



Photo Credit: Tom Saater, IRC

EDUCATION COST EFFECTIVENESS BRIEF – Tutoring

Nigeria | 2019

Executive Summary

The International Rescue Committee (IRC) and Creative Associates International (Creative) implemented the Education in Emergencies (EiE) project in Nigeria to provide formal and non-formal education to crisis-affected children. One of EiE project interventions was a remedial tutoring program that trained 1,305 tutors who supported 22,162 children to improve their basic literacy, numeracy, and social-emotional skills. The program's impact was studied via randomized evaluation which found positive impacts on literacy and numeracy and limited improvements in social-emotional skills. This brief explores the results of a cost-effectiveness analysis of the tutoring intervention.

Supplementary tutoring for under-performing students cost an average of £63 (2019 GBP) per student and achieved small to moderate impacts in students' literacy and numeracy scores. This fits with a number of other studies of remedial tutoring which show consistently low costs and moderate impacts, resulting in a cost effective “best bet” for improving learning outcomes.

Project Description

Nearly 2 million people have been displaced, with an estimated 10.5 million children out of school due to the Boko Haram insurgency in Northeast Nigeria.¹ An estimated 1.6 million children are at increased risk for recruitment into armed groups, early marriage and pregnancy, and exploitative labor and trafficking. Over 600 teachers have been killed, more than 19,000 have fled, and approximately 1,200 schools have been damaged or destroyed.²

From October 2018 through May 2019 the International Rescue Committee (IRC) and Creative Associates International (Creative) were funded by the UK Department for International Development (DFID) to implement an after-school remedial tutoring intervention in Yobe and Borno states in Northeast Nigeria. The intervention was part of a larger Education in Emergencies (EiE) program that aimed to improve the literacy, numeracy, and social-emotional learning of children at-risk of dropping out.

The tutoring intervention was implemented in formal schools and focused on training teachers to be tutors, providing teachers and their students with the resources required to learn, and engaging the community and school committees. The free-of-charge tutoring intervention was targeted to under-performing students in grades two through four, who ranged in age from 6-17. Students were provided with 2.5-hour tutoring sessions three times a week for over the course of 21 weeks. Participating teachers received face-to-face trainings on supplementary tutoring, monthly teacher learning circles, and on-site coaching visits by experienced mentors. Children were provided supplementary learning materials in addition to the tutoring by teachers.

IRC conducted a randomized control trial to study the impact of the tutoring program on literacy, numeracy, and social-emotional learning outcomes. The control group children were placed on a waitlist to receive tutoring at a later time. The research sample included 1,175 total children, 633 in treatment and 542 in the waitlist control group.

The cost analysis covers inception (October – November 2018) and implementation (December 2018 through May 2019) of the remedial tutoring training and implementation. Inception included activities required to start a project such as procurement, recruitment, and training.

Education in Emergencies Activities

Tutoring Program

- Recruiting and providing stipends to tutors (£23 per month)
- 4-day face-to-face trainings and 2-day refresher trainings for master trainers and tutors
- Coaching visits: one 2-hour visit per month from coaches trained by IRC
- Training and support for community coalitions and civic society organizations to facilitate community-level reading activities
- Tutor Learning Circle establishment and support
- Materials for tutors and students, including lessons plans for literacy, numeracy, and SEL
- Children received tutoring 3x a week for 21 weeks. Each session included 40 minutes on literacy, 40 minutes on numeracy, and 30-minute SEL.

Project Costs

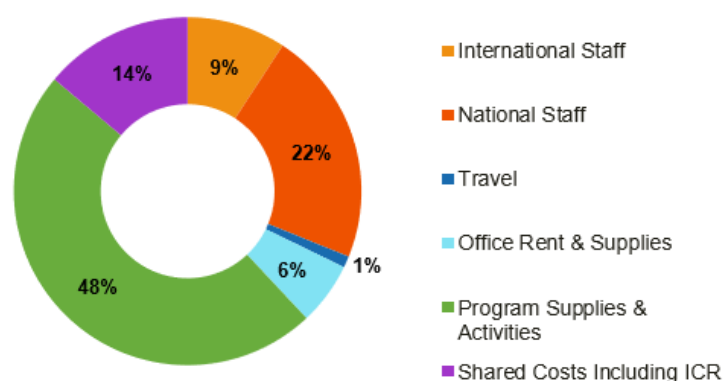
The cost per student for 21 weeks of remedial tutoring was £63, and the cost per tutor was £1,063, including support costs.

