

Personalised Adaptive Learning (PAL)

Prelims: Current events of national and international importance

Why in news?

Recently, Nobel Laureate and economist Michael Kremer released the study on the use of personalised adaptive learning (PAL) software, conducted in Andhra Pradesh.

- **Personalised adaptive learning (PAL) -**
 - PAL offers a **scalable, tech-enabled solution to bridge learning gaps in classrooms.**
 - From diagnosis to personalised practice, PAL equips government schools with the tools to improve learning outcomes, efficiently and at scale.
 - The learning content **automatically adjusts in real time** based on how a student is performing.
- **Key features**
 - The real-time adjustments to content and difficulty,
 - Personalized learning paths based on individual needs,
 - Instant feedback and
 - Detailed progress tracking, and data-driven insights for educators
- **Recent Findings -** The study uses the PAL software, which involved schools that adopted PAL has showed that **learning rates doubled among students** than those didn't used it.

In India, the Annual Status of Education Report (ASER) 2024 showed that only 44.8% of Class 5 students in government schools could read a Class 2 text.

- **Randomised Control Trial (RCT) -**
 - The trail was conducted by selecting 60 government schools in Andhra Pradesh.
 - Divided into 30 schools, were equipped with computer labs and

tablets pre-loaded with a PAL software and another 30 schools did not receive the PAL intervention.

- Independent tablet-based math assessment test (separate from PAL) with validated questions ranging from Grade 2 up to the student's current grade.
- **Observed outcomes** -
 - Improvement in learning outcomes (a gain of 1.9 equivalent years of schooling) and
 - Larger gains - in younger grades (Grade 6 and 7) and especially among girls than boys.
 - Students in smaller classes had greater access to tablets and used PAL more due to better access (42.3 versus 30.6 hours) showed better gains.
- **PAL's use in India** - Its ***use in India is scattered*** and has been in use in some government schools in Rajasthan, Uttar Pradesh, and Telangana, Andhra Pradesh.
- **Advantages** - Adaptive learning boosts math's understanding; Tech-aided learning yields big gains; Struggling students gain from adaptive math's; Personalised remediation helps students catch up.
- **Future outlook** - Need for a gradual scaling up of the intervention, implementing in the entire country; and to get teachers on board and ensure training - both the teacher and technology are used for effective classroom learning.

Only 63.5% of schools in the country have internet facilities, and around 65% have computers, according to the latest UDISE+ data.

References

1. [Indian Express | Personalised Adaptive Learning \(PAL\)](#)
2. [PAL Works | Personalised Learning, Systemic Results](#)