



Findings from a Pilot Study of SEL Kernels in Northeast Nigeria





Introduction

This brief presents findings from a 2-year project in Northeast Nigeria funded by USAID. The project is led by the International Rescue Committee (IRC) and the EASEL Lab at Harvard University, in partnership with Nigerian educators and government officials in Borno and Yobe states. The overall purpose of the project is to improve learning outcomes for students in Northeast Nigeria. In this phase, we collaborated with local teachers to create and pilot a set of low-cost activities to build social and emotional skills. Activities were developed specifically to respond to local needs, values, and priorities, using human-centered design methods to increase uptake, fidelity, and quality of implementation. Ultimately, if these activities are shown to be effective, they can be used in schools and non-formal education (NFE) programs across NE Nigeria to improve student outcomes at-scale.

Why Social Emotional Learning (SEL)?

Social emotional learning (SEL) includes knowledge and skills that enable students to focus attention, demonstrate self-control, resolve conflicts peacefully, understand feelings, and get along with peers. Social and emotional skills are important for success in school and life (Jones, McGarrah, & Kahn, 2019). Research indicates that high-quality SEL programs in school can lead to higher grades, better mental health outcomes, and improved wellbeing for both students and teachers (Durlak et al, 2011; Oliveira et al, 2021). SEL programs can also protect children from some of the negative effects of toxic stress, by helping teachers create a safe and supportive learning environment, and by teaching specific skills and strategies that help children process emotions in healthy ways and build positive relationships (Jones & Kahn, 2017). However, there are few evidence-based SEL programs developed or used in NE Nigeria. This project is designed to create low-cost SEL activities that are culturally-relevant, effective, and feasible for use in schools and NFE programs across NE Nigeria.

Previous SEL Research in Education in Emergencies Settings

There is limited research on SEL programs in Education in Emergencies (EIE) settings, and the few studies that exist show promising yet mixed results. In 2016-2019, the IRC and NYU's Global TIES for Children were funded by Dubai Cares to conduct rigorous program evaluation research in Lebanon and Niger. Two low-cost targeted SEL interventions, Mindfulness and Brain Games, were implemented in a tutoring program alongside the IRC's Healing Classrooms approach. These studies found that adding Mindfulness or Brain Games to Healing Classrooms had some promising results: students in the SEL intervention group showed improvements in school grades and some areas of social and emotional competence, such as increased behavior regulation and decreases in emotion dysregulation and aggression, compared to students enrolled in public school alone (Weiss-Yagoda, Tucciarone, Aber, & Annan, 2021). However, the SEL interventions did not lead to broader improvements in children's literacy, numeracy, and SEL outcomes. Based on qualitative and implementation data collected during these studies, one hypothesis for the mixed findings is that the SEL materials were not sufficiently localized to the context, and therefore had poor relevance and low uptake by teachers.

In 2017-2018, with support from FCDO, the IRC conducted a rigorous evaluation of an Accelerated Learning Program (ALP) that aimed to improve the literacy, numeracy, and SEL outcomes of out-of-school children in NE Nigeria. The program led to improvements in children's literacy and numeracy skills, but the impact on SEL skills was limited: the only changes observed were decreases in children's orientation toward the use of disengagement as a conflict resolution strategy (Diazgranados, et al, 2022). Qualitative data collected by Girl Effect, a local research partner, suggested that teachers had difficulty understanding and implementing the SEL activities. Specifically, teachers struggled to understand the concept of SEL, had difficulty understanding activities and finding materials to implement them, and also reported that some activities were not relevant or culturally appropriate. As a result, many teachers reported skipping SEL lessons and focusing on the literacy and numeracy lessons.



In response to these findings, the current study is designed to examine our broad hypotheses that: (a) short, simple, and flexible SEL activities that reflect local values and priorities, combined with (b) a behavioral insights approach to design - including co-creation of SEL materials, rapid prototyping, and user testing with local teachers - will increase local relevance and teachers' understanding and use of the materials, and ultimately lead to improved student SEL outcomes. Research around the globe demonstrates the importance of implementation in achieving intended program impacts (Durlak & Dupre, 2008). As such, in the current phase of this work we ask the following overarching question: Does locally-driven and co-created SEL content increase teacher uptake, fidelity and quality of implementation, and overall positive perception of SEL activities in the classroom?

