

Immersive Learning: Gamified Self-Regulation in Math with Learning Analytics

Situation

High poverty rates within the Syracuse City School District (SCSD) has led to inequitable access to educational opportunities and resources, perpetuating cycles of poverty and limiting long-term educational success for affected children. This logic model provides an overview of the situation, the interventions of using a gamified application designed to address these disparities, focusing on improving access to educational resources, enhancing student support systems, and fostering equitable learning opportunities to break the cycle of poverty and promote long-term success for middle school students in SCSD.

Resources

- Middle School Students
- Middle School local Teachers
- Instructional Design Team
- Funding
- Developer Team
- Graduate Assistants
- Time

Activities

- Gamified mathematics via mobile applications
- Curriculum training on mobile application for local instructors
- Control Group learning

Outputs

- Recordings
- Focus group feedback
- Gamified Application Pilot program
- Question set for students
- Prior mathematical data scores
- Quantifiable/Measurable data from control group and pilot group

Outcomes

Short-Term

- Increased motivation from alternative learning measures
- Increased development of problem-solving skills

Long-Term

- Increased student knowledge
- Increased interest for learning
- Implementation of gamified app throughout SCSD middle schools

Impact

- Increased interest and enrollment into STEM programs
- Higher graduation rates
- Increased educational knowledge
- Educational gap closure from students of impoverished neighborhoods to that of affluent neighborhoods