goals (SDGs) with the aim of fostering global peace, improving human welfare, and safeguarding the environment in 2015. These 17 goals and 169 targets emerged from an extensive collaborative effort involving national governments and millions of citizens worldwide, who collaborated to establish a universal roadmap for achieving social, economic, and environmental sustainability. India, as a developing nation, committed to achieving the SDGs by 2030, joining 193 other countries in this endeavour. Prior to India's commitment to the SDGs, the country took a significant step in 2013 by passing the New Companies Act, which mandated corporate social responsibility (CSR) initiatives. This legislation, coupled with India's longstanding tradition of social work and philanthropy, laid the foundation for enhanced social development efforts undertaken by the government, corporations, and civil society organizations. Consequently, the alignment with the SDGs spurred the creation of new and innovative programs, where sustainability became the overarching principle guiding all social development initiatives.

In this section, we attempt to orient multiple SDGs with the initiative, which targets to create an inclusive and equitable education system for everyone to improve students' lives. The program is aligned with various SDGs related to equitable quality education, reduction of gender inequality, economic growth, and sustainable development.

No Poverty

End poverty in all its forms everywhere

Target 1. a: "Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programs and policies to end poverty in all its dimensions".

By providing scholarships to meritorious engineering students from low-income families, the program addresses the financial barriers that often prevent these students from pursuing higher education. This directly contributes to poverty alleviation by creating pathways for social mobility and economic empowerment. The program's emphasis on holistic development, including technical training, soft skills enhancement, and mentorship, equips students with the skills needed to secure gainful employment in engineering and technology sectors. As a result, graduates are more prepared to enter the workforce, earn sustainable incomes, and contribute to their families' and communities' economic well-being.

Quality Education

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Target 4.1: "By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes."

While the SSP is primarily focused on higher education, its ripple effects extend to earlier educational stages, indirectly supporting SDG Target 4.1. By providing scholarships to meritorious engineering students from poor backgrounds, the program sends a strong message about the value and attainability of education. This encouragement can motivate younger students to pursue and complete their primary and secondary education with the goal of accessing similar opportunities in higher education. The initiative's commitment to funding and mentorship can inspire families and communities to invest more in their children's primary and secondary education, knowing that there are pathways to further support at the tertiary level. Although not directly targeting primary and secondary education, Siemens' initiative plays a crucial role in shaping educational aspirations and ensuring that students aim for high learning outcomes early in their educational journey. By emphasizing educational attainment and providing role models in the form of scholarship recipients, the program indirectly enhances the quality and equity of primary and secondary education through positive reinforcement and long-term goal setting.

Target 4.3: "By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university."

The intervention directly supports SDG Target 4.3 by providing financial assistance and holistic development opportunities to students pursuing engineering degrees, thereby facilitating access to quality technical and tertiary education. By targeting first-year engineering students from government colleges and reserving 50% of scholarships for girls, the program promotes gender equality and ensures that more women can pursue careers in engineering, a traditionally male-dominated field. Additionally, the scholarship's financial support and mentoring programs reduce the barriers to entry for students from economically disadvantaged backgrounds, making higher education more affordable and attainable. This aligns with the goal of ensuring equal access to quality technical and vocational education, as it helps students gain industry-relevant skills and prepares them for successful careers. The program also provides comprehensive training, internships, and mentorship, which enhance the quality of education by integrating academic learning with practical experience. This approach ensures that scholarship recipients are well-prepared to meet the demands of the workforce, bridging the gap between education and employment and contributing to the overall objective of providing quality technical and tertiary education for all.

Target 4.5: "By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples, and children in vulnerable situations".

This scholarship program makes significant strides toward achieving SDG Target 4.5 by prioritizing gender equality and inclusivity in its selection criteria. By reserving 50% of its scholarships for girls, the program actively works to eliminate gender disparities in technical education, encouraging more women to pursue engineering and related fields. This initiative aligns with global efforts to reduce gender gaps in STEM fields and promotes greater female representation in technical and vocational sectors. Moreover, the program's focus on supporting students from poor and vulnerable communities, ensures that individuals who face systemic barriers to education have equal opportunities to succeed. By providing financial aid and mentorship, the program helps level the playing field for students who might otherwise be unable to access quality education due to economic constraints.

