Age of Learning® My Math Academy®

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 Pre-K-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 (MMA) 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:	PARTICIPANTS Who we reach:	ACTIVITIES What we do:	OUTPUTS Products of activities:		OUTCOMES What changes or benefits result	
AGE OF LEARNING PROVIDES: Standards-aligned student-facing, adaptive games covering Pre-K-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 Educator videos Educator-facing teacher dashboard	PRE-K-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	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	Have access to the game platform, curriculum, and offline activities within their Zone of Proximal Development Have increased engagement and motivation while learning Pre-K–2 math concepts in MMA Learn Pre-K–2 math concepts	Have increased understanding of Pre-K–2 math concepts	All Pre-K–2 students have the math skills and knowledge to succeed in elementary school and beyond Have increased confidence, and persistence with learning math
Professional development (PD) resources Administrator dashboard Parent dashboard Educator- and parent- facing offline activities with embedded ELL and	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	Number and nature of MMA PD sessions completed Number of videos accessed Proportion of offline activities marked as complete Frequency of dashboard usage	Empowered with granular data to plan data-informed instructions Have access to PD materials	Develop greater capacity to support students based on their individual needs and progress Improve self-efficacy and pedagogy in Pre-K-2 math concepts	Develop greater capacity to make informed decisions about math curriculum Develop greater capacity to implement knowledge about Pre-K-2 math learning in the classroom
SEL supports Parent education videos SSO and LMS integration SCHOOLS PROVIDE: Internet-enabled	ADMINISTRATORS	Participate in MMA PD Use data dashboard to review usage and math performance at the district-, school-, classroom-, and student-level	Frequency of dashboard usage Number and nature of MMA PD sessions completed	Have access to usage and performance data for varying levels	Develop greater capacity to support teachers in their instruction with the information gained from the dashboard	Develop greater capacity to plan for/facilitate the implementation of well-aligned, content-specific teacher PD
devices	PARENTS	Use dashboard/portal to monitor student progress Use educational videos and materials to engage students in offline activities	Frequency of dashboard usage Number of videos accessed Proportion of offline activities marked as complete	Informed about children's progress on Pre-K–2 math concepts Learn how to support children using offline activities and videos	Better understand children's progress on Pre-K–2 math concepts Better understand which Pre-K–2 math concepts their children are learning and why they are learning them	Develop greater capacity to provide additional mathematical learning opportunities and support to children

FIGURE 1. My Math Academy Logic Model



^{*} 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.