



Coding And Robotics Education in Schools (CARES) Scheme, Goa

Coding and Robotics Education in Schools Scheme



Learn. Think. Create

Project Management Unit - Goa



**Directorate of Technical Education
Government of Goa**



CARES – Reimagining School Education

Pioneering the future of education

In the vibrant coastal state of Goa, a vision is set in motion. It is a vision that aligns with the winds of change blowing through education, guided by the transformative National Education Policy (NEP) 2020.

Backed by scientific reports and research evidence, the Coding And Robotics Education in School (CARES) Scheme was notified by the Government of Goa (GoG) in May 2021.

“

Vision

To incorporate Computational and Design thinking abilities, as well as programming, into school-level teaching in the state of Goa, to prepare students for the needs of the digital world of the twenty-first century.

”



A Goal Simple Yet Profound

To equip students from all walks of life with the skills needed to thrive in the digital world of the 21st century.

Challenges on the Horizon

A crystal-clear vision, yet the challenges it presents demand creative solutions.

Pedagogical Innovation

Adopt innovative teaching methods that align with the curriculum standards.

Assessment Methods

Develop fair and effective evaluation techniques.

Teacher Training

Equip educators with the knowledge, skills and confidence to teach the curriculum effectively.

Inclusivity

Address the diverse learning needs of all students.

Stakeholder Collaboration

Build partnerships with industry, government, school administration, parents, and students.

Infrastructure

Establish a reliable and robust IT infrastructure to support digital learning.

Resource Accessibility

Ensure access to necessary technology and materials for all students, regardless of their background.

Student Engagement

Foster interest and enthusiasm among school students.

Content Relevance

Develop and update curriculum content to stay relevant in a rapidly evolving field.

Transforming challenges into opportunities

Challenges pave the way for crafting innovative solutions in the form of educational products

Comprehensive Curriculum Integration

Easy integration into curricula for seamless adoption.

Empowering Educators

Teacher empowerment with effective training and resources.

Enhanced Learning Experience

Enhancement of student learning with interactive experiences.

Continuous Improvement

Committed to evolving with tech and education changes.

Accessibility for All

Promote inclusivity and reduce technological disparities.

Holistic Skill Development

Promote essential 21st century skills.

Streamlined Assessment

Innovative assessment tools for accurate progress measurement.

Future-Ready Graduates

Boost student employability and adaptability for a digital future.



Teachers

- Simplified teaching with ready-made curriculum materials
- Enhanced classroom engagement
- Reduced preparation time
- Professional development opportunities



Students

- Interactive learning experiences
- Skill development for the digital era
- Confidence in technology
- Real-world problem-solving skills



Parents

- Peace of mind with quality education
- Increased involvement in their child's learning journey
- Increased awareness of tech advancements
- Support networks and parent-teacher collaboration



Schools

- Cost-effective educational solutions
- Improved student outcomes
- Positive reputation for modernized teaching
- Efficient resource allocation



Government

- Aligned with national educational priorities
- Access to innovative educational tools
- A workforce prepared for the digital age
- Real-time dashboard with analytics for informed policy decisions



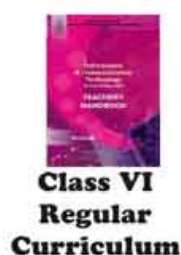
Industry Partners

- Contribution to a skilled future workforce
- Collaborative opportunities with educational institutions
- Potential talent pipeline for technology industries
- Enhanced corporate social responsibility through continuous support

Curriculum Model

Curriculum Structure

- Two-level approach (Regular and Elective Curriculum)
- Modular design for flexibility
- Alignment with educational standards