While the program does not specifically target persons with disabilities or indigenous peoples, its emphasis on inclusivity and support for vulnerable groups by increasing the outreach for scholarship applications form marginalized states contributes to broader efforts to ensure equal access to education for all. By fostering a more equitable educational landscape, the Siemens Scholarship Program helps to create pathways for marginalized groups to pursue and succeed in higher education, aligning with the goal of eliminating educational disparities and promoting equal opportunities for all.

Gender Equality

Achieve gender equality and empower all women and girls

Target 5.b: "Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women."

The intervention significantly contributes to SDG Target 5.b by empowering women through increased access to technology-focused education and training. By reserving 50% of its scholarships for female students, the program actively promotes gender equality in engineering and technology fields, where women have traditionally been underrepresented. The scholarship program not only provides financial assistance but also includes components such as internships, mentorship, and industry exposure. These opportunities enable female students to engage with cutting-edge technologies and develop technical skills critical to the information and communications technology (ICT) sectors. Such exposure is vital in helping female students gain confidence in using enabling technologies, thereby preparing them for careers in high-demand technological fields. The program's focus on holistic development, which includes training in soft skills, communication, and problem-solving, equips female students with the competencies necessary to thrive in tech-driven

environments. This comprehensive approach ensures that women are not only technologically proficient but also well-rounded professionals ready to take on leadership roles within the ICT sector.

By fostering an inclusive environment that encourages women to pursue engineering and technology careers, the program to break down barriers and creates a pathway for women to excel in ICT, promoting their empowerment and participation in shaping the future of technology. Through these efforts, Siemens plays a pivotal role in advancing gender equality in the digital age, ensuring that women are active contributors to technological innovation and societal progress.

Target 5.c: "Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels."

By contributing to gender equality through education and empowerment initiatives and strategically reserving 50% of its scholarships for female students, the program emphasizes the importance of gender parity in higher education, particularly in engineering and technology disciplines. This initiative reflects and reinforces Siemens' commitment to gender equality, setting an example for other corporations and educational institutions to follow. By actively promoting the participation of women in traditionally male-dominated fields, Siemens encourages the adoption of gender-sensitive policies and practices within the educational and corporate sectors. This contributes to creating a supportive environment where women can thrive, thereby influencing broader societal norms and expectations regarding gender roles. The program's holistic development approach, which includes mentorship and leadership training, empowers female students to become advocates for gender equality. By equipping women with the skills and confidence needed to excel in their careers, the program helps cultivate a generation of leaders who can drive policy changes and champion gender equality in their respective fields. Additionally, the success of this program in promoting gender equality can serve as a model for policy development at institutional and governmental levels.

Good Jobs and Economic Growth
Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all

Target 8.6: "By 2020, substantially reduce the proportion of youth not in employment, education or training."

The Siemens Scholarship Program directly contributes to SDG Target 8.6 by addressing the critical need to equip youth with the skills and opportunities necessary for meaningful employment. By offering scholarships to engineering students from economically disadvantaged backgrounds, the program removes financial barriers that often prevent talented individuals from pursuing higher education in STEM. This increases the number of young people engaged in education and prepares them for the workforce. The program includes a holistic development plan that provides students with technical knowledge, soft skills, and industry exposure through internships and mentoring. These elements are crucial in ensuring that students are not only academically successful but also industry-ready upon graduation. By enhancing employability, the program reduces the proportion of youth who are not in employment, education, or training, contributing to economic growth and stability. This effort aligns with broader initiatives to reduce youth unemployment and underemployment, providing a pathway for sustainable careers in engineering and technology sectors.

REDUCED INEQUALITIES

Reduce inequality within and among countries

Target 10.2: "By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status."

