



The Impact of Lakou Kajou on Educational Outcomes Among Haitian Children

**A School-Based
Randomized Control Trial Study**

EXECUTIVE SUMMARY

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Lakou Kajou is an educational media program produced in Port-au-Prince, Haiti. Targeted to pre-primary and early primary grade learners, the series presents core academic objectives (including literacy, numeracy and science), along with messages related to socio-emotional and physical wellbeing and transversal messages of gender equity, inclusion and cultural pride. Each of the series 15 episodes focuses on a different educational theme.

This study sought to answer the question of whether exposure to *Lakou Kajou* improves learning outcomes for young Haitian children. More specifically, it examined whether children who viewed multiple episodes of the video series made greater learning gains with respect to some of the educational domains presented on the program than children who had not viewed. The study also looked at skill achievement with respect age, gender, and locale.

Method

Figure 1 provides a graphic depiction of the research procedure. The study had a sample of 899 Haitian children, 469 (52%) females and 430 (48%) males. Half were 6-year-olds and the other half were 7-year-olds. Attendance during the intervention was near perfect.

Researchers recruited schools from Port-au-Prince (the urban sample, n=300 students), Legone (peri-urban, n=304 students), and Petite Rivières de Nippes (rural, n=295 students). There were roughly equal numbers of boys and girls and six- and seven-year-olds from each locale. In November 2020, the team conducted baseline (one-on-one) interviews with children whose parents provided written consent. The team used a research instrument developed

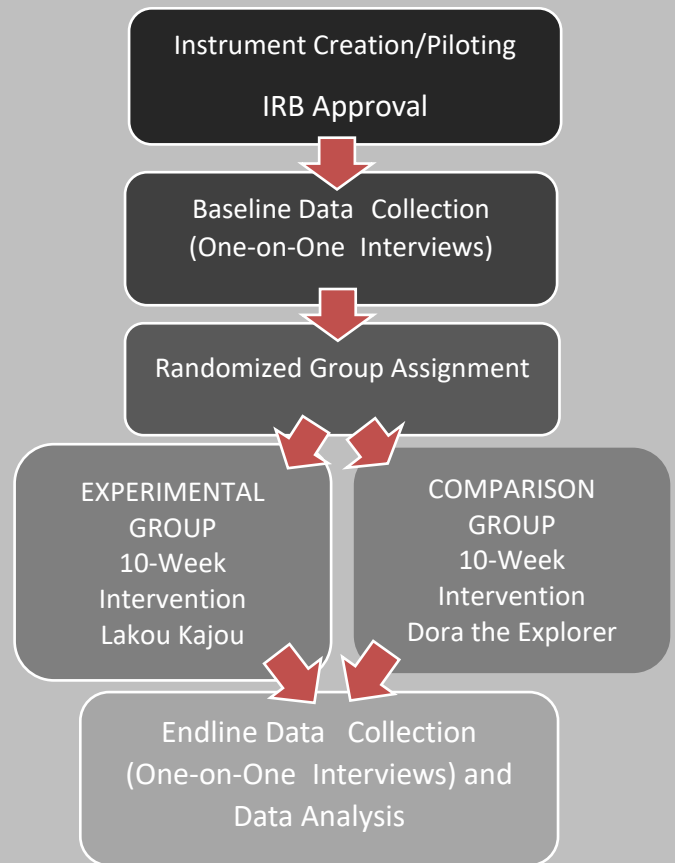


Figure 1. Study Procedure

specially for the study. The interactive survey, which was administered in Haitian Creole, probed children’s knowledge and understanding related to each of the curricular areas studied. (Appendix B provides information about the resulting scales and subscales associated with each measure.) After the baseline data collection, the team randomly assigned children into one of two intervention groups: *Lakou Kajou* (experimental) or *Dora the Explorer* (comparison). The selection process ensured balanced representation within the two groups with respect to age, gender, and locale.



Participating children saw three screenings of seven episodes of one of the programs (depending on their group assignment). In January 2021, after a ten-week intervention period¹ the team conducted post-intervention (one-on-one) interviews with the children.

Researchers compared the pre- and post-intervention performance of the children in the two groups on tests of the core curricular foci of **literacy** and **numeracy**, and transversal domain of **gender equity** as well as knowledge related to the episode themes of **trash/environment, processes, plant growth/photosynthesis, tools, landmarks, measurement, and justice**.