**Class VI
Regular
Curriculum**



**Class VII
Regular
Curriculum**



**Class VIII
Regular
Curriculum**



**Class VI
Elective
Curriculum**



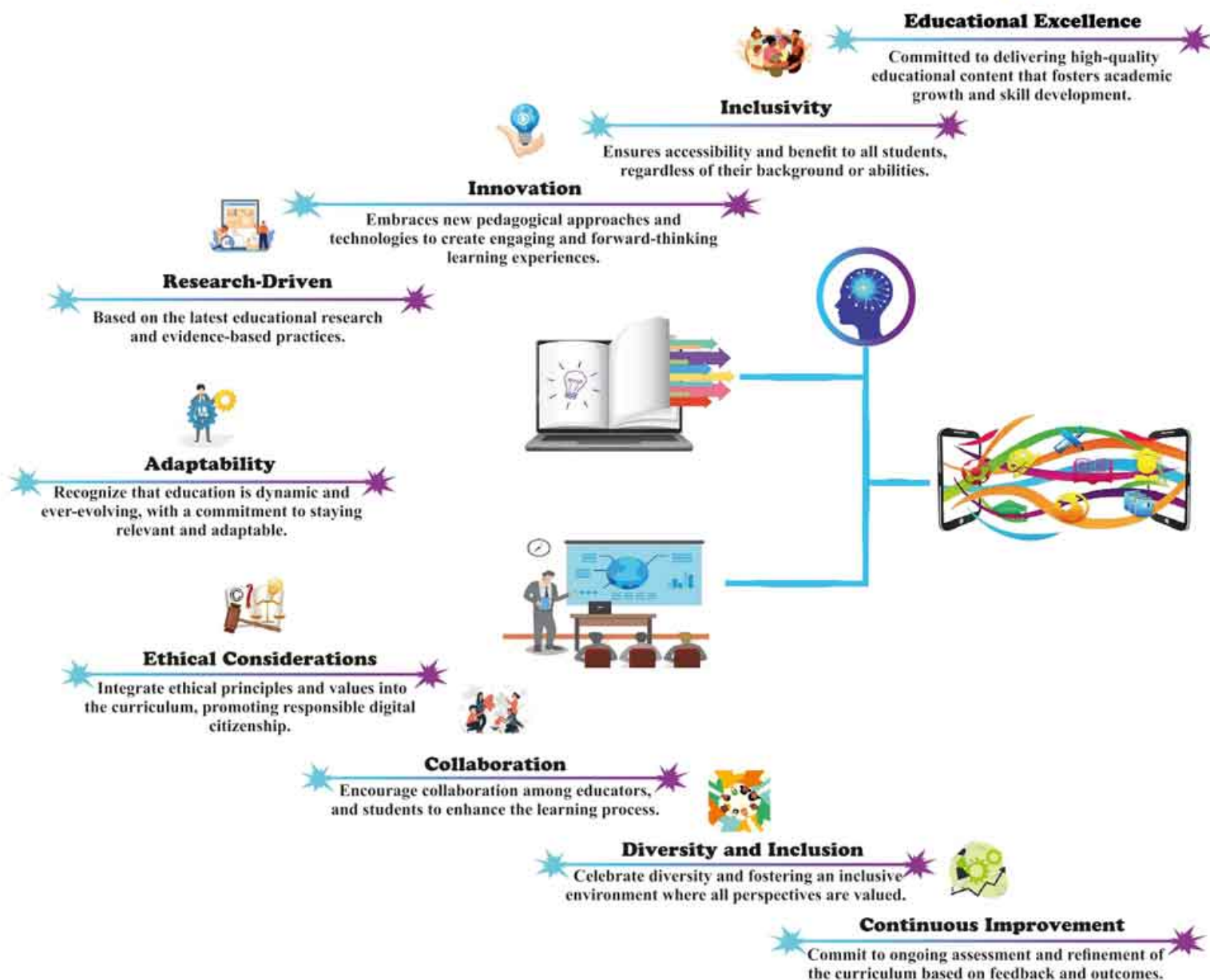
**Class VII
Elective
Curriculum**



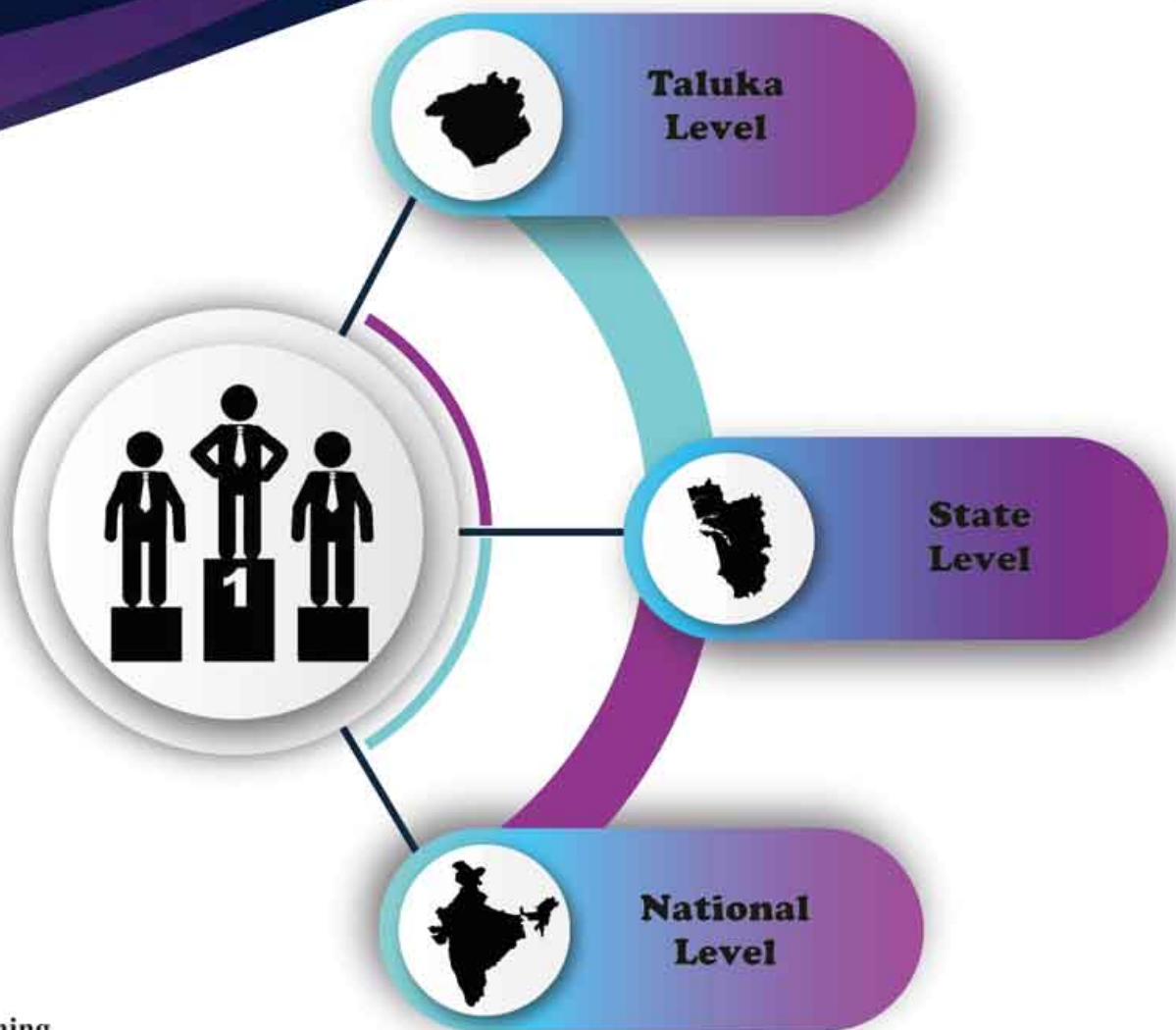
**Class VIII
Elective
Curriculum**

Our guiding curriculum values

A curriculum product that not only educates but also enriches the lives of students and educators while contributing positively to society.



Competition Model



Features

- Design & Planning
- Resource Management & Promotion
- Training
- Logistics Management
- Judging & Evaluation