This initiative plays a significant role in empowering marginalized communities, thus contributing to SDG Target 10.2. By providing financial aid to students from low-income families, the program ensures that economic status does not impede access to quality education. This support facilitates social and economic inclusion, enabling students from disadvantaged backgrounds to pursue higher education and improve their life prospects. The scholarship program's emphasis on supporting female students further promotes gender equality, ensuring that young women have equal opportunities to excel in traditionally male-dominated fields such as engineering. By fostering an inclusive educational environment, the program contributes to reducing social inequalities and promoting the economic inclusion of diverse groups. Through mentorship and internships, scholars gain exposure to industry networks and professional environments, which are often inaccessible to those from marginalized backgrounds. This exposure is crucial for building confidence and competence, empowering scholars to participate fully in economic and social activities. By facilitating this inclusion, the program contributes to a more equitable society where all individuals, regardless of their background, can achieve their full potential.

Target 10.3: "Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard."

The scholarship program aligns with SDG Target 10.3 by working to eliminate educational inequalities and promote equal opportunities. The program addresses disparities in access to higher education by providing scholarships to students from underprivileged backgrounds, who might otherwise be unable to afford engineering degrees. By doing so, it levels the playing field and ensures that talented students can access the same opportunities as their more affluent peers. In addition to financial support, the program offers a comprehensive development plan that includes training in soft skills, internships, and mentorship. This holistic approach helps to bridge the gap between education and employment, ensuring that scholars are well-prepared to compete in the job market. By equipping students with the skills and confidence needed to succeed, the program reduces inequalities of outcome related to educational and career opportunities. The scholarship's commitment to reserving 50% of its awards for female students further addresses gender-based disparities, promoting equal opportunities in STEM fields. This proactive approach to gender inclusion helps to dismantle systemic barriers and supports the advancement of women in engineering, contributing to broader efforts to achieve gender equality.

Partnerships for the goals

Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

Target 17.15: "Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development."

The initiative supports India's educational policies and contributing to poverty eradication and sustainable development. By offering scholarships to needy meritorious engineering students, the program respects India's policy space by directly complementing national initiatives aimed at expanding access to quality education and skill development. The scholarship program reduces financial barriers to higher education, empowering students from low-income families to pursue engineering degrees. This increases their potential to secure

higher-paying jobs, thus contributing to poverty alleviation. By focusing on technical fields critical to India's economic growth, the program equips students with the skills needed for gainful employment in sectors like manufacturing, engineering, and technology, which are essential for sustainable development. By investing in local human capital, the program supports India's leadership in establishing policies that drive sustainable economic growth and social development. This aligns with the country's vision of leveraging its demographic dividend for long-term prosperity.

Target 17.17: "Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships."

The scholarship program exemplifies the principles of SDG Target 17.17 by fostering effective partnerships between the private sector, public institutions, and civil society to advance educational and developmental goals. The program's design and implementation highlight the benefits of collaboration in achieving shared objectives. Siemens collaborates with Smile Foundation, Growth Centre, Rise Consulting, and Mechatronics Training Centre to identify and support deserving students. This partnership leverages the strengths of both sectors, combining Siemens' technical support with the expertise of other organizations. Siemens leverages its financial resources, technical expertise, and industry networks to support the program, demonstrating how corporate strategies can effectively contribute to public goals. The program builds capacity within the education sector by developing skilled graduates who are equipped to meet the demands of the workforce, thus contributing to sustainable economic growth.

Snapshot of Alignment of the SSP initiative with SDG Goals

SDG	Targets
	➢ Target 1. a: Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programs and policies to end poverty in all its dimensions.
	➢ Target 4.1: By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes. ➢ Target 4.3: By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university. ➢ Target 4.5: By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples, and children in vulnerable situations,
	➢ Target 5.b: Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women. ➢ Target 5.c: Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.
	➢ Target 8.6: By 2020, substantially reduce the proportion of youth not in employment, education or training.
	➢ Target 10.2: By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status. ➢ Target 10.3: Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard.
	➢ Target 17.15: Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development. ➢ Target 17.17: Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships.