Research Questions

This study was designed to explore the following questions:

- How often and how much time do teachers spend on Dabaru?
- Are teachers able to implement Dabaru with high quality and fidelity?
- Are teachers motivated to use Dabaru in their classrooms?
- Are students engaged in the Dabaru activities?
- Are Dabaru relevant to teachers' education goals?
- Can teachers fit Dabaru into their regular teaching schedule?
- How do Dabaru benefit teaching and learning?
- What is the cost of designing and implementing Dabaru?

Research Design, Methods and Sample

Between April and September 2021, we conducted an implementation study to pilot the Dabaru in NE Nigeria. In total, 224 teachers and 826 students from 75 primary schools in Borno and Yobe states participated. All participants were part of a tutoring¹ program the IRC is implementing with 2nd – 4th grade low-performing in-school children in NE Nigeria. The tutoring program consists of sessions that last 2.5 hours, 3 times per week, for a period of 5 months, in groups of 25 students per tutor. The teacher sample included 109 male and 115 female tutors, ages 20-61 (mean = 39 years old), who worked as teachers in government schools. The student sample included 429 girls and 394 boys, ages 7-17 (mean = 11.5 years), 287 who were identified as displaced and 536 from the host community.

We collected quantitative, qualitative, and costing data for this study. Data collection comprised classroom observations, teacher surveys, student surveys, teacher focus groups, and student focus groups. We also reviewed financial information from the program. All data were collected by enumerators and IRC education program staff in NE Nigeria, specifically the monitoring and evaluation (M&E) officers in Borno and Yobe states. The study was approved by the IRC Institutional Review Board, IRB #: 00009752, and by the National Research Ethics Committee of Nigeria NHREC/01/01/2007.

¹ IRC's tutoring program provides primary school children who are at risk of dropping out with remedial tutoring. This tutoring prioritizes the development of basic literacy, numeracy, and social emotional learning (SEL) skills. Tutoring is offered free of charge and took place after school.

Summary of Findings

How often do teachers implement Dabaru? How much time does it take?

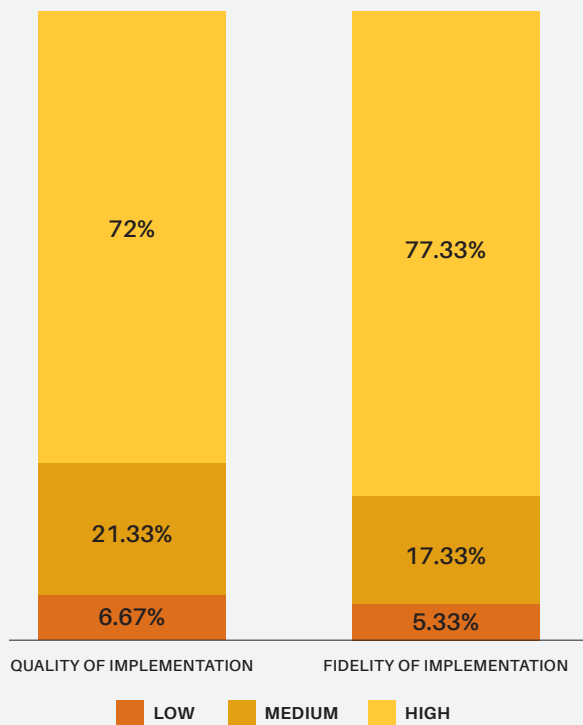
Students attended the tutoring program 3 times per week over a period of 5 months, starting at the end of April and ending at the beginning of September. On average, teachers spent 18 minutes per activity and implemented the Dabaru during almost every class session, for a total of 737 minutes (12.3 hours) of SEL activities across 5 months. Implementation was highest in June and lowest in September, which coincides with school vacation when there are fewer opportunities to teach. Overall, teachers implemented Dabaru regularly throughout the study period, suggesting that teachers found it feasible to integrate Dabaru into their schedule. Almost all (99%) of teachers reported that 20 Dabaru were enough for 5 months of implementation.