Bootcamps to prepare students for competitions Offline & Online

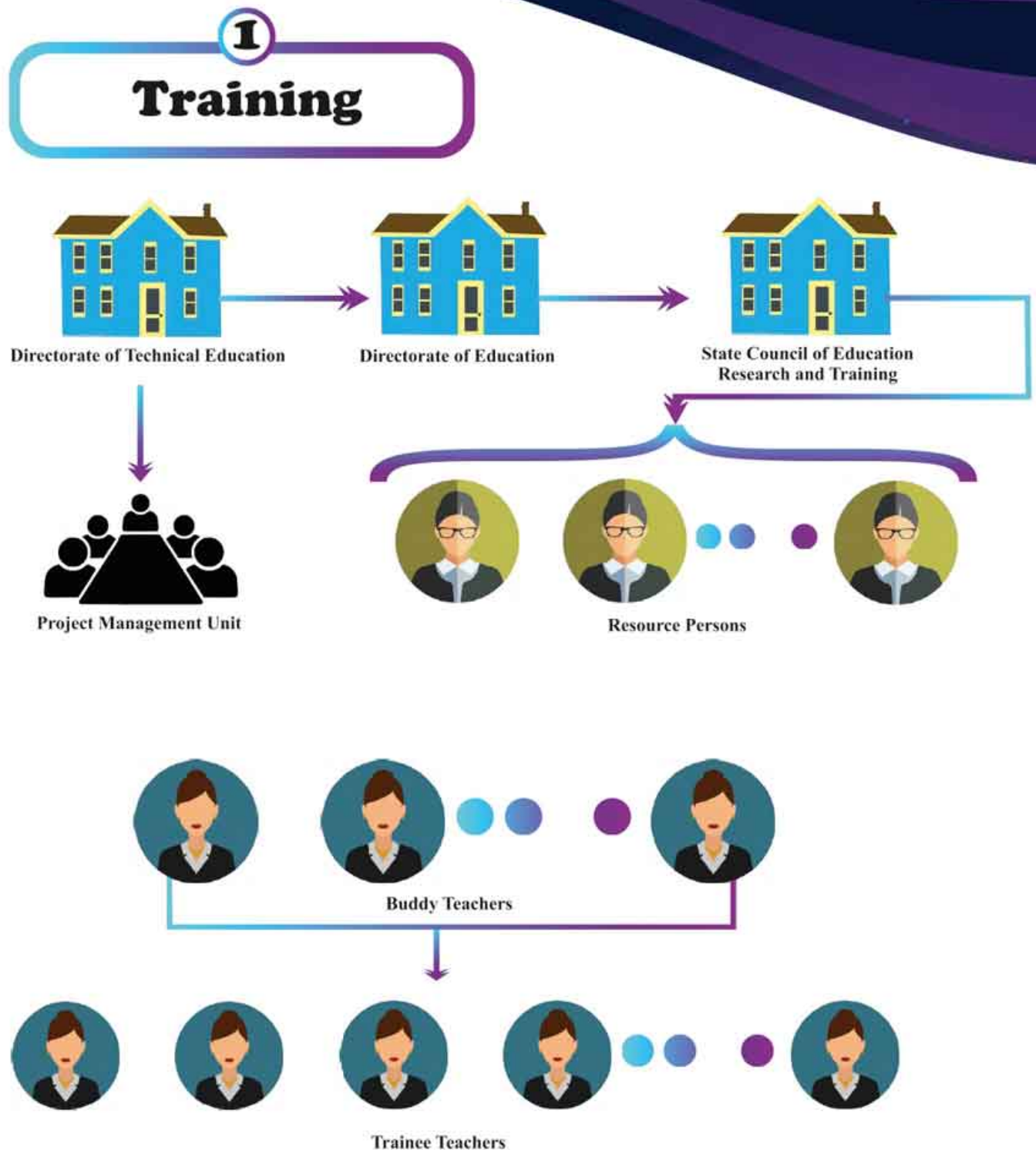
Expert led sessions

- ✧ Specialised guidance
- ✧ Interactive discussion
- ✧ Q&A sessions

Student led sessions

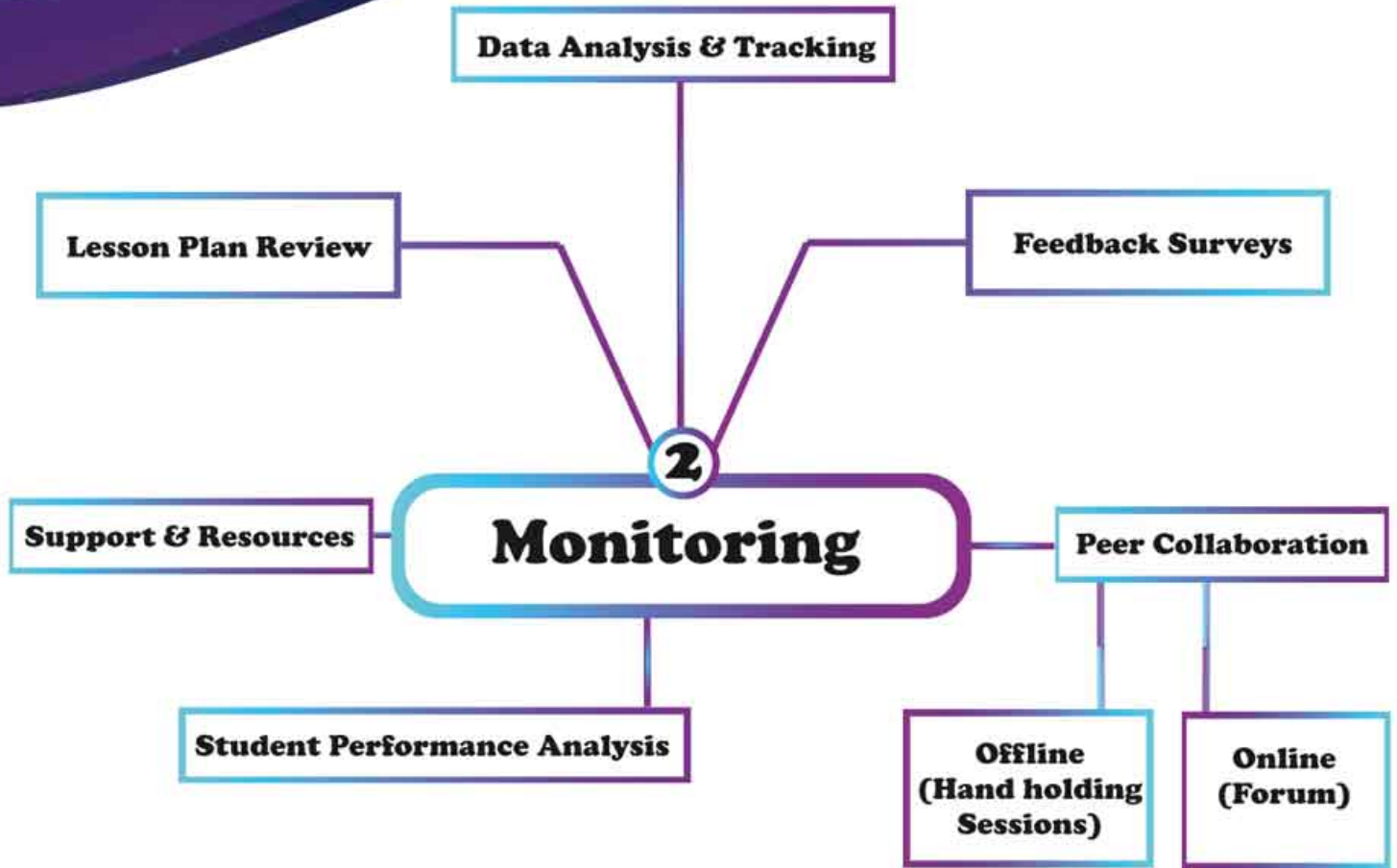
- ✧ Peer-to-peer learning
- ✧ Empowerment
- ✧ Student engagement