07

Conclusion and Way Forward

The assessment highlights that pivotal role SSP has played in transforming the lives of scholars. The scholarship program has successfully supported meritorious students from underprivileged backgrounds, providing them with not only financial aid but also a holistic development platform that encompasses technical training, soft skills development, and extensive industry exposure through internships. The program's outcomes indicate a significant positive shift in the lives of scholars and their families, from economic upliftment to enhanced career growth and social mobility.

Through a comprehensive and multifaceted approach, the program has achieved its goals of creating industry-ready engineers. The program addresses the needs and queries of the scholars and their parents through orientation sessions before initiating. The standardisation of the entire programme, robust data collection, monitoring and evaluation practices and hiring industry expert stakeholders for trainings have supported the program in creating a sustainable impact.

There are various aspects of the program that makes it different than other scholarship programs which focuses on providing only financial assistance. Some of these aspects that are well appreciated by the stakeholders are:

i. **Self-Development -** The soft skills and language trainings were instrumental in preparing scholars for real-world challenges. Scholars benefitted from interdisciplinary skills that helped them adapt to the corporate world and communicate better. They not only gained confidence but were also self-aware and were able to utilize their strengths to grow professionally and personally.

ii. **Internship opportunity and industry exposure -** The internship component of the program was critical in providing scholars with hands-on industry experience, allowing them to bridge the gap between academic learning and professional application. The internships also help scholars in building a strong resume and their learnings during internship helps them in clearing the placement interviews.

iii. **Mechatronics training -** The incorporation of mechatronics training equipped them with interdisciplinary skills that helped them adapt to the rapidly evolving demands of the industry. The discussions with scholars as well as employee volunteers highlighted the importance of mechatronics training in industry and how that contributes to enhancing the employability of the scholars.

iv. **Involvement of alumni and their parents in orientation -** The program involves alumni and parents in the orientation, who share their experience and the impact the program has created. This helps in building assurance among the parents and scholars that are joining the program. The alumni also give advice to new scholars on time management and balancing academics with SSP trainings, workshops and assignments.

v. **Employee engagement -** One of the most appreciated elements of the program is the employee engagement. The employees of Siemens volunteer and are involved in end-to-end program from orientation process, assessments, internship, mentorship and final year projects. For batch VI, the internships were converted into projects due to Covid-19 lockdown and the employee volunteers helped students in the same. Along with help in the process and in technical projects, the employee volunteers also provided sessions on safety and compliance to prepare them for safe industry exposure as well as functional training to develop job-specific essential competencies.

The discussion with the Smile Foundation team and Siemens CSR team highlighted some of the measures they have taken over the years to enhance the impact and sustainability of the initiatives. Some of the measures undertaken by the stakeholders are:

a) Building an alumni platform that will foster networking and support among SSP graduates.

b) A 1-on-1 mentorship model is in works for implementation to provide scholars with specific and personalized support.

c) Language trainings were introduced to help scholars with communication skills which are essential for their careers and personal development.

d) Reviewing and updating the soft skills curriculum to address the needs of the scholars as well as the industry.

e) Increased targeted outreach in most vulnerable and backward states to promote application from these underprivileged areas.

The employee volunteers also shared their satisfaction with the program and the impact it has created. The discussions highlighted that these volunteering opportunities gave them a sense of doing something for the community. Some of the volunteers shared that this experience of interacting with new generations help them in staying updated and constant learning.

However, it is to be noted that since the program aims to also change behavioural skills such as communication, personality development, dressing sense, etc., the transformation will be slow. A training session translates into a change in perception and becomes a routine practice over time. Implementing this change has proven to be even more difficult in scholars coming from orthodox backgrounds. There are certain areas that require revisiting to ensure that the impact is comprehensive and sustainable. Some of the key areas that require a strategic approach are:

