



Mobility=Education

BICYCLES FOR EDUCATIONAL EMPOWERMENT PROGRAM (BEEP)

World Bicycle Relief 2012 Summary Report

Condensed from BEEP Evaluation Report – World Vision Zambia – December 2012

Data Collection Period – Oct 30–Nov 1, 2012



CONTACT

World Bicycle Relief
info@worldbicyclerelief.org
312-664-3836
worldbicyclerelief.org

TABLE OF CONTENTS

Organizational Overview	3
The Bike	3
Program Overview	4
Case Story: Belita	7
Monitoring and Evaluation	9
Metrics: June 2009–December 2012	10
Field Mechanics and Spare Parts	11
Challenges Presented in 2012	13
2013 Update & 2014 Forecast	14
Acknowledgements	15

Copyright © 2014 World Bicycle Relief

ORGANIZATIONAL OVERVIEW

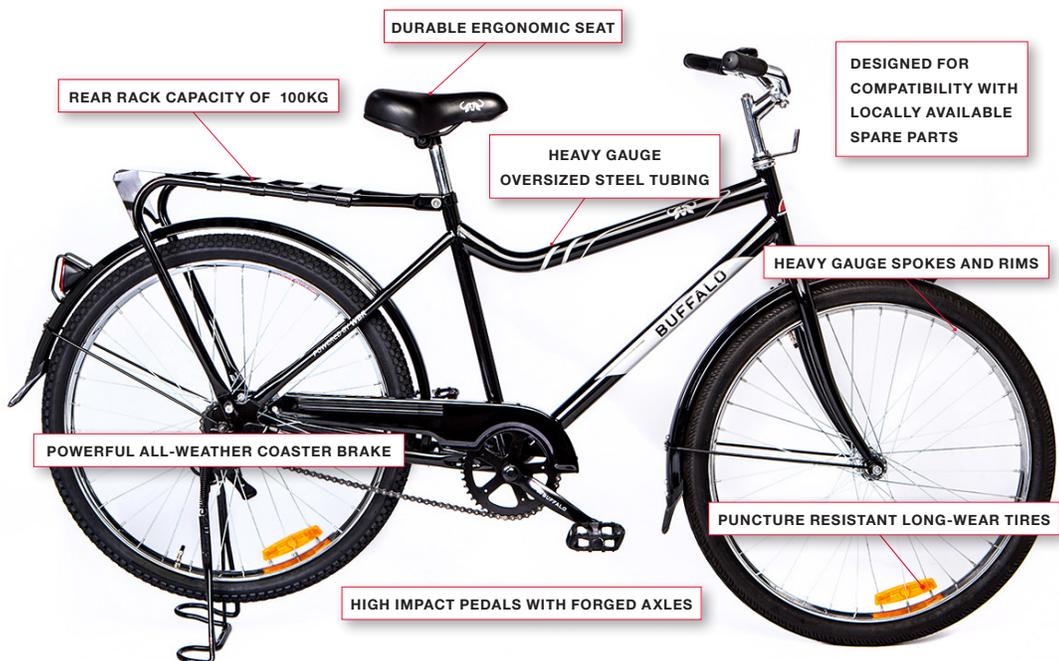
World Bicycle Relief is a nonprofit organization mobilizing people through The Power of Bicycles. We envision a world where distance is no longer a barrier to education, healthcare and economic opportunity. World Bicycle Relief has trained more than 850 field mechanics and provided more than 125,000 specially designed, locally assembled bicycles to disaster survivors, healthcare workers, students and entrepreneurs.

Strategy

- DESIGN, SOURCE and MANUFACTURE rugged bicycles engineered specifically for rural African terrain and load requirements
- ASSEMBLE bicycles locally with proper tools and close attention to quality
- DELIVER bicycles through Work-to-Own and Study-to-Own programs
- ESTABLISH maintenance infrastructure by training local field mechanics
- EVALUATE our work through independent studies
- COMMUNICATE program results to donors and partners

THE BIKE

Simple, sustainable bicycle transportation multiplies an individual's efficiency. Compared to walking, bicycles improve access to education, healthcare and economic opportunity by increasing carrying capacity and accessible travel distance while decreasing the time it takes to commute to and from schools, clinics and markets.



PROGRAM OVERVIEW

Need for the Program

Access to education is essential to ending the cycle of disease and poverty in Africa. According to the World Bank, “A basic education has a general preventative impact: it can inform children and youth and equip them to make decisions concerning their own lives, bring about long-term behavioral change, and give them the opportunity for economic independence – all fundamental to prevention, and therefore to hope.”

Educating girls strongly correlates with reduced poverty, increased life expectancy and improved quality of life. Plan UK’s 2009 report describes the value of education for girls as follows: “An extra year of education increases a girls’ income by 10 to 20 per cent and is a significant step on the road to breaking the cycle of poverty. Educated girls mean the chance of a better life for themselves and their children, a more prosperous community, a better workforce and a wealthier nation.” According to Nike Foundation research, women reinvest 90% of their income back into the household, whereas men reinvest only 30% to 40%. Essentially, educating girls is one of the best long-term investments a community can make.

