ROCKET LEARNING

Monitoring and Evaluation

2020-2023

Internal + External Evaluations

External partners: J-PAL, Vidhi Centre for Legal Policy

Internal: M&E supported and validated by experts from Harvard and Stanford professors like Prof. Dona McCoy, and Prof. Sunny Anand

Nashik ECCE (April-December 2022)

What was evaluated?

❖ Measuring Pre-literacy, Pre-Numeracy and Cognitive development

❖ Random sample of 3-6 years of children enrolled in Anganwadis and part of the Rocket Learning WhatsApp groups

Type of Assessment

❖ Baseline assessment and endline assessment conducted six months and 12 months after intervention started, respectively.

❖ JPAL-ECE Assessment tool, Rocket Learning tool

Results

❖ Overall, mother daily engagement is seen 21% more in students of age 3-5 years

❖ 3-5 years of students' mean score difference is 18% more than 6-7 years of students' mean score difference.

❖ The minimum scores are higher by 34%(from 21% to 55%) points from one month active to 12 months active, and users reached the top of the class.

Nashik ECCE (Cont.)

Results

❖ Mother daily engagement shows an increasing trend with score differences from baseline to endline highlighting the critical role of parental support in improving 'learning outcomes' of children

❖ Mother daily engagement statistically significant after controlling for mother's education and mothers having their own smartphones with whatsapp and students' age

Difference in mean scores from baseline to endline by daily mother time with child (in mins)
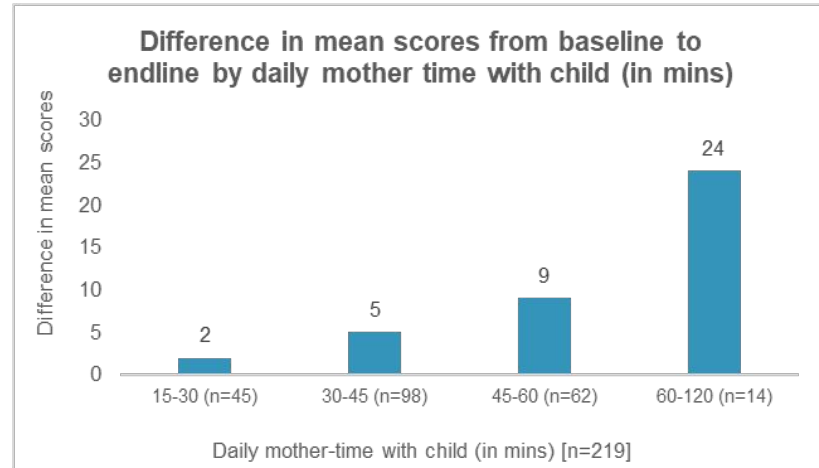
Mumbai ECCE (December 21-June 22)

What was evaluated?

- ❖ Measuring Pre-literacy, Pre-Numeracy and Cognitive development
- ❖ Random sample of 3-6 years of children enrolled in Balwadis and part of the RL whatsapp groups

Type of Assessment

- ❖ Baseline assessment and endline assessment conducted six months and 12 months after intervention started, respectively.
- ❖ ASER-Modified assessment tool

Results

- ❖ Overall, female students relatively fared 6% better than the male students in mean score difference.
- ❖ Data showed a strong positive and statistically significant relationship between user (parent) engagement and improvement in child's learning score, after controlling for child's age and mother's education.
- ❖ Monthly Active Users (MAUs) are achieving substantial Learning Outcomes (LO) gains - scores are higher by 36% points from one month active to 12 months active, and users reached the top of the cohort.

Chandigarh ECE (August 20 - February 21)

What was evaluated?

- ❖ Measuring Pre-literacy, Pre-Numeracy and Cognitive development

Type of Assessment

- ❖ Sample-based Control and treatment students
- ❖ World Bank/ CECED assessment tool

Results

- ❖ Children enrolled in the Rocket Learning program scored higher on the learning outcome assessment (World Bank/ CECED assessment tool)
- ❖ Large proportion of children were able to avert the learning loss by participating in our program
- ❖ Additionally, the result of the analysis is significant as the probability of zero effect is very low (Pr (>|t|) = 0.000549)

UK FLN (Nainital & Haridwar) July 22- March 23

What was evaluated?

