IMPACT | 2030

TATA CONSULTANCY SERVICES

Igniting Interest in STEM by Leveraging the Expertise of our Employees and Community

ORGANIZATION

TATA CONSULTANCY SERVICES

SECTOR

IT Consulting

HEADQUARTERS

Mumbai, India

SDGs IMPACTED BY THE CASE STUDY

4 QUALITY EDUCATION | 8 DECENT WORK AND ECONOMIC GROWTH | 17 PARTNERSHIPS FOR THE GOALS

EXECUTIVE SUMMARY

Augmented reality, IOT, driverless cars, agile systems and other technologies are disrupting sectors across the global economy. But companies are facing crucial supply and demand issues. The talent pipeline is lacking qualified applicants to keep fueling the engine of innovation.

In 2009, Tata Consultancy Services (TCS) launched goIT, a student innovation program, in response to this demand. The program's objective is to demystify computer science and help students gain the skills and confidence required to pursue Science, Technology, Engineering, Math (STEM) degrees and careers. During the program, TCS employees mentor middle and high school students, sharing their industry expertise while demonstrating an important link between STEM education and careers in the technology sector. goIT was designed to include TCS' core skills of research excellence in consulting, technology expertise, skill-based volunteerism, and philanthropic investments and as of 2019, the Sustainable Development Goals, into its curriculum.
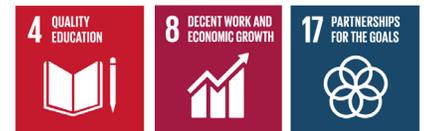
BACKGROUND

In the United States alone, there are currently 557,903 open computing jobs, representing the number one source of new employment. Yet, only 49,291 computer science college majors graduated last year. The Bureau of Labor Statistics estimates that by 2020, there will be one million more computer science-related jobs in the U.S. than there will be qualified candidates to fill them. In fact, less than 10 percent of more than 50 million students in K-12 public schools are taught computer science concepts. It is evident the world's financial future depends on developing a knowledge-driven economy and producing more graduates with STEM-based skills. Since its launch, goIT has:

| Engaged 25,000+ students in 77 cities across North America.

| Reported that 70 percent of all students who completed the goIT program saw an increased interest in STEM, and 94 percent agreed that goIT increased their interest in pursuing a STEM career.

| 3,800+ TCS volunteers have contributed more than 240,000 hours towards the goIT program.

"**Programs like goIT truly strengthen access to opportunities and our communities, and I am delighted to see the initiatives being taken to teach students in grades eight and nine about careers in the STEM field. The coding, programming and design thinking skills being taught to students in schools across Toronto are essential skills that will empower our youth to discover their talents and explore the many fascinating careers in STEM.**"

- HONOURABLE MITZIE HUNTER
Canada's Minister of Advanced Education and Skills Development for Ontario

OUR SOLUTION

goIT is TCS North America's flagship STEM education student engagement program and draws from its workforce to guide mentorship and instruction in classrooms of under-represented and under-resourced populations. At its core, goIT is an inventive approach to develop problem-solving skills during which students become digital innovators that design solutions to problems facing their communities; these problems are often rooted in the Sustainable Development Goals (SDGs), which TCS is committed to directly impacting. With a focus on SDGs, students use empathy, design thinking, and an entrepreneurial pitch process as part of the goIT experience, which closely mimics the iterative, agile methodology of our customer innovation lifecycle. During the program, students design, prototype and pitch a solution to a problem or inefficiency facing their community. Throughout the program, TCS volunteers work alongside students to mentor them as they develop their concepts, keeping current industry trends and technologies at the forefront. Although the program targets middle and high school students, with minor modifications, the program can be easily tailored to reach learners of all ages in a variety of delivery formats. TCS works directly with local nonprofit organizations and government agencies to identify school districts where the goIT program will be implemented. By leveraging the train-the-trainer model, TCS has been able to dramatically scale the program by empowering educators with the content necessary to bring goIT to their classroom, while also preparing them to introduce the SDGs to their students as part of the program experience. Upon completion of the program, with a new understanding of the SDGs, teachers can integrate the SDGs and computer science skills into units well after the program culminates.

PARTNERSHIPS IN PRACTICE

The STEM skills gap is a problem only a holistic, cross-disciplinary approach can solve. TCS has partnered with other industry actors (clients), education partners and local/federal governments to address these barriers by delivering a digital innovation program that can be integrated in a transdisciplinary approach.

THE RESULTS

For nearly a decade, goIT has continued to expand and adapt to address the ever-changing needs of the STEM talent pipeline. As a result, TCS has been able to directly impact 25,000+ students (half of which have been young women, an underrepresented group in the STEM field) across 77 cities in the United States and Canada.

Since this program began, over 45 percent of TCS CSR projects impact SDG Target 4.5 while maintaining the program integrity and quality of student engagement. Through post-event surveys, 70 percent of all students who completed the goIT program reported an increased interest in STEM disciplines, and 94 percent agreed that goIT increased their interest in pursuing a STEM career.

CALL TO ACTION

Industries who want to successfully support the community need to understand that multiple stakeholders – both internally and externally – are needed for engagement. When considering every voice at the table, the beneficiary (in this case, our students) must be the focus of all conversations and program goals.

The core competencies of the human and intellectual capital within an organization are the most valuable and readily available skills to leverage. It is through the passion and knowledge of your employees that you will find success on a grand scale. goIT ignites the initial spark in students to pursue a STEM career. By developing cross-sector partnerships, we can collaboratively create STEM programs and initiatives in a systemic and sustainable approach.