# **SMART INDIA HACKATHON 2025**



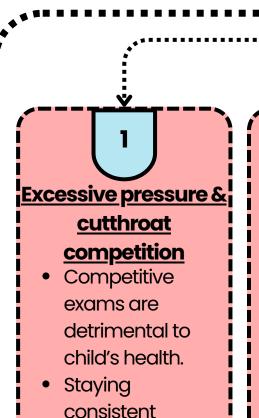
- Problem Statement ID SIH25141
- Problem Statement Title Student Innovation: Swadeshi for
   Atmanirbhar Bharat Toys & Games
- Theme Toys and Games
- PS Category Software
- Team ID -
- Team Name Learn×Play



## **Learn**XPlay

## **Smart Learning Game**





difficult.

Vast syllabus
makes it difficult
to revise entire
syllabus

throughout is

## \_\_\_\_

# <u>Lack of</u> <u>engagement and</u> motivation

- Due to backlogs and vast syllabus, students often lose motivation and falls into Depression.
- Rural and government schools face issues like poor infrastructure, lack of digital tools.

### **PROBLEMS**

## Low Retention and Recall

- Students rarely practice spaced repetition or selftesting, which are proven methods for long-term retention.
- They re-read notes passively, which gives an illusion of learning but not real memory retention...

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### <u>Lack of</u> Concentration

- Dopamine
  booster apps
  like Instagram
  or Twitter often
  breaks the
  concentration.
- Sitting for straight 1.5 hours has become difficult due to boring lectures and practice.

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## Neglect of Regional Languages

Many students
study in a language
(mostly English) that
is not their mother
tongue.
Translation in the
mind weakens
memory
connections.
It's easy to
understand in
regional languages.

### <u>Pressure load decreases</u>

 Transforms assessments into fun, interactive tasks (quizzes, challenges, badges, and leaderboards), gamification shifts focus from rote grades to skill mastery and competency.

## Better Engagement • Friendly competition in

 Friendly competition, peer collaboration, and social elements boost engagement and positive peer interactions, reducing isolation and fostering teamwork.

### **Encourages Active Learning**

 Instead of being passive listeners, students become active problem-solvers. They make decisions, complete missions, and interact with the content regularly.

## Supports Goal-Setting and Self-Monitoring • Camified elements help students track their

 Gamified elements help students track their progress. This builds self-awareness and encourages them to set personal learning goals.

### <u>Multilingual Support</u>

- App will support many local and regional languages to make sure participation of every student.
- It will help to learn subjects in their mother tongue.

Our game combines education and entertainment through interactive battles, puzzles, and real-time challenges. Players earn and lose marks based on their answers, face time-limited questions, and receive compliments for perfect scores. The system adapts with new questions if they lose, encouraging replayability. With puzzles in chemistry and logical reasoning, lifelines for hints, and a save-notebook feature to track progress, the game builds

problem-solving skills while keeping players engaged. This unique mix of learning, competition, and strategy makes knowledge acquisition exciting and rewarding. S

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#### **SMARTINDIA** TECHNICAL APPROACH **Learn**XPlay **HACKATHON** 2025 Game Frontend (Game Interface) **Development Unity Game** For building menus, puzzles, and battle UI Core platform for building the game (UI, **Engine** gameplay, physics, rendering). **2D Assets** For player, teacher/boss, puzzles, (Sprites, Models, For scripting game logic, player interactions, background, and other elements and effects. **Programming** scoring, and mechanics. **Animations** Language **Asset Internal** Integrated Development Environment (IDE) **Visual Studio UI System** Manager **Layer** for writing and debugging C# scripts. Code **Unity's Graphics** Rendering **Canvas Renderer** Garbage & Event System **Pipeline** Collection Source code management, version control, Asset **GitHub** DirectX, and team collaboration. scaling **Bundles** OpenGL, anchoring **Prefab** Vulkan. input events system or testing and running Metal **Testing & Unity Test Runner Build Systems Deployment** WebGL (Web Browsers)

