

Hey Siri, Can you fix my bike?

Indo-German Programme for Vocational Education and Training (IGVET- II)



Commissioned by: Federal Ministry for Economic Cooperation and Development (BMZ)



Project partner: Ministry of Skill Development and Entrepreneurship



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Budget: EUR 5 million



Locations: Andhra Pradesh, Kerala, Karnataka, Tamil Nadu, Telangana, Maharashtra and West Bengal.

SDGs addressed:



You are riding your bike to work, when you suddenly hear a dull pop and the engine stops. As you wheel your vehicle to the side of the road, you look around for a garage, or a mechanic, or even a small roadside shop. But there is none that can help you as you ride an electric vehicle.

In 2023, India recorded a significant increase in electric vehicle (EV) sales. From 1.02 million EVs sold in 2022, sales jumped by 50% to reach 1.53 million vehicles in just one year. Unfortunately, there is still relatively much that is unknown about how these revolutionary vehicles function, much less how to troubleshoot problems associated with them. Conventional vehicles easily find roadside assistance, but mechanics for EVs are hard to find.

To address this gap and encourage an uptick in the amount of users switching to this more sustainable mode of transportation, the GIZ partnered with the Ministry of Skill Development and Entrepreneurship in 2020 to introduce a vocational course on electric vehicles in 42 government polytechnic institutions.



In Telengana, GIZ partnered with the State Board for Technical Education and Training to develop the curriculum for this elective diploma vocational course and worked towards strengthening industry-institutions partnerships in the state.

A. Siri Venella, a recent graduate from the Government Girls Polytechnic College, Secunderabad: “The best part about this course was the practical aspect to it. Whatever we were being taught in the classroom was demonstrated to us practically. Even though the course on Electric Vehicles was an elective course, I took it up because I have always been intrigued by these vehicles, as well as charging stations. I want to become a scientist and develop the fastest charging station in the country.”



Like Siri, Shiva Kumar Gopilakadi plans on devoting his career to research in the field, especially on batteries – an interest sparked by his semester studying electric vehicles. “The various kinds of batteries used in these vehicles fascinated me and I plan to pursue this line of research. It was a very enriching experience learning about EVs during this course”, he says.

The course curriculum, carefully designed by GIZ experts in Green Mobility, covers topics such as the importance of EVs, their types and parts, battery management systems, plug-ins, types of chargers, troubleshooting and more. To make such new and varied course material available and simple to teach, GIZ also designed a two-week training course exclusively for faculty members. This training course involved a combination of online and practical classes, administered to 60 faculty members of polytechnics in Telangana.

“I was thrilled to learn that the institution would be offering a course on EVs. I have been teaching for the last 12 years, but I have not seen such an innovative addition to the curriculum yet. The future is electric and I am preparing my doctoral thesis on the topic”, says Neeraja Bathala, lecturer at the Electrical and Electronics Department, Government Girls Polytechnic, Secunderabad. “The two-week training course was very comprehensive, covering so many practical aspects. I felt a lot more confident when I began the semester, thanks to the training I had received.”



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While students and teachers put their best foot forward, the proof, of course, is in the pudding. “We are so happy with the results this year: 99% of our students have secured a first division in EV”, says Mr. Narsaish Goud, principal of the Government Girls Polytechnic, Secunderabad. “We have received positive feedback not only from students and teachers, but also from parents, who are delighted at the new career options that have opened up for their wards. These students can now choose from careers in research, manufacturing and servicing.”

As the faculty of polytechnic institutions across the state prepare to introduce another batch of students to the merits and wonders of EVs, ambassadors for these green vehicles are slipping into the industry, armed with the knowledge and skills to encourage great leaps forward in the race for sustainable transport.