RADIO INSTRUCTION TO STRENGTHEN EDUCATION (RISE) IN ZANZIBAR

LEARNING GAINS ASSESSMENT: MORE THAN CHILD'S PLAY

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RADIO PHOTOS ON PAGES 2 AND 3 Peter Benett | PHOTO OF GIRL WITH SPECIAL NEEDS ON PAGE 3 James Mitchell
OTHER PHOTOS RISE Project

Students at a RISE learning center, who now have access to an early childhood education.

BACKGROUND AND OBJECTIVES OF THE STUDY

The *Radio Instruction to Strengthen Education* (RISE) project is a partnership between Zanzibar's Ministry of Education and Vocational Training and Education Development Center, Inc., with funding from the American people through the United States Agency for International Development (USAID). The RISE project was established in Zanzibar in 2006 to develop and pilot several models of early childhood education service delivery for children in the most underserved areas. Working collaboratively with Zanzibar's MoEVT, RISE has helped build on and expand Zanzibar's existing early childhood education infrastructure through its Interactive Radio Instruction (IRI) activities. In the 2 years since its inception, RISE has provided early childhood education opportunities to more than 10,000 Zanzibari children. By the end of 2010, RISE will have reached more than 20,000 children.

IRI is an interactive teaching and learning methodology that promotes quality learning in diverse environments, including those with shortages of qualified teachers, school infrastructure, and learning materials. RISE's unique *Tucheze Tujifunze* (TuTu) series consist of early childhood radio programs carefully developed for Zanzibari students by Zanzibari educators. RISE has produced Preschool, Standard One, and Standard Two series ranging from 78 to 99 programs. Based on child-friendly pedagogy that is inclusive, playful, active, and engaging for young students, each 30-minute broadcast integrates the formal Zanzibar curriculum with games, songs, stories, and activities that encourage problem solving and self-directed exploration. Each program covers four subject areas: Kiswahili language, math, English, and basic life skills.

To assess the impact of the project, RISE conducted a comprehensive evaluation between January and December 2008 with two purposes:

- Measure the learning gains of IRI beneficiaries
- Investigate the effectiveness of different IRI delivery models

Community mobilization is critical to ensuring local management and sustainability of RISE centers.

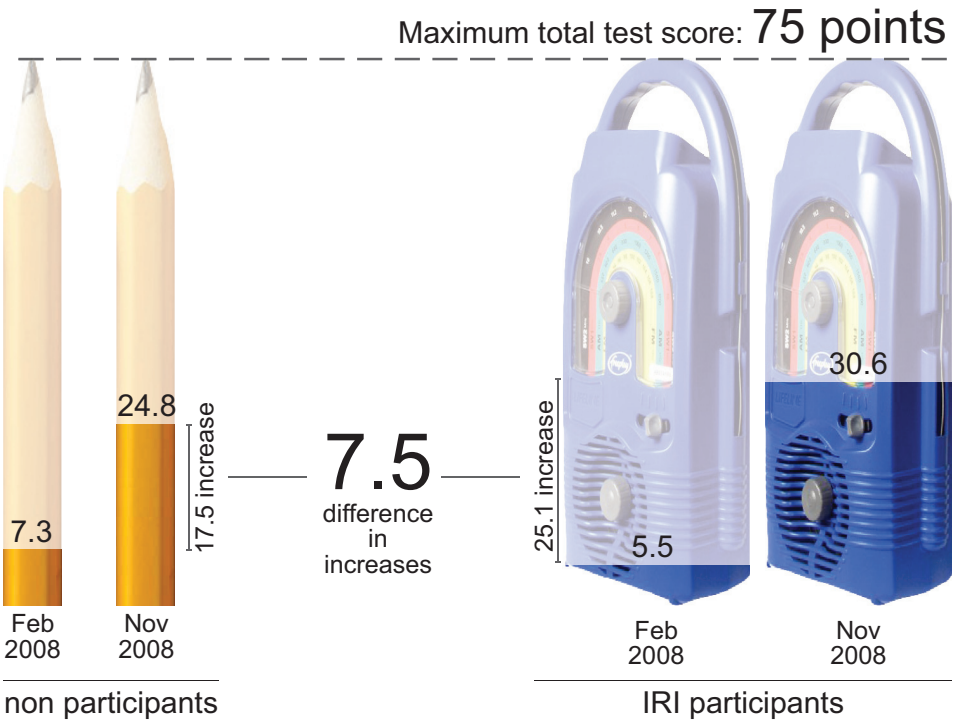
Teachers and mentors are trained in IRI and child friendly pedagogy.