Are teachers able to implement Dabaru with high quality and fidelity?

All teachers were observed three times to assess the quality and fidelity of Dabaru implementation: at the beginning, middle, and end of the study. Implementation quality included four components: Teaching Clarity, Teacher Supportiveness, Pedagogical Skills, and Student Enjoyment. Overall, 72% of observations were rated high quality, 21% were rated medium quality, and 7% were rated low quality. Average scores for each component were between 2.62 and 2.88 (on a scale of 1 to 3), indicating relatively high and consistent scores across each of the different components.

Dabaru fidelity included three components: teachers were expected to introduce the activity, practice the activity as written, and debrief after completing the activity to discuss how the skills can help students in their daily lives. Overall, 77% of observations were rated high fidelity, 17% were rated medium, and 5% were rated low fidelity. On average, teachers were strongest in the introduction and practice, and had lower scores in the debrief. In other words, teachers consistently implemented the introduction and practice, but were less likely to complete the debrief part of each activity. The debrief is important because it helps students to connect classroom learning to other parts of their lives. In the future, we will provide more training and support so that teachers are better prepared to lead the debrief.

FIGURE 1. Classroom observations of implementation quality and fidelity

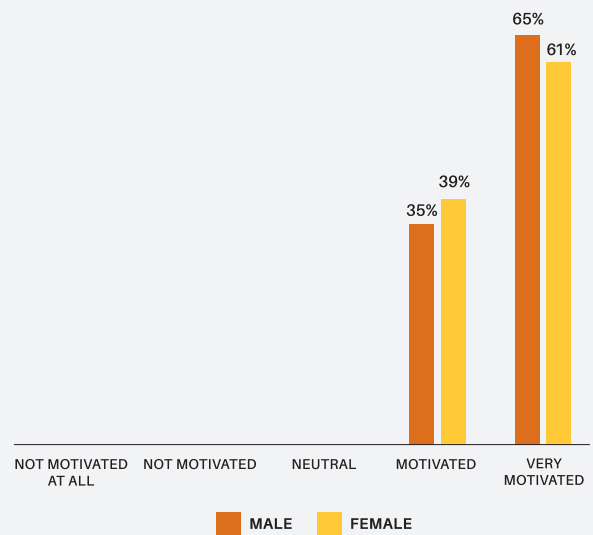


An important aspect of our study was to understand if Dabaru can be used effectively by teachers with an array of background characteristics in NE Nigeria. We explored differences in implementation across a number of these characteristics, such as age, gender, experience, and education levels. We found no differences in quality or fidelity of implementation based on age, experience, or education levels. In other words, Dabaru were used equally effectively by teachers with 1 to 35 years of experience, and by teachers with a national diploma or post-graduate degree. These findings suggest that Dabaru can be used effectively by a wide range of teachers in NE Nigeria, even those with low levels of education or experience. One exception to this pattern of findings is that we observed some differences based on gender. Specifically, we found that male teachers were more likely to be rated high on quality and fidelity of implementation. This suggests we need to further explore socio-cultural factors that may affect teacher performance in NE Nigeria, and identify how to support female teachers in gaining the skills they need to facilitate Dabaru in their classrooms.

Are teachers motivated to use Dabaru in their classrooms?

Motivation was assessed through teacher surveys. All teachers (100%) in our study were motivated to use the Dabaru: 63% of teachers responded as “highly motivated” and 37% responded as “motivated.” None of the teachers reported being neutral, not motivated, or not motivated at all to use Dabaru. This finding suggests that our approach to landscape and design research was effective: Dabaru skill areas and activity types were selected by teachers based on their own needs and preferences and their students’ needs, which may explain why teachers were so motivated to use them.

FIGURE 2. Teacher-reported motivation to use Dabaru



The Dabaru is drawing the attention of the children to come they are enjoying it and it’s making them to come [attend class]. Even those who don’t want to come, they do come, and we are happy about.