## **Learn**XPlay

## **FEASIBILITY AND VIABILITY**

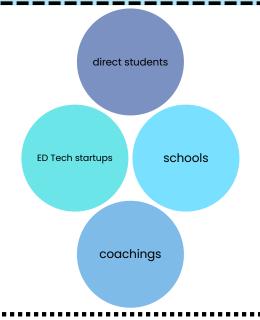


# **Feasibility Market Feasibility**

- Educational gaming is already a growing sector (EdTech + Gamification), so the idea fits current trends.
- Schools, coaching institutes, and parents are looking for interactive ways to engage students.
- Pandemic and post-pandemic push → online, gamified, and hybrid learning are normalized.
- Schools increasingly open to gamified engagement tools (if aligned with curriculum).

### **Technical Feasibility**

- Unity supports crossplatform builds (Android, iOS, Windows, WebGL).
- Can be optimized for lowend devices → important for accessibility in India/other emerging markets.



### **Economic Viability**

- Digital distribution through app stores (Google Play, iOS, Steam, Microsoft Store) removes physical costs.
- Schools can adopt annual subscriptions (₹100-200 per child per year in India) or bulk licensing.

### **Funding Flexibility**

- Funding can come from a mix of grants like IES, NSF.
- partner with educational institutions or publishers to co-develop curriculum-aligned games, receive letters of support.

## **Smartphone Penetration**

- 85.5% of Indian households possess at least one smartphone.
- Good reach: most families already have the hardware needed to use the game.

### **Lona-Term Plan**

- Al-Driven Personalization: Adaptive learning paths that adjust question difficulty based on child performance.
- Content Pipeline → Expand across subjects & exams ensures fresh value.

### **Localization & Curriculum Adaptation**

- With large user base, we can earn enough revenue to support localization (languages, regional curricula) and still sustain economies of scale.
- Content creation cost per user drops as user base increases.

### Problem:-

Schools and parents may resist adopting game-based learning, fearing it reduces seriousness of studies.

### Solution:-

Highlight research on improved retention & engagement (20-30% higher than traditional). Partner with teachers' associations to build trust.

### Problem:-

India has diverse languages and state board curricula.

### Solution:-

Start with NCERT-based questions (accepted across boards).

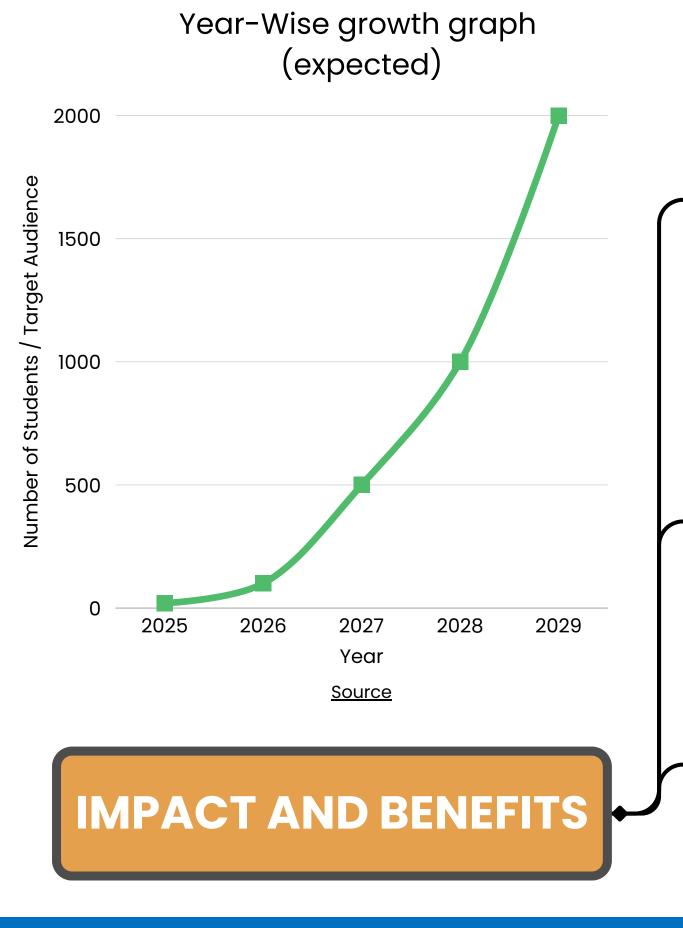
Use multilingual localization.