Teacher Training Model



Features

- **Wide Reach:** Rural and urban areas
- **Scalability:** Easily deployable to numerous teachers
- **Remote Accessibility:** Supports online access for all teachers
- **Comprehensive Support:** Provides assistance and resources to all
- **Collaboration Opportunities:** Fosters an online and offline learning community



Evaluation

Level 4 -

Did the training have a measurable impact on performance?

Level 3 -

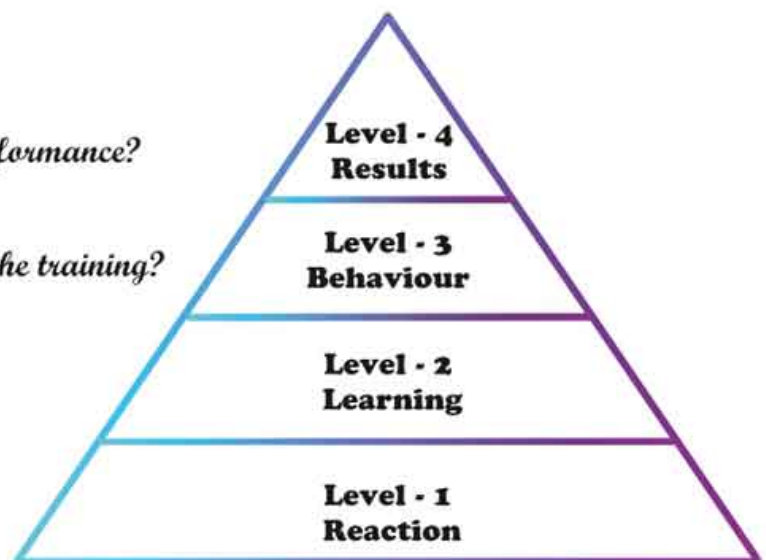
Did the learner's behaviour change as a result of the training?

Level 2 -

Did knowledge transfer occur?

Level 1 -

Did the learner enjoy the training?