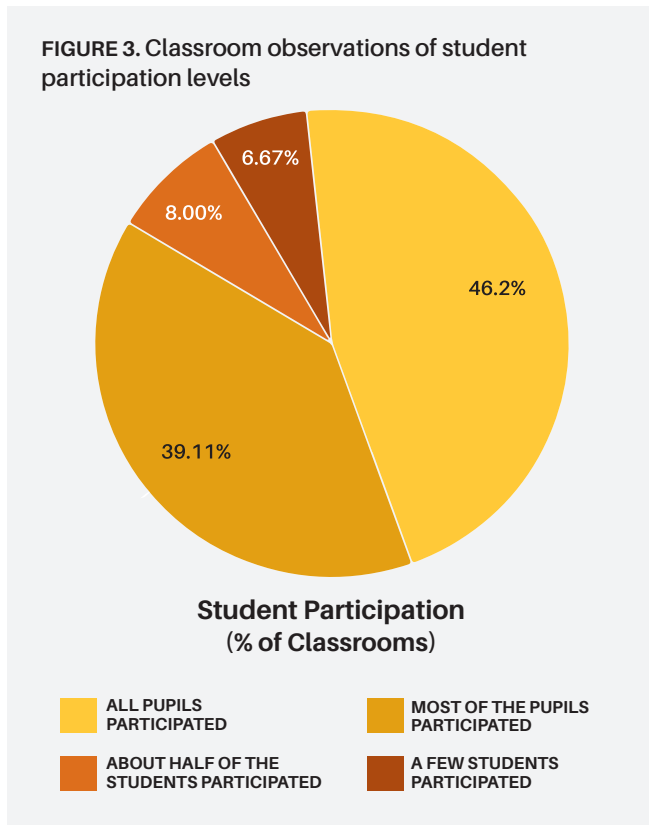
TEACHER, FGD, BORNO

...even when teaching them if it is “Dabaru” time they will say sir it’s time for “Dabaru” so they will pay attention in what you are teaching.

TEACHER, FGD, BORNO

Are students engaged in the Dabaru activities?

Student engagement was assessed through classroom observations. During 85% of observations, most or all pupils participated in the Dabaru activities; and 72% of observations showed an equal level of participation by girls and boys. This is an important and positive finding because it suggests that Dabaru can support whole-class participation and gender equity in learning activities.



They often practice activities of “Dabaru” that is what they are doing as play. This is also an achievement. Even those that are not in the tutorial program benefit from the learners they play with.

In addition, to what he said, like our learners yesterday we did “Memory Game” and “stand up/sit down.” So today even before I enter the class they have start practicing what I teach them. So instead of the rough play immediately if the bell is rings, they rush to the classes to practice it really helps them.

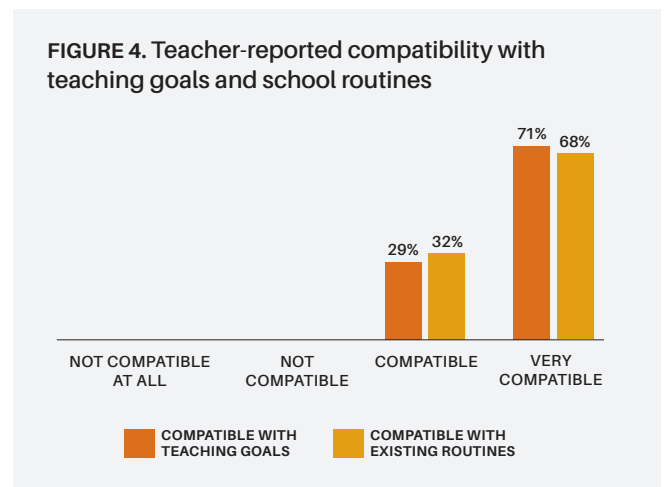
TEACHER, FGD, BORNO

Are Dabaru relevant to teachers’ education goals?

Relevance was assessed through teacher surveys. Over 99% of teachers indicated that Dabaru are useful or very useful to their teaching goals. On average, using a scale of 1 to 5 (1=not useful at all, 5=very useful), teachers ranked the different types of Dabaru activities between 4.5 and 4.6, indicating high usefulness across all types. Teachers reported a slight preference for Dabaru that were locally-sourced. These activities came directly from NE Nigeria community members (with added boosts to emphasize the social and emotional learning components) and therefore may have been familiar to students and teachers.