In rural Zambia, where children are especially at risk for extreme poverty and high HIV/AIDS infection rates, only 60% of children enrolled in primary school go on to complete high school. Access to education is complicated by family dependence on children’s economic activities, the impact of HIV/AIDS and the growing number of child-headed households. Furthermore, it is not uncommon for students to walk two or three hours each way to get to school. According to a 2007 report by the Zambian Ministry of Education, children who walk long distances risk harassment, sexual abuse, poor nutrition and inability to provide critical family support. High school students must travel even farther and often rent rooms near school, putting them at risk for transactional sex and other dangers of living away from parental supervision.

Girls, who are responsible for the majority of household chores, are at a particularly high risk. A 1998 study found that Zambian girls spend more time on productive work than any group of adult men. Zambian girls collect fuel and water, cook for the family, care for younger siblings and support household businesses; these responsibilities, coupled with long and sometimes dangerous commutes to school, create considerable barriers to girls’ education. As a result, many girls frequently miss classes and often drop out of school altogether well before completing high school.

Description of the Program

The Zambian Ministry of Education has identified safe, reliable transportation as one way to immediately increase school enrollment. World Bicycle Relief, in partnership with the Zambian Ministry of Education, local communities and relief organizations, has created the Bicycles for Educational Empowerment Program (BEEP) to provide purpose-designed, locally assembled bicycles to children, teachers and community supporters. Safe, reliable transportation to school will enable children to have better educational and economic outcomes. Teachers and community supporters will be better able to access professional development opportunities and to assist struggling students.

Strategic Objectives:

- Increase school attendance, particularly for girls, orphans and vulnerable children
- Improve school performance, particularly for girls, orphans and vulnerable children
- Reduce student dropout rates, particularly for girls, orphans and vulnerable children
- Improve teachers' attendance and access to professional development opportunities
- Resolve school access and attendance issues through increased community engagement
- Improve livelihood opportunities for bicycle recipients and their families
- Improve student safety during the commute to and from school, particularly for girls

The Bicycles for Educational Empowerment Program (BEEP) empowers each local community to select bicycle recipients and monitor bicycle use. Local leaders work with World Bicycle Relief and program partners to form a Bicycle Supervisory Committee comprised of up to 12 members from a broad cross-section of the community: school officials, parents, students, local community organizations, church leaders and traditional leaders. Committee members attend four program orientation meetings to learn about the importance of educating girls, select bicycle recipients and nominate candidates for mechanics training.

In each school, 80% of bicycles are allocated to students and 20% to teachers and community supporters. Students are chosen based on distance and other challenges that affect their ability to attend school; 70% of student bicycles go to girls in recognition of the importance of girls' education. Teachers and community supporters are chosen based on distance to school, need to access district resources and contribution to student and school support. Community-nominated mechanics attend a week-long intensive training during which they receive a set of proper bicycle tools, build their own bicycle and learn basic business skills. Each bicycle recipient contributes toward the purchase of a communally owned starter set of spare parts managed by the Bicycle Supervisory Committee; bicycle recipients pay for spare parts as needed in order to replenish the community's supply of parts.

After the orientation meetings, recipient selection and mechanics training have been completed, the Bicycle Supervisory Committee conducts the distribution ceremony, a celebration attended by the whole school and many community members. Bicycle recipients sign a service-to-own contract whereby the bicycle becomes their personal property after two years, provided the bicycle has been used for its primary intended purpose. Students agree to attend classes regularly; teachers and community supporters agree to complete their school responsibilities; and mechanics agree to support the school and the program. Recipients and their families are encouraged to use the bicycle for improving household livelihood, provided this does not interfere with school attendance. The Bicycle Supervisory Committee monitors contract compliance and can reclaim and reallocate bicycles if the contract terms are not being met.

2011 Highlights

In 2010, World Bicycle Relief set benchmarks to be met in 2011: launch programming in Southern Province, Kalomo and Choma Districts by May 2011 and complete distributions in Central Province and Mumbwa District by June 2011. We are pleased to report that these goals were accomplished.

We also made greater efforts to more closely integrate with World Vision Zambia field staff. Empowering Community Development Workers to conduct program orientation meetings has resulted in increased community engagement and operational efficiency.

Throughout the year, we monitored the program and collected data in Mumbwa District for evaluation purposes and to formulate a short-term impact assessment. The schools in Southern Province also received training on collecting data to support our ongoing efforts to evaluate the program.

Another exciting development took place in October, when World Bicycle Relief began distributing a new mountain bike model. Produced by a world-class supplier, these bicycles can accommodate both genders and are easily adjustable to fit both small and large riders. Bicycle recipient feedback regarding the new bicycle design has been overwhelmingly positive.