## LearnXPlay

## **IMPACT AND BENEFITS**





# Educational Impact:

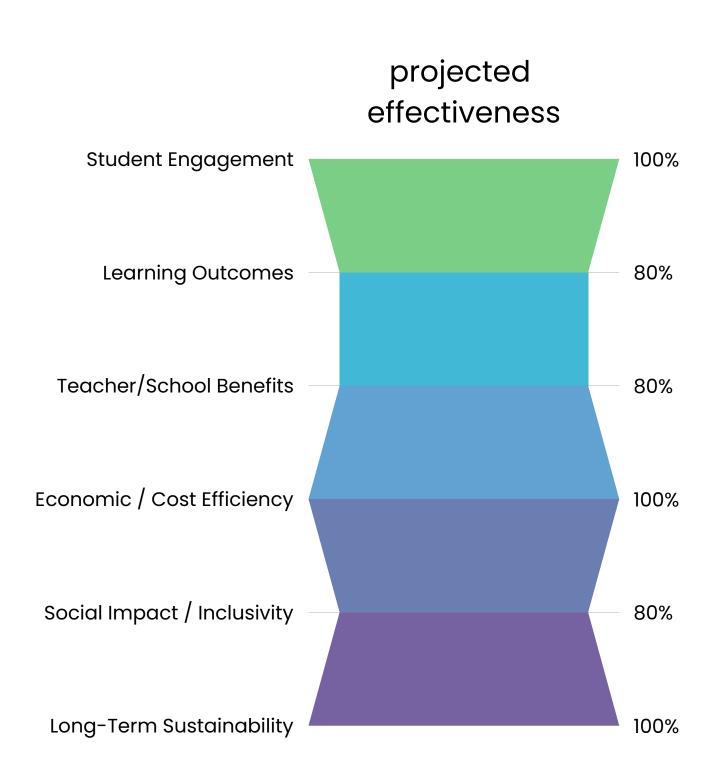
Improved Learning
Retention: Gamified
quizzes and time-bound
challenges can increase
retention by 20–30%
compared to traditional
methods.

## Assessment Readiness:

Battle-style questions simulate exam pressure, improving speed and accuracy.

# Student Engagement:

Motivation Through
 Rewards: Compliments,
 points, and lifelines make
 learning rewarding.





## RESEARCH AND REFERENCES



- i) https://www.21kschool.com/in/blog/gamification-in-education/#3\_Improves\_Retention\_and\_Recall
- ii) How Gamification Transformed India's Curriculum-Based Learning
- iii) https://www.frontiersin.org/journals/education/articles/10.3389/feduc.2024.1466926/full
- iv) <a href="https://www.petersons.com/blog/gamification-in-education-pros-cons-and-practical-insights/">https://www.petersons.com/blog/gamification-in-education-pros-cons-and-practical-insights/</a>
- v) https://www.acadecraft.com/blog/gamification-education-challenges/

go-globe.com

Global increase State of Mobile Gaming Industry | GO-Globe

MOBILE GAMING INDUSTRY: INFOGRAPHICS Infographics By Go-Globe App Development...

ETPrin

85.5% Indian households posses at least one smartphone, 99.5% youth use UPI: MoSPI survey

neja, ET Bureau • Last Updated: May 29, 2025, 10:00:00 PM IST





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