

MOBILITY

BUFFALO BICYCLES IMPROVE ACCESS AND STUDENT EDUCATIONAL OUTCOMES

Key Findings | I-GATE BEEP Zimbabwe | 2014–2016



47%

WITH A BICYCLE, A STUDENT'S
TRAVEL TIME TO SCHOOL
DECREASED 47%



30%

TEST SCORES IMPROVED
UP TO 30% FOR STUDENTS
WITH BICYCLES



96%

STUDENTS WITH BICYCLES HAD A
96% BETTER ATTENDANCE RATE THAN
THOSE WITHOUT (AT PEAK IMPACT)



PHOTO: WORLD VISION © 2016



World Bicycle Relief partner World Vision Zimbabwe examined the impact of bicycles on student access to education and educational outcomes in Zimbabwe. The study sampled 1,540 students attending Zimbabwe schools that had implemented Bicycles for Educational Empowerment (BEEP) as part of the Improving Girls Access Through Transforming Education (I-GATE) program.

THE NEED

Zimbabwe is among the most literate countries in Africa, but in 2015, literacy rates for girls, ages 15 and older, were lower than that of boys (85% vs. 89%). Between 2015 and 2016, erratic rainfall and drought in the region resulted in the rural population becoming unable to meet minimum food needs. School officials recorded declining attendance and lower concentration levels among hungry children. Student dropout rates increased during this time as students living far from school struggled to walk due to hunger. For many families, the drought reduced incomes and resulted in an inability to pay school-related costs, adding to the increased dropout rates.

THE OPPORTUNITY

In many regions of the developing world, distance is one of the biggest barriers to girls' participation in school. Attendance is a reliable predictor for girls' learning outcomes. Data from 14 cohort BEEP schools show that the further a student lives from school, the more days of school missed:

- Students living up to 10km away were likely to miss up to 15 days per year
- Students living 1km away were likely to miss 1.5 days per year

Bicycles can reduce the time and effort expended on getting to school, reserving students' energy for the classroom. When school is not in session, bicycles can be used by other family members to bring goods to market, access healthcare, or transport necessities.



THE INTERVENTION

The Improving Girls' Access through Transforming Education (I-GATE) program was designed to identify and reduce barriers that impede girls' educational access, retention, and learning outcomes. I-GATE was funded through the UK Department for International Development and targeted more than 100,000 girls in Zimbabwe. The Bicycles for Educational Empowerment (BEEP) for I-GATE aimed to improve access to and retention in school for children in 10 districts of Zimbabwe who were aged 10-14 years (in grades 4-7) and lived 5km+ away from school. BEEP I-GATE was implemented through World Vision Zimbabwe and funded by World Vision Switzerland, World Vision USA and World Bicycle Relief. Executed from 2014 - 2016, BEEP I-GATE is the largest BEEP distribution to date.

PROGRAM GOALS

The main objective of BEEP I-GATE was to improve equitable access to education through the provision of bicycles and strengthened community support systems.

The project was expected to:

- Reduce absenteeism
- Improve safety and security
- Improve retention
- Improve concentration/performance

Key I-GATE interventions included:

- Formation of school clubs
- Provision of reading materials
- Community capacity building

The inclusion of BEEP in the I-GATE program resulted in a holistic education intervention that also addressed the barrier of distance to school.

THE IMPACT

Through the I-GATE program, students with Buffalo Bicycles were able to reduce their time traveled to school, increase their school performance, and improve their attendance.

TIME TRAVELED ↓

Students reduced their commute time to school by 47% with bicycles, from 77 minutes to 41 minutes on average. Reducing travel time allows students to get more sleep and spend more time on homework or leisure, while improving their willingness to travel to school. The time saved has a bigger impact on girls, who have additional chores and responsibilities at home. In some cases, bicycles can even reduce time spent on chores by making it easier to fetch water and bring goods to market.

STUDENT PERFORMANCE ↑

All students with bicycles maintained a passing mark (>50% average) over all terms and had an average 30% higher pass rate compared to students without bicycles. From 2015-2016, students with bicycles had twice the passing rate of students without. The overall impact of a bicycle on girls' performance was greater than the impact on boys' performance.

ATTENDANCE ↑

At peak impact, Term 1 2016, students with bicycles had a 96% better attendance rate than those without bicycles. Over all terms, there was a 5% difference between students with bicycles and students without bicycles missing ≥ 10 days of school.

"[Girls] used to travel for about 9 to 10 km to school then the same back home. Many girls had dropped out of school because of that, so the BEEP I-GATE came in as a savior. We had another girl who had dropped school at grade 7 in 2014 because of distance, she then got the bicycle and she re-enrolled this year and wrote her exams and she did very well." –FEMALE TEACHER FROM INSIZA DESCRIBING BEEP'S POSITIVE EFFECT ON ENROLLMENT



PHOTO: WORLD VISION © 2016

Before the girls had bicycles, it would take them two hours each way to walk between home and school. They would arrive tired with no energy to learn. After receiving bicycles, their attendance and performance has radically improved.

PROGRAM ACHIEVEMENTS



29,529

BUFFALO BICYCLES DISTRIBUTED



329

MECHANICS TRAINED



275

BICYCLE SUPERVISORY
COMMITTEES FORMED



275

SCHOOLS IN 10 DISTRICTS OF
4 PROVINCES SUPPORTED

I think the BEEP intervention helped quite a lot because children now have more time to read. So they now have this big advantage because they have a chance to read." – GOKWE NORTH MALE PARENT
SHARING HOW BEEP HELPED INCREASE LITERACY

RESEARCH STUDY METHODOLOGY

World Bicycle Relief conducted an evaluation of data collected by World Vision, WBR's BEEP implementation partner in Zimbabwe, to quantify the impact of Buffalo Bicycles on student participation in I-GATE BEEP from 2014 to 2016. The evaluation was a quasi-experimental design employing qualitative and quantitative data methods.

Primary data on the 1,540 student cohort was collected by World Vision's field-based staff and included:

- 1,030 students who received bicycles and 510 control students who did not receive bicycles
- Student groups who attended the same schools
- Demographic details such as age, date of birth, sex, and grade of each student
- Student attendance and performance reports from school records

Secondary data was mostly qualitative and obtained from:

- Improving Girls' Access through Transforming Education Endline Evaluation Report, March 2017
- Improving Girls' Access Baseline Report, July 2014

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WHY WORLD BICYCLE RELIEF?

World Bicycle Relief mobilizes people through The Power of Bicycles. Our innovative model combines philanthropic distributions with social enterprise sales that enable us to achieve greater efficiencies of scale, distribute more bicycles per donor dollar and create deeper impact where we work.

We work closely with our partners, supporters and end-users to design and implement sustainable programs, leveraging best practices and local expertise. World Bicycle Relief oversees the philanthropic programs and Buffalo Bicycles, Ltd. produces the bicycles that enable individuals to achieve mobility and thrive. We envision a world where distance is no longer a barrier to independence and livelihood.



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