Cover Story

# Inclusive Innovations

Building the Future Together.

India stands at a powerful turning point in history. With the vision of **Viksit Bharat 2047**, the nation is striving to become not just economically strong but also **scientifically advanced and socially inclusive**. At the heart of this transformation lies one key idea, **innovation that includes everyone.**

India being land of diversity, languages, cultures, geographies, and people. But along with diversity come challenges. Not everyone has equal access to technology, education, healthcare, or opportunities. This is where the idea of **inclusive innovation** becomes powerful and necessary.

Inclusive innovation means creating solutions that are **affordable, accessible, and useful for all sections of society,** especially those who are underserved or marginalised.

It is not just about high - end technology or complex inventions; it is about solving real problems faced by real people in everyday life.

Imagine a low - cost sanitary napkin machine for rural women, a portable water purifier for villages, or a mobile app that helps farmers predict the weather. These are not just innovations; they are **inclusive innovations,** designed to improve lives. India's journey toward becoming a developed nation depends not only on advanced technologies but also on ensuring that these technologies **reach everyone.**

## What is inclusive innovation?

Inclusive innovation is about creating solutions that include everyone, especially those who are often excluded due to economic, social, or geographical barriers.

It focuses on affordability, simplicity, and scalability.

The concept gained importance in India as policymakers, scientists, and entrepreneurs recognized the need to bridge the gap between technology and society.

Anyone, students, teachers, scientists, or entrepreneurs, can become an innovator by identifying and solving problems.

## Why is inclusive innovation important?

Because millions of people still lack access to basic needs such as clean water, quality education, healthcare, and sustainable livelihoods. Traditional innovations often cater to urban or affluent populations, leaving behind those who need solutions the most.

## Where does inclusive innovation happen?

Inclusive innovation can happen anywhere, in villages, towns, cities, schools, or even homes. It is not limited to laboratories or large industries. In fact, some of the best innovations emerge from **local communities** where people directly experience problems.

## Who is part of Inclusive Innovation?

The **"who"** is the most exciting part. Inclusive innovation is driven by:

- Students observing problems around them
- Teachers guiding curiosity
- Grassroots innovators solving local issues
- Startups creating scalable solutions
- Government and organisations supporting implementation

This means that innovation is **not limited to experts.** Anyone with observation and intent can contribute.

## Understanding Grassroots Innovation

Grassroots innovation refers to solutions that emerge from **local communities**, often without formal scientific training but with a deep understanding of real - life problems.

These innovations are:

- Simple
- Cost - effective
- Highly relevant to local needs

Students can learn that innovation does not always require advanced labs; it starts with observation. Many farmers, artisans, and local workers create practical solutions using available resources.

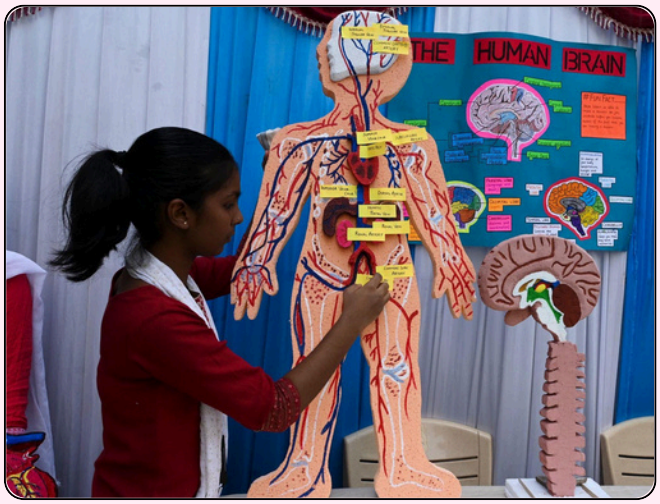
These ideas can be improved, scaled, and refined with scientific knowledge.

## Design Thinking for Students

Design thinking is a powerful method that students can use to innovate effectively. It involves:

- Understanding the user
- Defining the problem
- Generating ideas
- Building prototypes
- Testing solutions

This approach helps students move from **ideas to action.**




## Digital Inclusion & Technology Access

Technology has the power to bridge gaps, but only if it is accessible.