A total of £1,386,912 was spent on the program start-up and implementation, October 2018 through May 2019, by Creative and the IRC. All cost estimates reflect combined Creative and IRC spending. In-kind contributions are excluded, such as the cost of community spaces for trainings and teacher time that was uncompensated. Because the cost data does not allow precise disaggregation of a specific school or population of students, costs are averaged across all schools and students in the treatment group.

The cost of the tutoring program was driven by Program Supplies & Activities (including tutor training), constituting nearly 50 percent of total spending.

The single largest project inputs were tutor stipends (£195K), training of tutors (£163K), and learner snacks and host school supplies (£97K). These three items were approximately one-third of overall spending. These findings are in-line with expectations for a training-focused intervention.

Figure 1. Cost Category by Percentage of Total Spending



There were three core elements of the tutoring program: equipping tutors, equipping learners, and government engagement. Of these equipping tutors was the most expensive.

The cost analysis was broken down across activities including: tutor stipends; face-to-face trainings for tutors and master trainers; teacher learning circles (TLCs); government engagement; and all learner-associated costs. The activities were then aggregated by tutors (stipends, trainings, and TLCs), learners, and government engagement. The three elements included a variety of materials and activities costs. For instance, equipping tutors to teach literacy, numeracy, and SEL skills included:

- **Tutor Compensation:** This included tutor stipends for facilitating tutoring (£23 per month), time by staff to facilitate payments, and any stipends for community meetings.
- **Face-to-face trainings:** All costs associated with facilitating, developing, and running trainings. This also includes the materials that were provided to the tutors at the trainings for literacy, numeracy, and socioemotional learning.
- **Teacher/Tutor Learning Circles:** All costs associated with facilitating TLCs

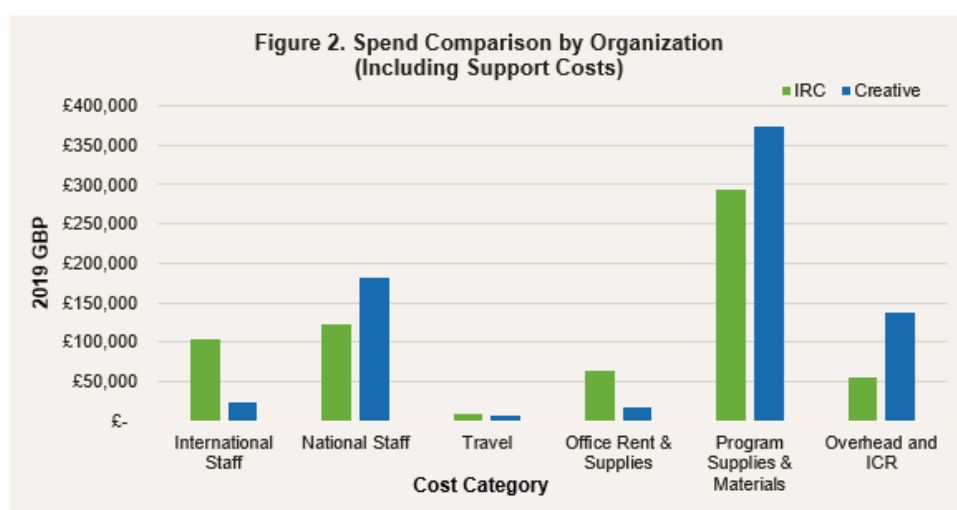
Support for the learners included all costs associated with reaching students, such as learner materials and snacks. These amounted to eleven percent of the overall cost. Note that the low percentage of costs specifically for learners means that the per-teacher cost is the most useful figure for planning because costs per child are heavily driven by the number of children per teacher in this context.