Results

As highlighted in Figures 2-3², after the intervention, children in the *Lakou Kajou* viewing group outperformed those in the *Dora the Explorer* group on every

¹ To avoid penalizing children who had been in the comparison group, at the end of the study, all children had the opportunity to view *Lakou Kajou* episodes.

² The graphs in Figures 2-3 denote mean scores on multi-point scales from HLM models at baseline and post intervention. Group differences in post-intervention scores were statistically significant at $p < .001$ on all measures. See Appendices for more detail.

measure tested. Regarding the core curricular foci, children in the *Lakou Kajou* made gains of **25% in literacy** and **24% in numeracy**, and **15%** with respect to the transversal theme of **gender equity** while those in the *Dora the Explorer* group made no change. The gains in the episode theme outcomes associated with being in the *Lakou Kajou* group were **24% for trash/environment**, **20% for process**, **14% for plant growth/photosynthesis**, **18% for tools**, **19% for landmarks**, **18% for measurement**, and **19% for justice**. The performance level of children in the *Dora the Explorer* group remained unchanged.

Figure 2. Results — Literacy, Numeracy, Gender Equity



Figure 3. Results — Episode Theme-Based Learning (sample of findings)



Exposure to *Lakou Kajou* resulted in improved developmental achievements in all the educational domains tested. While gains in literacy and numeracy were particularly strong, the learning in other curricular areas, including the transversal domain of gender equity, was also notable and align with findings from studies of similar, high-quality educational children’s media programs in low-income countries including research on international co-productions of *Sesame Street*³ and *Akili and Me*⁴

The study found no differences in the performance of girls versus boys and no ages differences⁵. There were, however, notable differences in the performance with respect to locale. Children from urban and peri-urban groups scored higher, on average, on all measures at baseline than their rural peers. Additionally, the children in the *Lakou Kajou* viewing group from urban and peri-urban schools made greater learning gains after the intervention than their rural peers.

Implications

The findings demonstrate the positive educational value of *Lakou Kajou* and suggest the worth of extending access to the program so that as many Haitian children as possible can benefit.

Given the lower skill level of children in the rural samples, focusing efforts on reaching children in similar remote areas would be especially valuable.

The data provide compelling evidence of the strength of *Lakou Kajou* as an educational tool and the contribution it is making on young Haitian children’s development. Additional research is necessary to examine the long-term effects of exposure to *Lakou Kajou* as well as the impact of viewing in more naturalistic settings (i.e. outside of schools).

³ See: Mares, M. L., & Pan, Z. (2013). Effects of Sesame Street: A meta-analysis of children's learning in 15 countries. *Journal of Applied Developmental Psychology*, 34(3), 140-151.

⁴ Borzekowski, D. L. (2018). A quasi-experiment examining the impact of educational cartoons on Tanzanian children. *Journal of applied developmental psychology*, 54, 53-59.

⁵ The lack of age difference, which is unusual for developmental data, may be attributable to the relatively compressed age sampling and the fact that age groupings were configured on age categories rather than exact birthdate.

Appendix A: Summary Results: Table 3 from Full Report

Table 3. General constructs presented in every episode, baseline and post (N=899)

Variables	No. of Items	Score range	Cronbach's alpha at baseline	Baseline Scores		Post-Intervention Scores	
				<i>Lakou Kajou</i> Mean (SD)	<i>Dora the Explorer</i> Mean (SD)	<i>Lakou Kajou</i> Mean (SD)	<i>Dora the Explorer</i> Mean (SD)
Literacy	31	0-31	0.9636	16.35 (10.47)	16.28 (10.58)	24.30 (8.85)	16.43 (10.53)***
Letter identification	15	0-15	0.9197	7.25 (5.01)	7.17 (5.06)	7.25 (5.02)	11.27 (4.41)***
Letter sounds	16	0-16	0.9423	9.07 (5.73)	9.08 (5.82)	9.16 (5.79)	13.02 (4.71)***
Numeracy	23	0-29	0.9349	18.82 (7.91)	18.91 (7.71)	23.19 (6.96)	19.28 (6.97)***
Number identification	8	0-8	0.9308	6.15 (2.75)	6.18 (2.73)	7.26 (2.08)	6.39 (2.40)***
Number naming	8	0-8	0.9243	6.12 (2.68)	6.14 (2.63)	7.19 (2.10)	6.28 (2.35)***
Counting recitation	3	0-9	0.6878	3.35 (2.39)	3.35 (2.39)	5.13 (2.92)	3.38 (2.34)***
Counting items	4	0-4	0.8959	3.19 (1.40)	3.17 (1.40)	3.59 (1.09)	3.18 (1.39)***
Gender equity†	9	0-9	0.8372	2.90 (2.78)	2.81 (2.72)	4.19 (2.97)	2.81 (2.68)***

~ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, † response option "both boys and girls" was scored correct

Appendix B: Summary Results: Table 4 from Full Report

Table 4. Episode theme variables, at baseline and post (N= 899)

Variables	No. of Items	Score Range	Cronbach's alpha at Baseline	Baseline Scores		Post-Intervention Scores	
				<i>Lakou Kajou</i> Mean (SD)	<i>Dora the Explorer</i> Mean (SD)	<i>Lakou Kajou</i> Mean (SD)	<i>Dora the Explorer</i> Mean (SD)
Trash	12	0-13	0.68	2.56 (2.23)	2.61 (2.17)	5.73 (3.69)	2.59 (2.18)***
General trash knowledge	4	0-5	0.45	0.16 (0.47)	0.21 (0.55)	1.35 (1.51)	0.21 (0.55)***
Bins	8	0-8	0.72	2.41 (2.17)	2.40 (2.07)	4.38 (2.84)	2.38 (2.07)***
Process	16	0-21	0.86	4.87 (4.26)	5.16 (4.37)	9.16 (5.86)	5.12 (4.36)***
General process knowledge	4	0-7	0.07	0.14 (0.40)*	0.21 (0.49)	1.11 (1.49)	0.20 (0.49)***
Process steps	12	0-14	0.86	4.71 (4.11)	4.96 (4.19)	8.05 (5.02)	4.92 (4.18)***
Plant Growth/Photosynthesis	10	0-11	0.85	4.12 (2.80)	3.99 (2.75)	5.56 (3.12)	3.97 (2.76)***
General photosynthesis knowledge	3	0-4	0.22	0.17 (0.45)	0.14 (0.38)	0.72 (0.94)	0.13 (0.38)***
Plant knowledge	7	0-7	0.90	3.95 (2.68)	3.85 (2.68)	4.96 (2.76)	3.83 (2.69)***
Tools	10	0-11	0.84	3.85 (2.94)	3.93 (3.00)	5.86 (3.66)	3.91 (3.01)***
General tool knowledge	3	0-4	0.79	0.53 (1.00)	0.54 (1.10)	1.38 (1.50)	0.53 (1.09)***
Tool identification	7	0-7	0.86	3.31 (2.49)	3.39 (2.44)	4.48 (2.85)	3.37 (2.44)***
Landmarks	9	0-10	0.61	1.62 (1.65)	1.59 (1.55)	3.46 (2.76)	1.58 (1.55)***
General landmark knowledge	3	0-4	0.56	0.13 (0.47)	0.13 (0.48)	0.76 (1.08)	0.13 (0.47)***
Landmark identification	6	0-6	0.61	1.49 (1.50)	1.45 (1.40)	2.70 (2.12)	1.44 (1.41)***
Measurement	9	0-10	0.70	3.06 (2.36)	3.05 (2.31)	4.83 (3.11)	3.00 (2.31)***
General measurement knowledge	3	0-4	0.80	1.40 (1.41)	1.25 (1.34)	2.19 (1.51)	1.23 (1.34)***
Measurement identification	6	0-6	0.64	1.66 (1.58)	1.78 (1.61)	2.65 (2.08)	1.76 (1.60)***
Justice	5	0-6	0.40	1.36 (1.14)	1.37 (1.08)	2.06 (1.58)	1.36 (1.07)***
General justice knowledge	3	0-4	0.72	0.34 (0.82)	0.30 (0.74)	0.91 (1.16)	0.30 (0.73)***
Justice scenarios	2	0-2	0.19	1.03 (0.73)	1.07 (0.74)	1.15 (0.76)	1.06 (0.74)***

~ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$