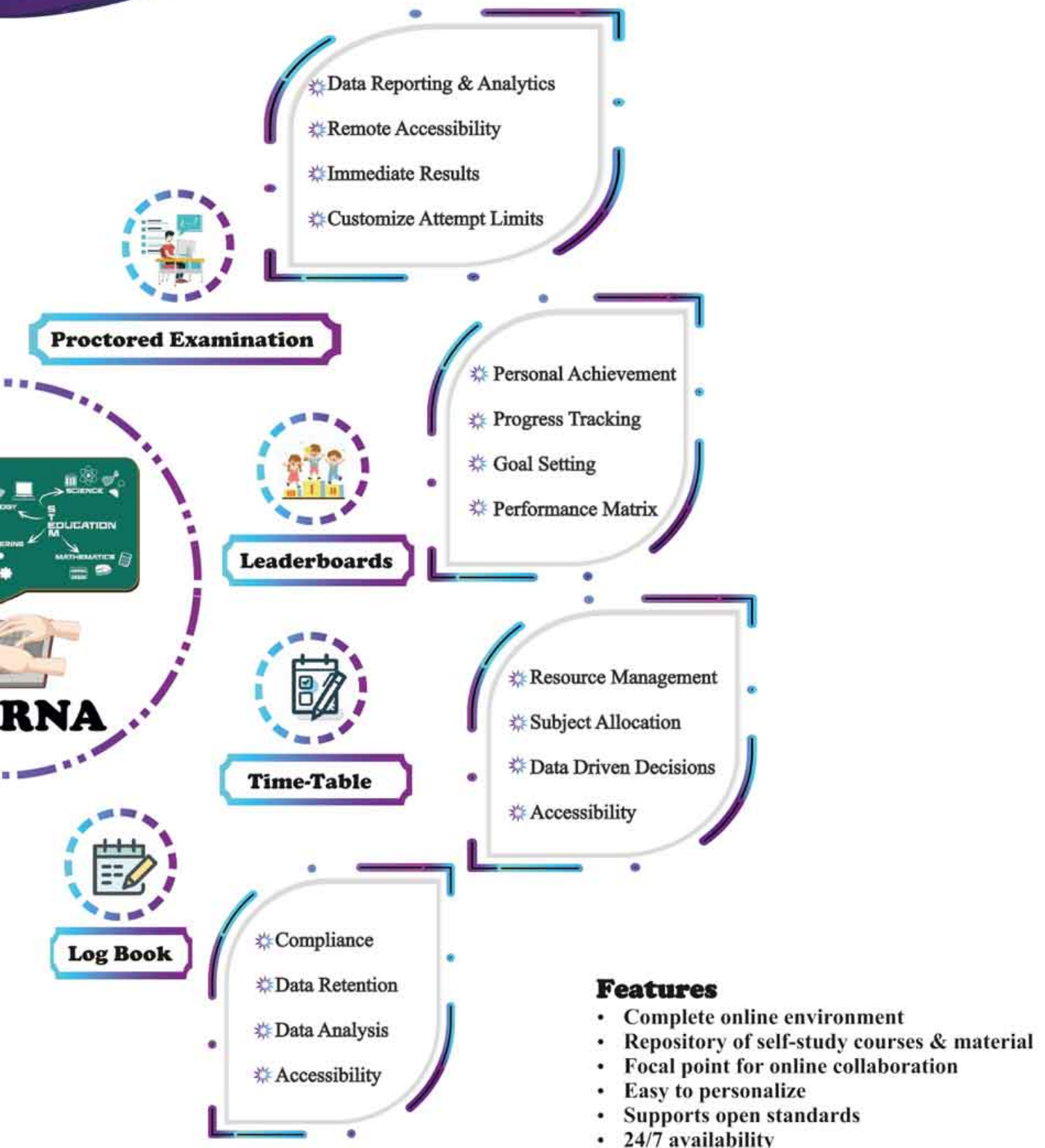


Kirkpatrick Model for Evaluation

PRERNA Course Management Model



Reach aNd Achievements



AI/ML Extension & Chat Bot

AI / ML Extension



Face Detection Extension

Detects facial landmarks & facial features



QR Code Scanner Extension

Scans the QR code through camera



Object Detection Extension

Capability to detect number of objects

Features

- Can be executed without internet
- Block based programming
- Flexible & self paced
- Customised blocks