Can teachers fit Dabaru into their regular teaching schedule?

Compatibility was assessed through teacher surveys. Over 99% of teachers reported that Dabaru were compatible or very compatible with both their teaching goals and existing school routines. Teachers reported using Dabaru in English and Math classes that take place during the IRC tutoring program in which they were implementing the Dabaru. Interestingly, teachers also reported using Dabaru in other academic subject areas during regular school hours, including English, Math, Indigenous Languages and Culture, Agricultural Science, and Home Economics, among others. This unexpected finding is known as a “spillover effect” and is a positive finding, because it indicates that teachers chose to implement Dabaru in their normal (formal) classrooms, and suggests that Dabaru can be integrated into regular academic instruction. Many Dabaru activities include adaptations that involve literacy and numeracy concepts in addition to SEL, which may have made integration easy and appealing to teachers.



How do Dabaru benefit teaching and learning?

Potential benefits of Dabaru were assessed through teacher surveys. Overall, there was a positive and statistically significant increase in teachers' self-reported ability to teach SEL from the beginning to end of the study. On a scale of 1 to 5 (1=low ability, 5=high ability), only 65% of teachers reported high scores at the start of the study, whereas 96% of teachers reported high scores at the end of the study. This finding suggests that Dabaru improved teachers' confidence and capacity to teach SEL, which is an important finding because research demonstrates that teacher self-efficacy is associated with positive student outcomes, including motivation to learn, positive behavior, and academic achievement (Mojavezi & Tamiz, 2012).

Perceptions of impact were also gathered through focus groups. At the end of the study, 18 focus groups were conducted with a total of 54 teachers and 60 students from both Borno and Yobe states. Teachers reported that Dabaru led to improvements in children's SEL skills such as self-discipline, concentration, empathy and respect for others, peaceful coexistence, and conflict resolution. Teachers also reported improvements in children's academic learning in literacy and numeracy. Students described improvements in many of the same areas, and also reported improved relationships, improved learning and engagement in

Mostly especially the tolerance skills because since we start the "Dabaru" I see a lot of changes because they now respect each other previously you will be hearing who stole my pencil but now there is nothing like that. Most especially tolerance skills that we should be pleased with each other there is a lot of changes in the classes.

TEACHER, FGD, BORNO

Additional Dabaru have indirect impact on numeracy and literacy because of students' punctuality in the school they don't want missed Dabaru this reflect their academic performance, One father testified this to me "before my son cannot even read or write and his doesn't interact with his junior brothers and sisters but now he can read all the Hausa alphabets, short word and sentences and he can sing a song with his younger brother at home."

TEACHER, FGD, YOBE

class, and relief from trauma. These findings suggest that overall, Dabaru were seen as beneficial to student learning and wellbeing in a variety of ways.

What is the cost of designing and implementing the Dabaru?

The project spent \$198,060 (2021 USD) to localize and implement Dabaru with 361 tutors and 9,025 students during one cohort of implementation. Based on these numbers, IRC's Best Use of Resources Unit determined that the cost of localizing and implementing the Dabaru was \$548 per tutor (including direct costs, shared costs, and indirect costs) and the cost per student was \$21.95. These costs rely on the assumption that only one cohort of 25 students per tutor received the Dabaru. If the project were implemented in larger classes, the cost per student would decrease. If the Dabaru were implemented in additional cohorts during the same time period using the same tutors, the cost per child would decrease further.

The total cost of the Dabaru can be disaggregated into the design and implementation phases. The project spent \$138,651 designing the Dabaru from October of 2019 through January of 2021, equivalent to \$384 per tutor and \$15.36 per student. The design phase included landscape research, behavioral insights and design workshops, and field testing, which took longer than expected (16 months) given the restrictions and school closures introduced by the COVID-19 pandemic. In situations where this work is not significantly delayed, we would expect the design of the Dabaru to be less expensive. The project spent \$59,409 to implement the Dabaru from February through August 2021, equivalent to \$164.57 total per tutor or \$6.57 per student. Future projects working with the same population will only need to cover the cost of implementation.

