

Army Goodwill School, Wuzur.

Problem statement/why the initiative was taken:

Opening of Innovation Club in the school.

An Innovation Club in schools can bridge this gap by providing students with a platform to collaborate, experiment, and innovate outside the conventional curriculum.

Idea

The idea behind opening an Innovation Club in school in this particular school was to create a dynamic and creative environment where students can explore, experiment, and develop skills that go beyond traditional academic subjects. My personal observation was that the students needed a place to express themselves and come out of classrooms and learn in a new way.

This club aims to inspire students to think critically, collaborate, and engage with real-world challenges through innovation and creative problem-solving.

Work done

Our team has successfully designed, developed, and tested the following innovative prototypes:

- 1. **Multitasking Table Lamp:** A solar-powered table lamp with a fan, LED light, and USB charging ports. The prototype has been tested and validated for its efficiency in providing cooling, illumination, and connectivity during power cuts.*
 - 2. **COATBRELLA:** A smart umbrella designed to shield users and their belongings from rain. The prototype has been tested for its durability, water resistance, and ease of use.*
 - 3. **Budget-Friendly Aqua Purifier:** An affordable, eco-friendly water purifier designed for rural communities. The prototype has been tested for its effectiveness in purifying water using simple and inexpensive methods.*
 - 4. **Foot-Operated Water Tap:** A hands-free device that controls water flow using a foot pedal. The prototype has been tested for its efficiency in enhancing hygiene and water conservation.*
 - 5. **Digi Banking:** A secure, laptop-based banking program that enables elderly users to print cheques via voice commands. The prototype has been tested for its usability, security, and effectiveness in eliminating manual writing.*
 - 6. **The Smart Backpack:** A solar-powered bag with inbuilt storage, designed for trekkers and campers. The prototype has been tested for its efficiency in providing power and storage on-the-go.*
 - 7. **Home Automation System:** A system that enhances fire prevention by enabling remote appliance control. The prototype has been tested for its effectiveness in reducing risks and ensuring safety.*
 - 8. **Automatic Irrigation System:** A system that automatically waters plants and lawns using sensors and timers. The prototype has been tested for its efficiency in providing the right amount of water without manual effort.*
- Each prototype has been designed, developed, and tested to ensure its effectiveness, efficiency, and usability.*

Impact:

The students have become the stars of the school and an inspiration to many. Full of confidence and energy

The impact of these innovative prototypes can be significant in various aspects:

Environmental Impact:

- *Reduced carbon footprint due to solar-powered devices (Multitasking Table Lamp, Smart Backpack)*
- *Conservation of water through efficient irrigation systems (Automatic Irrigation System) and foot-operated water taps (Foot-Operated Water Tap)*
- *Eco-friendly water purification methods (Budget-Friendly Aqua Purifier)*

Social Impact:

- *Improved accessibility and independence for elderly users through voice-controlled banking (DigiBanking)*
- *Enhanced safety and security through remote appliance control (Home Automation System)*
- *Increased convenience and comfort for users through smart devices (COATBRELLA, Smart Backpack)*

Economic Impact:

- *Reduced energy costs through solar-powered devices and efficient irrigation systems*
- *Increased productivity and efficiency through automated systems (Automatic Irrigation System, Home Automation System)*
- *Potential cost savings through reduced water waste and improved water conservation*

Health Impact:

- *Improved hygiene and reduced risk of water-borne diseases through foot-operated water taps (Foot-Operated Water Tap) and eco-friendly water purification methods (Budget-Friendly Aqua Purifier)*
- *Reduced risk of fires and electrical accidents through remote appliance control (Home Automation System)*

Overall, these innovative prototypes have the potential to make a positive impact on the environment, society, economy, and public health.