Chat Bot

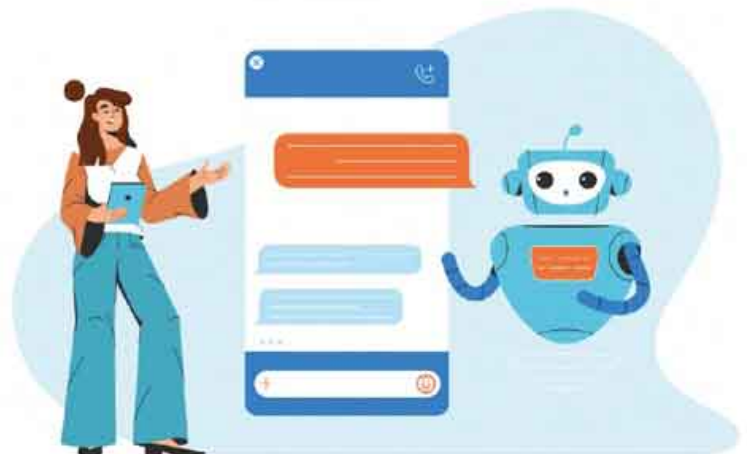


Benefits

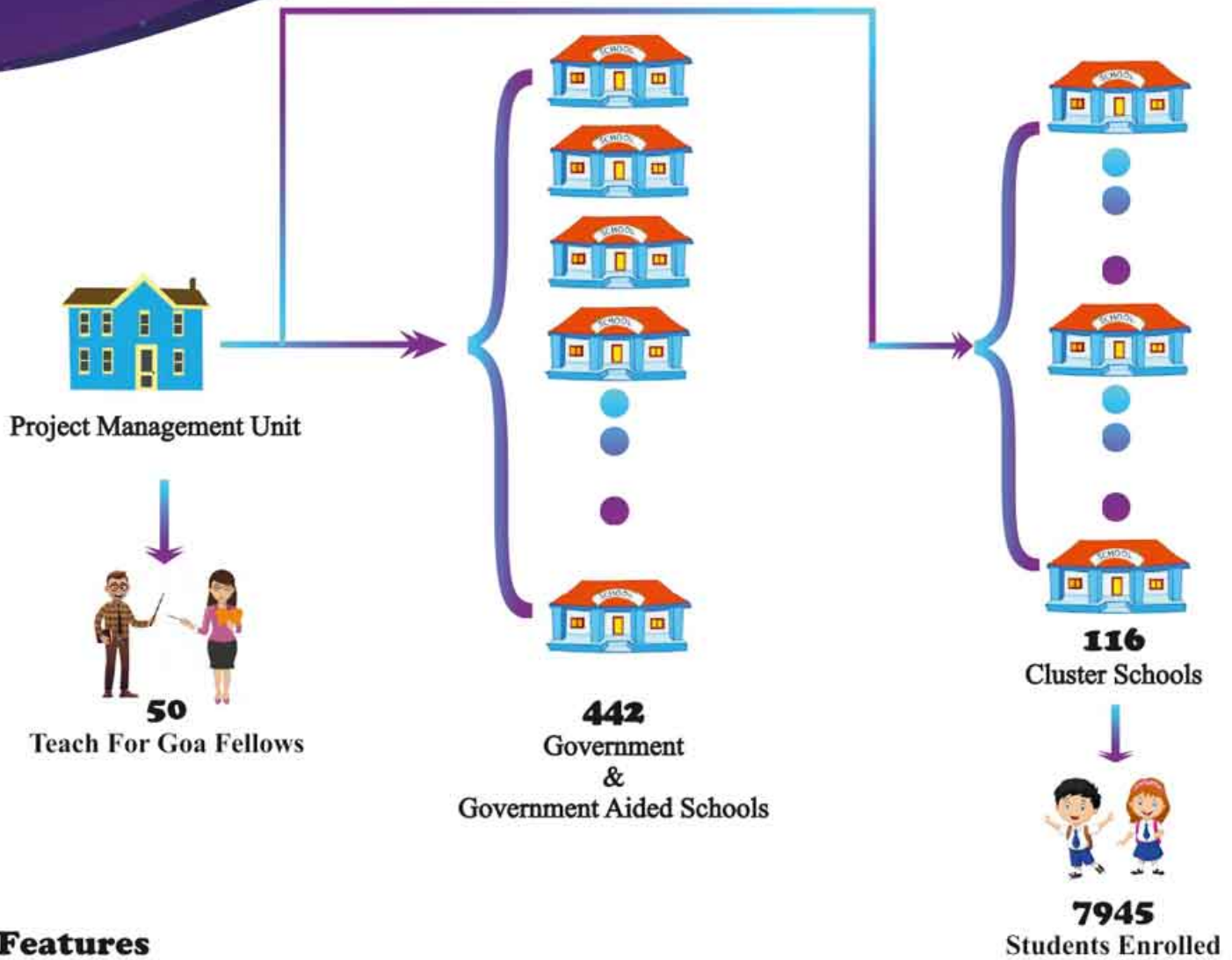
- Interactive and flexible
- Better student engagement
- Effective virtual learning
- Interactive learning and gamification
- Assessment, analytics and reporting
- Self-paced learning

Features

- Instant feedback & assessment
- 24/7 availability
- Progress tracking
- Analytics & reporting
- Integration with PRERNA LMS



