

Learning Outcome Assessment - Mumbai Rocket Learning

Design and assessment

Rocket Learning has been executing its home-learning model with 20,000+ children and parents in partnership with teachers from 800+ govt. run ECE centers in Mumbai (MCGM) . The CECED early years tool was used to measure performance of children across 10 learning outcomes (LO) in December 2021 post 6 months of the program.

Data showed a strong positive and statistically significant relationship between user engagement and the child's learning score after controlling for other causal predictors of scores such as age of the child and education of the mother.

*Given home-learning was the only learning source during this time of school closures, **this multi-variate regression is a good indicator of causality in terms of the program improving children's learning. The average Rocket Learning child attained learning outcomes that took them to the top 30% of an average class.***

Results

Engagement indicators on the platform had a positive and statistically significant impact on the learning score

The coefficient shows impact of engagement indicator on child's score after controlling for mother's education and age

Indicator	Coefficient	P-value
# months user was a power user (June-November)	0.025	<0.03
# months user was active (June-November)	0.026	<0.03
# weeks user was active in October – November	0.011	<0.10
# days user was active in October – November	0.002	<0.06
Self reported time spent with child (daily in mins)	0.034	<0.01

Monthly active users learnt substantially in every month they engaged

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Residuals:
    Min       1Q   Median       3Q      Max
-0.52268 -0.09800 -0.01027  0.12712  0.45215

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept)  0.02654   0.08088   0.328 0.743459
no_months_active  0.02445   0.01044   2.341 0.021291 *
age_tag_rank    0.12558   0.03423   3.668 0.000401 ***
mother_edu_rank  0.07425   0.02341   3.172 0.002035 **
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Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
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Residual standard error: 0.2067 on 96 degrees of freedom
(12 observations deleted due to missingness)
Multiple R-squared:  0.3139,    Adjusted R-squared:  0.2924
F-statistic: 14.64 on 3 and 96 DF,  p-value: 6.343e-08
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The study also showed important correlations that support our theory of change and the impact of parental involvement in learning.

1. Average daily time spent with the child improves with # of days they are active on the platform

2. Scores improve as self-reported time spent by parents improves

3. The effectiveness of time spent by a parent is independent of their education levels