RISE uses locally developed learning materials, which can be collected for little to no cost. These materials are also used to teach math, literacy and life skills.

RESULTS

LEARNING GAINS OF IRI BENEFICIARIES

Baseline and outcome tests were administered to treatment and control group samples of Standard One-level students to assess learning gains as a result of RISE's IRI activities. Treatment and control group students were comparable, except that treatment students also received the IRI programs. Any difference in test scores between the treatment (IRI students) and the control (non-IRI students) students can thus be attributed to the IRI program. Results show that RISE's IRI beneficiaries outperformed control students by 7.5 points out of 75 total points (or 10%), overall.[1] The greatest subject gains were made in Kiswahili. Test scores rose by approximately 3 points, on average, as a result of RISE interventions, over and above scores for control students. Progress is also evident in English and math results, where scores have risen by about 2 and 2.5 points, respectively, for treatment students over and above gains made by control group students. When comparing results by gender, student learning gains among treatment girls are shown to be greater than gains made by boys, demonstrating that IRI programming is girl-friendly and inclusive.



[1] These findings are confirmed by a positive program effect size of 0.55, which falls in the medium to large range. In other words, the mean of the treatment (IRI) group is at the 76th percentile of the control group.

EFFECTIVENESS OF IRI DELIVERY MODELS

Three different models (Non-formal, Formal, and Combination) are used to deliver IRI Standard One programs to students in Zanzibar. In remote communities, RISE has established non-formal centers, and it has trained local community members as mentors to guide students through the TuTu broadcasts and post-broadcast activities (Non-formal model). TuTu lessons are also delivered to students in formal government school classrooms, and additional training in IRI pedagogy is provided to the classroom teachers (Formal model). The third model is a combination of providing non-formal TuTu programming and formal non-IRI schooling to students (Combination model).

For this assessment, data were collected from a representative sample of each of the three groups of students (Non-formal, Formal, and Combination). Results show the non-formal and formal groups have increased their test scores relative to the control group by approximately 9 (12%) and 11 (14.6%) points, respectively, as a result of RISE interventions. Results indicate that these two groups represent the most effective service delivery mechanisms for IRI early childhood education in underserved Zanzibari communities.[2]

OTHER FACTORS INFLUENCING LEARNING GAINS

Results show that a variety of complementary factors play a role in positively affecting test score gains. Preschool education emerges as the most influential of these factors. Students who had previously attended preschool scored nearly 4 points higher, on average, than their counterparts who did not attend preschool. This result is evident, to varying degrees, across groups, disciplines, genders, and districts, regardless of whether this early childhood education took place in an IRI formal or non-formal preschool setting. This finding supports Zanzibar's Ministry of Education and Vocational Training's policy initiative of making preschool education a mandatory component of the basic education system, and it further reinforces the need for projects such as RISE that increase access to and quality of preschool provision in Zanzibar.

The radio is the key medium of instruction for reaching RISE's remote and underserved communities. This cost effective radio is solar and wind-up powered, and it is resistant to inclement weather.

Classes are interactive and inclusive of all children, including this girl with special needs.

A government official assessing a student's learning gains. Benchmark tests are essential for evaluating project impact.

[2] This is also supported by effect size calculations, which show that RISE had the largest impact on the formal group (0.80 effect size) and a large impact on the non-formal group (0.70). In other words, the mean of the formal group is at the 79th percentile and the mean of the non-formal group is at the 76th percentile of the control group.

Students that participate in the RISE project show that IRI is more than just child's play.

CONCLUSION

Substantial test score gains across all three tested disciplines (Kiswahili, math, and English) show that the IRI programming and approach have increased learning gains in both formal and non-formal settings in Zanzibar relative to a control group. Although students in formal treatment classrooms made the most significant learning gains, non-formal treatment students were not far behind them. Whereas both boys and girls benefited from the RISE intervention, girl students showed greater overall growth. This evaluation demonstrates that RISE's unique combination of IRI programming and early childhood education not only engages learners, but also promotes the quality of their learning.

USAID FROM THE AMERICAN PEOPLE

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