Elective Curriculum Model



Features

- Wide Reach - Rural and urban areas
- Dedicated Facilities - Access to modern technology
- Teacher expertise
- Online enrolment, training and assessment
- Effective management and coordination
- State - wide advancements



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Robo-TARK

TeachAble Robotic Kit

Object
Follower

Obstacle
Avoidance

Distance
Measuring

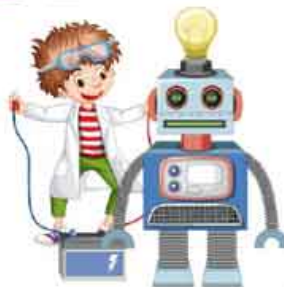
Maze Runner

Computing
Area of Shapes

Line
Follower

Features

- Detachable
- On board display module
- Easy to control
- Inclusive for STEAM
- Pick & place



2

GOVIN Suite

Gomantak Vishwa Integrated Development ENvironment

Indigenously curated development suite with open source technology having student friendly interface for block/ text based robotics coding.

Features

- Block based programming tool
- Exact pin mapping
- Text based view
- Multiple board support
- Student friendly interface



Teacher Learning Model



Benefits

Wider Audience Reach

Multi-lingual support enables to connect with wider audience.

Accessibility

Individual with hearing challenges or limited language proficiency can access the content through subtitles and dubbing.

Inclusivity

People unfamiliar with video's original language can comprehend the content.

Educational Impact

Educational videos become accessible to larger audience accommodating learners in their native language.

Features

- Alignment with learning objectives
- Multi-lingual support
- Subtitles closed captions
- Educational impact
- Engaging storytelling
- Motivational elements



A Journey With Persistent Vision

CARES vision motivates us to move ahead in the ever-changing world of opportunities.

Discover how our educational solutions can empower you

Unlock Potential

Unleash the full potential of your students with our innovative tools

Explore a range of educational products to suit various learning needs

Comprehensive Support

Our dedicated team to assist you at every step

Diverse Solutions

Foster Innovation

Embrace cutting-edge technology for a brighter future of education

Customized Learning

Tailor our solutions to fit your school's unique curriculum

Impact Unleashed

Transforming Education

435+ Schools
500+ Teachers
65k+ Students

Beneficiary

70+ Master Trainers
1.5 Lakh+ Hours
500+ Trainee Teachers

CPD

Continuous Professional Development

113+ Schools
8k+ Students

Elective Curriculum

Class VI, VII, VIII

Led by Teach For Goa Fellows (TFG)

Competitions

4 State Level
2 National Level
2 International
Bebras

ICT School Labs

Upgraded

4339 computing devices installed in all 442 Govt. and Govt. aided schools

Regular Curriculum

Class VI, VII, VIII

435+ Schools
65k+ Students

Led by School Computer Teacher

CARES – UniVerse

Universal and Versatile learning solution empowering school education

“ **Bridging the school education gap with Universal Versatility** ”

Overall CARES UniVerse Features

- ✦ Problem Based Learning Approach
- ✦ Project Based Learning Approach
- ✦ Differentiated Instruction
- ✦ Real World Skills
- ✦ 21st Century Skills
- ✦ Adaptable
- ✦ Digital Learning

Products and Plans

Flagship Products

- ✦ Flagship products are the foundational educational solutions.
- ✦ A comprehensive suite of tools and resources for teachers and institutions.
- ✦ Fully customizable to fit the unique needs of educational institution.
- ✦ Option to add Smart Products for enhanced functionality.

Smart Products

- ✦ Smart Products are specialized modules designed to enhance Flagship Products.

Perfect for institutions looking for flexibility and cost-effectiveness

Pro Version:

- Includes all Smart Products as part of the Flagship Product package.
- Ideal for institutions seeking a comprehensive solution.

Lite Version:

- Allows customisation to choose specific Smart Products as add-ons with the Flagship Product.

Plans for You

Pro Version:

- Suited for institutions aiming for an all-inclusive, advanced solution.
- Simplifies procurement and ensures access to the full suite of Smart Products.

Lite Version:

- Tailored for institutions that want to select specific Smart Products based on their unique needs.
- Offers budget-conscious flexibility without sacrificing quality.

We ensure that educational institutions have the flexibility and scalability to meet their specific needs while providing the best tools for modern education.

Are You Ready To Transform Education?

We invite you to experience the difference with a trial of our products

Request A Demo: See our solutions in action and explore their impact.

Try Before You Buy: Test our products with a no-obligation trial.

Get Started Today: Contact us to discuss the best-fit options for your institution.

Let's Revolutionize Education Together!

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