1. **Pre-training and Pre-internship Mentorship:** The scholars are seldom reluctant for interdisciplinary mechatronics training or the internship opportunities in different sectors. Mentoring sessions should be conducted before the mechatronics training and internships to help scholars align their career aspirations with these opportunities. This would enable them to gain a deeper understanding of how the training and internships contribute to their long-term goals.
2. **Trainer Dependency and Upskilling:** The mechatronics training at present relies heavily on few centres with limited number of trainers. Expanding the pool of qualified trainers and ensuring they are regularly upskilled to stay current with industry developments is essential for maintaining the quality and continuation of the program.
3. **Internship Scheduling Coordination:** It is important to keep the college authorities informed about internship durations to allow better academic planning for SSP scholars. This would ensure that scholars do not miss out on important academic sessions due to their internship commitments. The discussion with college authorities highlighted that the scholars do not take permission prior to starting internship and only inform when they have less attendance than minimum requirement. This not only impact their academics but also their placements as certain colleges have minimum attendance requirements for being eligible for campus placements.

To conclude, the Siemens Scholarship Program (SSP) has had a profound impact on the lives of academically deserving students from marginalized backgrounds. The holistic approach of going beyond mere financial assistance to provide a comprehensive framework that includes technical training, soft skills development, internships, and industry exposure, has successfully bridged the gap between academic potential and career readiness, enabling scholars to pursue their dreams without financial constraints.

What sets the SSP apart is its multifaceted approach, which integrates various developmental aspects to prepare scholars for real-world challenges. The program's emphasis on soft skills training, language proficiency, and industry-specific workshops has equipped scholars with interdisciplinary capabilities, enhancing their adaptability and confidence in dynamic professional environments.

The internship component has been instrumental in providing scholars with hands-on industry experience, allowing them to bridge the gap between academic learning and professional demands. Supported by industry partners, these internships have helped build strong résumés and contributed to scholars' employability. The incorporation of mechatronics training has been particularly noteworthy, introducing scholars to the interdisciplinary skills required for emerging industries. This training has empowered scholars with technical expertise and problem-solving skills, highly sought after in today's industry.

The program's involvement of alumni and parents has also been highly beneficial, fostering a sense of community and continued support within the SSP network. The feedback loop with stakeholders has enabled the SSP to refine its offerings, ensuring that the evolving needs of scholars are met.

Overall, the SSP is a powerful catalyst for change, fostering academic success, skills development, and long-term career growth. Its commitment to mentorship, skill-building, and industry engagement, coupled with its adaptability to stakeholder feedback, ensures that the SSP will continue to create lasting impact in the lives of its scholars and the broader communities they represent.

Case Study

CRISIL
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Breaking Barriers: Empowering Dreams through Engineering Education Scholarships

Rita* grew up in a low-income family, raised by a single mother who worked tirelessly as a daily wage labourer. With limited education, her mother struggled to provide for the family, but Rita was driven by a dream she had held close since childhood—to become an engineer.

Despite the many challenges, Rita's determination never wavered. She worked relentlessly to excel in her studies and eventually cleared the entrance exams to secure a place in a government engineering college. However, the financial burden of her education weighed heavily on the family. Desperate for help, they turned to relatives, but instead of support, they faced criticism. Many ridiculed her mother for encouraging a girl to pursue engineering, a field they believed was meant for men.

While exploring options for educational loans, Rita learned about the Siemens Scholarship Program (SSP) scholarship from a senior in college. With hope, she applied for multiple scholarships including SSP. When the acceptance from Siemens came, her mother accompanied her to the orientation in Mumbai—the first time they had ever travelled together for such an event. There, they both realized how transformative this opportunity would be.

Over the next four years, Rita thrived. She not only excelled academically but also honed additional skills essential for her future career. Upon graduation, she was offered a position at Siemens, a moment that changed her life.

Today, Rita is not only financially independent but also supports her family, including funding her younger brother's education. Her journey came full circle when she was invited back to speak at the orientation for a new batch of scholars, with her mother by her side. It was a deeply proud moment, as her mother shared how the scholarship had transformed their socio-economic status.

Rita's story has continued to inspire others. She has shared her experiences as a female engineer and SSP scholar on a panel with the Higher Management of Siemens during Women's Day. Her journey from humble beginnings to an engineer in STEM is a powerful testament to the life-changing impact of scholarships in engineering education, especially for young women breaking barriers in traditionally male-dominated fields.