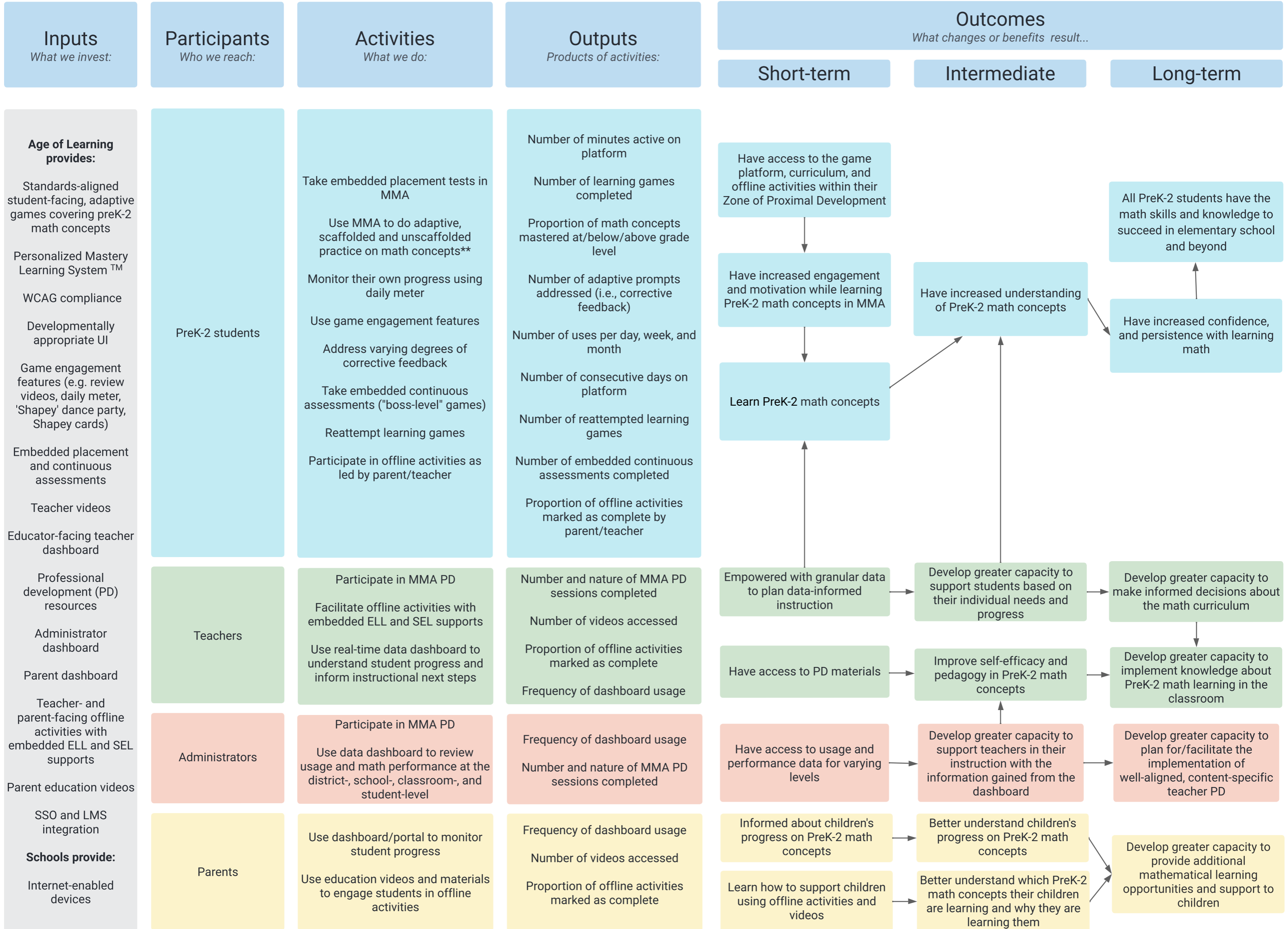# My Math Academy
Age of Learning

Problem Statement: Children enter formal schooling with different levels of mathematical skills and understanding but few to no tools provide them with engaging learning experiences of PreK-2 math concepts, continually assess and adapt to their specific learning needs, and provide their teachers and parents with appropriate data about their learning progress. My Math Academy is a tool that aims to address this problem. Below is its program logic model illustrating a road-map to address the problem.