- ❖ Measuring Foundational Literacy and Numeracy

Type of Assessment

- ❖ Sample-based Control and treatment students
- ❖ Tool used in Baseline & Endline – EGRA EGMA

Results

- ❖ Weekly parent study time is positively correlated to engagement level of kids on RL group and statistically significant (98% CI)
- ❖ For kids who don't engage in the group, absolute change in score is positively correlated to the weekly parent study time and statistically significant (>90% CI)

Uttar Pradesh FLN

What was evaluated?

❖ Measuring change in FLN learning outcomes for Grades 1 & 2

Type of Assessment

❖ Sampling by J-PAL and Harvard researchers
❖ Assessment tool prepared by CSF

Results

❖ Positive gains in Word Reading Skills - Significant results in reading two syllable words. RL students also better on reading words with matras
❖ Positive gains in Number Recognition, Ordering and Comparison till 20 - More children could master ordering and comparisons in RL treatment than control
❖ Significant Positive Impact in Letter Identification & Listening Comprehension - On average RL kids can read 11 letters vs 9.5 letters for a kid in the control

Parent Behaviour (Time Spent)
Vidhi (Mumbai Balwadis & Akanksha Schools)

What was evaluated?

- ❖ Measuring change in parental awareness & attitudes
- ❖ Output variables include time spent with children on educational activities, feedback on activities, likelihood of continuing to engage post school reopening

Type of Assessment

- ❖ Sampling by J-PAL and Harvard researchers
- ❖ Assessment tool prepared by CSF

Results

- ❖ The median parent-child, who was part of the program, engaged in learning at home for 4 days a week, compared to 2 days those not part of the program.
- ❖ The program also doubled the time the parents spent with children on learning activities on a daily basis. Thrice the number of parents reported increasing their engagement with children in the past 6 months.
- ❖ Parents in RL groups are more likely to continue engaging with children post school re-opening (2x more likely)

Parent Engagement - CSF + CSBC

What was evaluated?

- ❖ Identify the behavioral barriers impacting FLN outcomes. revealed that parents face motivational and capacity barriers that inhibit their engagement
- ❖ Executed by Central Square Foundation, Centre for Social and Behaviour Change (CSBC) at Ashoka University, NITI Aayog, the Department of Basic Education in Uttar Pradesh, Piramal Foundation, and Rocket Learning

Type of Assessment

- ❖ Exploratory study conducted in three aspirational districts in Uttar Pradesh
- ❖ Interviews with parents, teachers and academic resource persons (ARPs)
- ❖ 862 parents were in the treatment group and 478 were in the control group.

Results

- ❖ RL's interventions positively impacted parents' engagement on FLN – for example, parents in the workbook treatment group were willing to pay Rs 192.61 for 30 minutes of time spent on learning FLN activities vs parents in the control group who were willing to pay Rs 180.69.

Parent Engagement - A/B Tests - Real-time nudging

What was evaluated?

❖ Real-time appreciation message sent on a group using CN in response to parent activity at least 1 non-chat response within the interval Sent at 3 intervals: 8:30 am, 2:00 pm, 8:00pm

Geography Sample

❖ UP, UK, RJ, MP, HR

Type of Assessment

❖ Tracking of messages received and format

Results

❖ 17.15 percentage point (pp) 🎉increase in the number of non-chat messages within the groups compared to the control (statistically significant with a p-value of 0.002, super high confidence)

❖ 10 percentage point (pp) 🎉increase in the number of Daily Active Users (DAUs) when compared to the control group (p-value 0.02, high confidence

❖ Moderator Messages Impact: Although we observed a 5 percentage point (pp) increase in moderator messages, the p-value associated with this result is 0.5, indicating that the difference is not statistically significant.

Parent Engagement - A/B Tests Large-scale personalization/ Social Tagging - Aug-Sept 2023

What was evaluated?

❖ Every day, 2 AWW phone numbers were randomly selected and tagged on the Teacher Product Whatsapp group with the following Call to Action (CTA) - to send rich media of them doing the in-centre activity on the group along with the text "#Lucky AWC".

❖ One arm of the experiment included a deadline to complete the CTA and the other did not

❖ Those tagged AWW phone numbers who sent back rich media after being tagged were given a special certificate the next day on the group

1. **Treatment group 1 :** Not time-bound social tagging: AWW group receives a CTA to send pictures or videos at any time during the day.