Government engagement included all costs associated with meetings and working groups for community officials and engagement with local government officials. Engagement with the government cost approximately 18 percent of the overall cost of the program—while significant, this was seen as a necessary cost for implementing education programs within government systems, consistent with cost analyses from other education interventions within government systems (e.g. Pakistan Reading Project).³ Table 1 shows the total cost per program activity as well as the average cost of each activity per child who was provided tutoring.

Table 1. Cost-Efficiency by Program Component					
	Tutor Compensation	Face to Face Trainings	TLCs	Gov't Engagement	Learner Materials/Costs
TOTAL	£ 214,404	£ 400,750	£ 363,598	£ 254,933	£ 153,228
Cost per child by activity	£ 10	£ 18	£ 16	£ 12	£ 7
	Tutors			Government	Learners
Cost by Component	£ 44			£ 12	£ 7

While both organizations implemented similar project activities, resource use across cost categories still varied between IRC and Creative.

The highest spending category for both organizations was program supplies and materials, the resources required for direct program implementation. IRC spent a higher percent of resources on international staffing and office rent and supplies than Creative, while Creative focused relatively more resources on national staff, organizational overhead, and supplies and activities spending. These variations highlight that while every program has a set of necessary inputs, which we document in ingredients lists (see annex), these are not necessarily precise “recipes” for exactly what it takes to deliver outcomes. Different organizations may combine and use these resources in different ways to achieve learning outcomes



Results of the Impact Evaluation

The impact of the tutoring intervention was measured in a randomized evaluation.⁴ All effects were assessed using the standard mean difference (SMD), where effect sizes of 0.2 are considered small, 0.5 are considered moderate, and 0.8 are considered large.

- **Literacy** – Small to moderate statistically significant results were found for all 5 literacy metrics: letter sound (SMD = 0.35), non-word reading (SMD = 0.51), oral reading fluency (SMD = 0.53), listening comprehension (SMD = 0.21), and reading comprehension (SMD = 0.56).
- **Numeracy** – Small statistically significant results were found for 5 of 8 numeracy metrics: missing number identification (SMD = 0.28), addition level-1 (SMD = 0.24), addition level-2 (SMD = 0.38), subtraction level-1 (SMD = 0.25), and subtraction level-2 (SMD = 0.33).
- **Social Emotional Learning** – One small statistically significant impact of the tutoring intervention was identified (a decrease in students' tendency to perceive others' actions as hostile intent, SMD = -0.29). No other effects on SEL skills were found.

Cost-Effectiveness Findings

Consistent with other cost-effectiveness studies on remedial tutoring, the improvements in children's reading skills and some numeracy skills, suggest tutoring is a cost-effective way of improving learning outcomes in conflict and displacement settings.

It cost £63 per student to achieve small to moderate impacts across eleven outcomes. This suggests that tutoring targeted to under-performing students is moderately cost-effective, consistent with many other studies have shown remedial tutoring to be cost-effective in more stable contexts.⁵ While the impact evaluation showed similar effect sizes to “teaching at the right level” interventions, the costs of this program were slightly higher than other tutoring programs. In India, for example a remedial tutoring program cost only around \$13 per child treated (compared to \$80 per child, using 2019 exchange rates), but that program benefitted from unpaid volunteers who were recruited through existing informal networks while EiE tutors were directly compensated.

The new evidence, from this EiE study, that tutoring also works at a reasonable cost in complex emergency setting(s) adds to the overall confidence that remedial tutoring is an effective, cost-efficient, modality to improve basic educational outcomes across many contexts.