Inputs
What we invest:

Age of Learning provides:

Standards-aligned student-facing, adaptive games covering preK-2 math concepts

Personalized Mastery Learning System ™

WCAG compliance

Developmentally appropriate UI

Game engagement features (e.g. review videos, daily meter, 'Shapey' dance party, Shapey cards)

Embedded placement and continuous assessments

Teacher videos

Educator-facing teacher dashboard

Professional development (PD) resources

Administrator dashboard

Parent dashboard

Teacher- and parent-facing offline activities with embedded ELL and SEL supports

Parent education videos

SSO and LMS integration

Schools provide:

Internet-enabled devices

Participants
Who we reach:

- PreK-2 students
- Teachers
- Administrators
- Parents

Activities
What we do:

PreK-2 students
- Take embedded placement tests in MMA
- Use MMA to do adaptive, scaffolded and unscaffolded practice on math concepts**
- Monitor their own progress using daily meter
- Use game engagement features
- Address varying degrees of corrective feedback
- Take embedded continuous assessments ("boss-level" games)
- Reattempt learning games
- Participate in offline activities as led by parent/teacher

Teachers
- Participate in MMA PD
- Facilitate offline activities with embedded ELL and SEL supports
- Use real-time data dashboard to understand student progress and inform instructional next steps

Administrators
- Participate in MMA PD
- Use data dashboard to review usage and math performance at the district-, school-, classroom-, and student-level

Parents
- Use dashboard/portal to monitor student progress
- Use education videos and materials to engage students in offline activities

Outputs
Products of activities:

PreK-2 students
- Number of minutes active on platform
- Number of learning games completed
- Proportion of math concepts mastered at/below/above grade level
- Number of adaptive prompts addressed (i.e., corrective feedback)
- Number of uses per day, week, and month
- Number of consecutive days on platform
- Number of reattempted learning games
- Number of embedded continuous assessments completed
- Proportion of offline activities marked as complete by parent/teacher

Teachers
- Number and nature of MMA PD sessions completed
- Number of videos accessed
- Proportion of offline activities marked as complete
- Frequency of dashboard usage

Administrators
- Frequency of dashboard usage
- Number and nature of MMA PD sessions completed

Parents
- Frequency of dashboard usage
- Number of videos accessed
- Proportion of offline activities marked as complete

Outcomes
What changes or benefits result...

Short-term

PreK-2 students
- Have access to the game platform, curriculum, and offline activities within their Zone of Proximal Development
- Have increased engagement and motivation while learning PreK-2 math concepts in MMA
- Learn PreK-2 math concepts

Teachers
- Empowered with granular data to plan data-informed instruction
- Have access to PD materials

Administrators
- Have access to usage and performance data for varying levels

Parents
- Informed about children's progress on PreK-2 math concepts
- Learn how to support children using offline activities and videos

Intermediate

PreK-2 students
- Have increased understanding of PreK-2 math concepts

Teachers
- Develop greater capacity to support students based on their individual needs and progress
- Improve self-efficacy and pedagogy in PreK-2 math concepts

Administrators
- Develop greater capacity to support teachers in their instruction with the information gained from the dashboard

Parents
- Better understand children's progress on PreK-2 math concepts
- Better understand which PreK-2 math concepts their children are learning and why they are learning them

Long-term

PreK-2 students
- All PreK-2 students have the math skills and knowledge to succeed in elementary school and beyond
- Have increased confidence, and persistence with learning math

Teachers
- Develop greater capacity to make informed decisions about the math curriculum
- Develop greater capacity to implement knowledge about PreK-2 math learning in the classroom

Administrators
- Develop greater capacity to plan for/facilitate the implementation of well-aligned, content-specific teacher PD

Parents
- Develop greater capacity to provide additional mathematical learning opportunities and support to children

*Shapey - game characters and manipulatives in My Math Academy

** Recommended dosage: Prior studies indicate that children who spend at least 45 min a week, for about 12-14 weeks, have consistent, significant gains compared to those that use it for a shorter time or less frequently.

Figure 1. My Math Academy logic model

LEARN PLATFORM