2. **Treatment group 2 :** Time bound social tagging: A soft deadline will be set for the AWWs to respond by 3pm the next day

3. **Control group :** Continued to receive current CTA with no other interventions

Parent Engagement - A/B Tests Large-scale personalization/ Social Tagging - Aug-Sept 2023 (Cont.)

Geography/ Sample

❖ MH, UP, MP

Type of assessment

❖ A/B Testing on Social Tagging

Results

❖ Overall, 72% of tagged AWWs in T1 and 52% of tagged AWWs in T2 responded with the rich media CTA during the course of the experiment
❖ 39% of tagged AWWs in T1 and 42% of tagged AWWs in T2 responded with the rich media CTA within 1.5 days of being tagged (deadline marginally worked)
❖ T1 led to an increase in the average number of non-chat active days per user, i.e 1.39 extra days of activity per month per user (statistically significant)
❖ WAU on rich media increased by 11% in T1 in comparison to the control group (statistically significant). Highest increase in MP.
❖ DAU on rich media increased by 15% in T1 in comparison to the control group (statistically significant)
❖ The experiment worked best for T1 groups with medium level of activity, with a 23% increase in WAU (compared to 9% in high activity groups)

Parent Engagement - A/B Tests Large-scale personalization/ Social Tagging - Aug-Sept 2023 (Cont.)
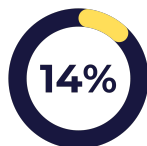
T1: Tagging Without Deadline

No of tagging instances **6470**

72% No. of tagged AWWs who responded with rich media
3720

Tagged instances + Rich Media Only sent within time window
2570
39%

14% Tagged instances + Rich Media + Lucky Hashtag
906

T2: Tagging With Deadline

No of tagging instances **6446**

52% No. of tagged AWWs who responded with rich media
3720

Tagged AWWs + Rich Media Only sent within time window
2739
42%

10% Tagged AWWs + Rich Media + Lucky Hashtag
883

Teacher Model - UP Study (To bucket per KAP)

What was evaluated?

❖ Baseline study to evaluate AWW Knowledge, Attitudes, Practices

Geography/ Sample

❖ Location: Prayagraj, Uttar Pradesh
❖ Duration of the survey: 18th – 26th May, 2023
❖ Number of AWWs surveyed: 240 AWWs

Type of assessment:

❖ Interview - Questionnaire created by Content-M&E team

Teacher Model - UP Study (To bucket per KAP) Cont.

Key Results

❖ Digital Literacy: The research revealed that while a significant number of AWWs had access to smartphones provided by the government, there was a lack of self-ownership. Moreover, around 40% of AWWs reported having three or more years of experience in using smartphones. Digital literacy skills varied among AWWs, with younger AWWs and those with higher education demonstrating better digital literacy.

❖ Teaching and Learning Materials (TLM): Most AWWs used the TLM provided by the state government, and higher-educated AWWs tended to prepare TLM themselves. Furthermore, a high percentage of AWWs reported making TLM the previous month, with younger AWWs being more involved in this task.

❖ Activities with Children: Physical activities, arts and crafts, and pre-literacy activities were the most common activities conducted by AWWs at the Anganwadi Centers (AWCs) with children. Approximately 44% of AWWs reported engaging in activities with children for six days during the previous week. Most AWWs spent less than 45 minutes per day on these activities. Additionally, the research indicated that a significant proportion of AWWs conducted Rocket Learning (RL) activities with children, and those high on the digital literacy index were more active in sending back the conducted activities on the RL group.

Teacher Model - UP Study (To bucket per KAP) Cont.

Key Results

❖ Responsibilities and Encouraging Child Learning: AWWs reported teaching hygiene, good behavior, and child & newborn-specific nutrition as their top responsibilities. However, only 1/5th of AWWs reported ECE teaching as one of their responsibilities. Various ways of encouraging child learning were highlighted, including play-based learning, storytelling, and reading books. Younger AWWs showed a higher inclination toward using multiple ways to encourage learning compared to older AWWs.

❖ Knowledge and Attitudes: Most AWWs recognized cognitive development as an important domain, followed by physical development. However, there is a need for improvement in the knowledge and confidence levels of AWWs when it comes to teaching pre-numeracy skills. The research also identified areas of agreement and disagreement among AWWs regarding teaching practices and child well-being.

THANK YOU!