Overall, costs were tied to three main categories: (a) design and localizing work, (b) teacher training, material production, and ongoing implementation costs, and (c) fixed program-level costs that are incurred at the regional and country level. With the design and localizing work complete, it would only be necessary to cover components (b) and (c) in future rounds of implementation in Nigeria. Once trained, teachers can serve multiple cohorts of students over time, further decreasing the cost per student as the cost of design and contextualization are "spread" across more beneficiaries.

Conclusion and Recommendations

This pilot study was designed to explore the feasibility, implementation, and user demand of new SEL activities called “Dabaru” in NE Nigeria. Working in close collaboration with local teachers and with input from families, students, and state education officials in Borno and Yobe, we created Dabaru to be low-cost, easy to use, and responsive to the values, priorities, and needs of education settings in NE Nigeria. Overall, our study suggests that our design process — emphasizing local input and co-creation of materials — lead to improvements in teacher motivation, uptake, ease of use, and fidelity and quality of implementation of SEL activities in the classroom.

Our main findings include:

- Teachers used Dabaru often and consistently throughout the study period
- Teachers implemented Dabaru with high levels of quality and fidelity
- Teachers reported that Dabaru are useful and aligned with their teaching goals
- Teachers are motivated to use Dabaru and students are engaged in the activities
- Teachers show improvements in their confidence and self-reported ability to teach SEL after using Dabaru
- Teachers perceive Dabaru as having a positive impact on students and leading to increased positive social interactions, engagement with learning, and wellbeing
- Dabaru are a cost-efficient and potentially cost-effective solution to promote SEL in Northeast Nigeria

Recommendations and Goals for Future Work:

- Conduct rigorous research to generate evidence on the cost-effectiveness of highly localized short, simple, flexible SEL activities in Northeast Nigeria. Findings from this research can be relevant for other low-resource conflict and crisis affected settings that aim to improve the SEL skills, learning, and wellbeing of children.
- Build evidence to identify whether Dabaru are equally impactful for children according to their sex, socioeconomic status, displacement status, disability, displacement, and mother tongue language.
- Build evidence to identify the specific supports and training teachers need to improve Dabaru facilitation and increase the impact of Dabaru on children’s outcomes and on teacher wellbeing.
- Engage key stakeholders at the national and state levels to ensure the intervention is aligned with the government’s policy and priorities.



- Consider developing SEL content for formal schools in NE Nigeria and other conflict and crisis settings. When generating SEL content and programs:
 - » Prioritize **localization through collaboration with local educators**. Teachers must be involved in the identification of needs and the co-creation of SEL programming because this will ensure that content is clear, culturally appropriate, and feasible to convey in the classroom. Teachers who are provided with SEL teaching and learning materials that are aligned with their skill level, classroom priorities, and cultural values are more likely to implement that content in their classroom with high levels of quality and fidelity.
 - » Conduct **formative research** to ensure understanding of local needs, values, practices, and priorities of actors in the formal school system.
 - » Engage in **design research** to develop feasible, desirable, culturally relevant and potentially cost-effective, scalable SEL content for the formal school system, through processes of rapid prototyping, iteration, and the use of human-centered design approaches and behavioral science to truly connect with and meet the needs

of local communities. In NE Nigeria, further design work is needed to integrate Dabaru into the formal school system.

- » Conduct **implementation research** to ensure that the assumptions of a theory of change are being met on the ground and that SEL programming is being implemented as intended, before **testing effectiveness**.
- » Include **costing considerations** at early stages of program development and research. Accounting for cost during the design and pilot phase of SEL programs can help identify whether the solutions are scalable before rigorously testing.
- » Rigorously test the effectiveness of new approaches on children’s SEL, learning, and wellbeing outcomes before taking to scale.
- Invest in the **development of SEL measures**. To yield trustworthy data, greater investment is needed in the development and testing of SEL measures, particularly in education in emergency settings. Greater investment in this area can ensure that valid, reliable, and feasible instruments are available to identify needs, monitor program implementation, and evaluate the impact of SEL programming.

AUTHORS

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