Inclusive innovation ensures:

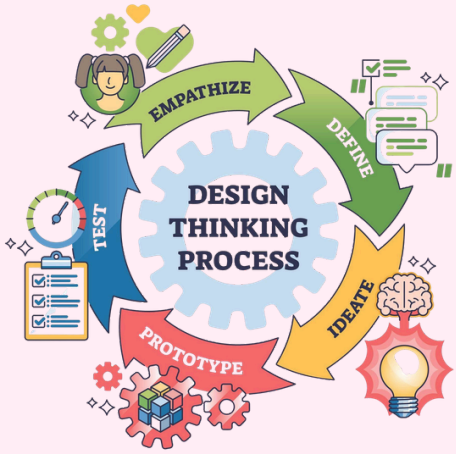
- Digital tools reach rural areas
- Students have access to learning platforms
- Technology is affordable and user - friendly

India's digital ecosystem is rapidly growing, enabling students to learn, innovate, and connect like never before.

## Methods of Inclusive Innovation

Inclusive innovation follows a structured yet flexible approach. It is very similar to what programs like **GYS Samasya Khoj** and **Avishkar Awards** promote, starting from problem identification to solution development.

It begins with **observation**, where you notice problems around you. Then comes **problem definition**, understanding who is affected and why it matters. Next is **idea generation**, followed by designing a solution and testing it.




## Key Methods Used

- **Frugal Innovation (Jugaad)** - Doing more with less
- **User - Centred Design** - Focus on real users
- **Sustainable Innovation** - Environment - friendly solutions

## Usage Areas

Inclusive innovations are widely used in:

- Agriculture (smart irrigation, soil sensors)
- Healthcare (low - cost devices)
- Education (digital learning tools)
- Energy (solar solutions)

These innovations directly improve the quality of life.

## Success Stories

India has many inspiring examples. **Arunachalam Muruganantham's** low - cost **sanitary pad machine** transformed rural healthcare.

The **Jaipur Foot** has helped thousands regain mobility.

These examples show that innovation is about solving real problems with empathy and creativity.

## Future Impact

The future of inclusive innovation is deeply connected with emerging technologies:

- **Artificial Intelligence** → smarter farming, healthcare
- **Renewable Energy** → sustainable villages
- **Biotechnology** → improved health solutions
- **Digital Platforms** → access to education

India is moving toward a future where:
Every village can become a **hub of innovation**
Every student can become a **problem solver.**

Students today can become innovators who design tools for farmers, healthcare systems for villages, and smart solutions for cities. Inclusive innovation will play a major role in building a developed India.

## DIY Activity: Build Your Own Inclusive Innovation

Students can identify a problem around them and create a simple solution using available materials. **For example,** a water - saving device or a waste management model.

Explain your idea clearly: the problem, the solution, and its impact. This helps develop innovative thinking.

## Schools as Innovation Hubs

Schools can transform into **innovation hubs** by creating the right environment.

This includes:

- Science clubs (like GYST Clubs)
- Innovation competitions
- Workshops and exhibitions
- Access to learning resources

According to the GYS model, schools that actively engage in innovation activities help students develop **critical thinking, collaboration, and creativity.**

## Classroom Activity for Teachers

Teachers can ask students to identify real - life problems and discuss possible solutions. Group discussions and presentations can help students think critically and creatively, building an innovation mindset.

## Innovation Skills Every Student Should Develop

To become innovators, students need to develop key skills:

- Observation
- Critical thinking
- Creativity
- Communication
- Collaboration

Activities like **GYS Talks** help improve articulation and presentation skills, which are essential for success.

## Conclusion

Inclusive innovation is a movement that empowers people to create meaningful change. It begins with understanding problems and finding simple, effective solutions.

For students, this is an opportunity to think, explore, and innovate. Every idea has the potential to make a difference.

India's future lies in the hands of young innovators who are not only intelligent but also empathetic and socially aware.