Analysis Method: Cost-Effectiveness at the IRC

The IRC is committed to maximizing the impact of each dollar spent to improve our clients' lives. Cost effectiveness analysis compares the costs of a program to the outcomes it achieved (e.g., cost per diarrheal incident avoided, cost per reduction in intra-family violence). Conducting cost effectiveness analysis of a program requires two types of information:

- 1) An impact evaluation on what a specific program achieved, in terms of outcomes
- 2) Data on how much it cost to produce that outcome

Teams across the IRC produce a wide range of outcomes, but cost effectiveness analysis requires that we know - based on impact research - exactly which outcomes were achieved and how much they changed, for a given program. For example, an impact evaluation might show a village that received IRC latrines and hygiene promotion had a 50 percent lower incidence of diarrhea than a village next to it which did not receive the IRC intervention. If so, we know the impact of our program: 50 percent decrease in diarrhea incidence. Cost effectiveness analysis becomes possible only when there is an impact study that quantifies the change in outcomes as a result of the IRC project.

At the same time IRC runs impact evaluations, we gather data on how much the evaluated program costs. First, IRC staff build a list of inputs that were necessary to implement the evaluated program. If one thinks of a program as a recipe, the inputs are all the 'ingredients' necessary to make that dish. Budgets contain a great deal of information about the ingredients used and in what quantities, so reviewing the program budget is the first place to start. However, many of the line items in grant budgets are shared costs, such as finance staff or office rent, which contribute to multiple programs, not just the one included in the impact evaluation. When costs are shared across multiple programs, it is necessary to further specify what proportion of the input was used for the particular program. Specifying such costs in detail, while time-consuming, is important because it provides lessons about the structure of a program's inputs. We can divide costs into categories and determine whether resources are being allocated to the most important functions of program management and enable us to model alternative program structures and quantify the cost implications of different decisions.

¹ "Entire Generation of Children Missing Out on Education in Boko Haram Affected Nigeria". Plan International, May 27, 2017.

² "The Cost-Effectiveness of Two Models of Professional Development for Learning Facilitators in Non-Formal Learning Centers on the Learning and Transition Outcomes of Out-of-School Children in Nigeria: Preliminary Findings"

³ Tulloch, Caitlin. 2022. "Education Cost Effectiveness Brief – Pakistan Reading Project." The International Rescue Committee.

⁴ Silvia Diazgranados Ferrans. "The Effects of Tutoring on Children's Learning Outcomes in Nigeria." International Rescue Committee. 2020.

⁵ Abdul Latif Jameel Poverty Action Lab (J-PAL). 2018. "Teaching at the Right Level to improve learning." J-PAL Evidence to Policy Case Study. Last modified August 2022

This work was conducted by the Best Use of Resources Initiative at the IRC. For questions or more information please contact us at airbel@rescue.org.

Preferred Citation

Hoyer, Kayla. 2019. "Education Cost Effectiveness Brief – Tutoring." The International Rescue Committee.



Annex: Ingredients List

Nigeria | 2019 GBP

Program Costs	Tutoring Costs in £
International Staff	43,806
Education Technical Coordinator	3,162
Consortium Manager	7,335
Technical Advisor	17,488
Benefits (cumulative)	15,820
National Staff	210,780
EiE M&E Manager	2,316
EiE M&E Officer	1,645
Education Manager, Borno	4,680
Education Officers	60,367
Teacher Education Officer	8,251
Drivers	1,321
Partnership Manager, Borno (1 FTE)	8,909
Education Team Leader, Yobe (1 FTE)	29,388
Benefits (cumulative)	93,903
Program Supplies & Materials	667,076
Project Costs	
Repairs/Renovations to Schools	3,210
School Tutoring Supplies	46,250
SEL Consultant	843
Advocacy Campaigns	1,393
Tutor Costs	
Materials & Printing Costs	46,123
Stipends	194,899
Teacher Learning Circles	25,306
Learner Costs	
Snacks	51,512
Learner Supplies	17,472
Trainings	

Trainer of Trainers Training	18,115
Tutors	183,192
School Management Committees	18,649
CSOs	5,533
Government Officials	34,969
Meetings & Summits	
Technical Working Group Meetings	12,905
Partner Meetings	1,376
Steering Group Meetings	1,361
Annual Technical Summit	589
Sub-Grantee	3,378
Travel	9,090
Domestic Travel (Flights, Per Diem, Lodging)	7,151
International Travel (TA Field Visits)	1,940
Shared Costs	456,160
TOTAL	1,386,912
Cost per Student (Tutoring = 22,162)	63