A student recipient signs her 2-year service-to-own contract at a bicycle distribution ceremony.

CASE STORY: BELITA

Belita, age 15 and attending 7th grade at Chilala Basic School, is one of hundreds of thousands of orphans in Zambia. She and her grandmother, Mushimbei, are a two-woman team full of initiative and ambition, supporting one another in spite of their many disadvantages. By the time Belita was six, her father had died and her mother left for the Zambian capital, Lusaka, like many rural people desperately searching for employment. Her mother never returned and Mushimbei, a widow herself, took responsibility for her granddaughter. The BEEP bicycle has given a boost to their team, acting as a helping hand, or as Belita says, “like our family member, since we are only the two of us.”

Belita and her grandmother live 4.5 km (almost 3 miles) from Belita’s school. Before receiving her bike, she woke at 5:00 AM to walk the distance; she often arrived late, and the trip left her too drowsy to concentrate. She only made it to school three days per week, and she had no time to study because of the long commute and chores.



With her World Bicycle Relief bicycle, Belita, age 16, has conquered her journey to school and improved her grades. She aims to pursue nurse training after completing basic school.

Since receiving her bicycle, Belita has attended class every day, arriving on time and with the energy to focus. She arrives home with time to study, and her class performance has improved as a result. Belita aspires to become a nurse; she and her grandmother are confident that with hard work and help from her BEEP bicycle, she can complete school and advance to college.

Belita and Mushimbei use the bicycle to solve other problems, too. To earn a living, Mushimbei used to carry vegetables on her head to sell in surrounding villages; Belita now carries the crops on her bike and easily sells them all. With the extra profits, they plan to improve their home and even invest in a solar panel. When her grandmother was sick and needed to go to a clinic, Belita could not pedal with her on the bike rack. So, with her grandmother sitting on the rack, she pushed the bike to the clinic.

Even food preparation is easier with the bike. Before, they each carried a sack of maize on their heads to the grinding mill to make their staple dish. The bicycle helps them to transport the maize more quickly and easily, relieving the time burden of walking and freeing Mushimbei from aggravating her leg pain.

When told that her story would be shared with donors, Belita paused for a long time, shyly toying with a maize bag, before saying, "Thank you for the bicycle. I used to walk but now I am riding."



With her new bike, Belita now makes easy work of riding to nearby villages and selling the vegetables grown on their farm.

MONITORING AND EVALUATION

World Bicycle Relief maintains an ongoing commitment to measure the effect of the Bicycles for Educational Empowerment Program in communities where it has been implemented. This report features results from 15 schools polled in Mumbwa district from October 30–November 13, 2012.

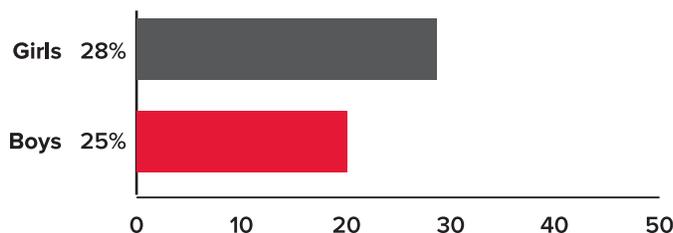
The evaluation targeted learners, teachers and community supporters in schools that have benefited from the Bicycles for Educational Empowerment Program.

Overall, there has been marked improvement in both academic performance and attendance.

Results: Improvement in Attendance

ATTENDANCE 27%

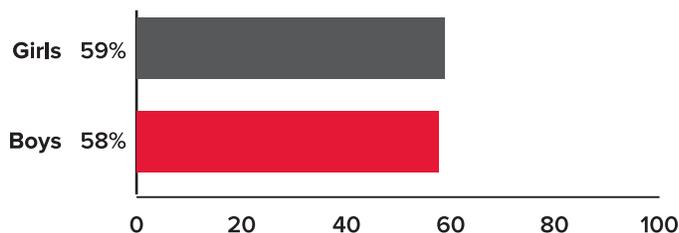
Data collected indicates an average attendance improvement of 27% for both girls and boys.



Results: Improvement in Performance

ACADEMIC PERFORMANCE 59%

Data collected indicates an average improvement in term-end scores of 59% for both girls and boys.



Household Economy

The provision of a bicycle to a household not only eases the mobility of the schoolchildren it also empowers the household with a tool for development that they can use to create wealth through income generation. After receiving bicycles, caregivers indicated that 29% of the households were using bicycles in one way or another to earn income. A vast majority (91%) of respondents indicated that they were using the bicycle to earn income by transporting goods and materials. Most of this income was used for meeting educational needs and requirements as well as supplementing other household needs.

METRICS: JUNE 2009– DECEMBER 2012

23,173 bicycles delivered to 102 schools;

310 Field Mechanics trained.



Kalomo District

4,751 Bicycles
23 Schools
51 Mechanics

We launched the Bicycles for Educational Empowerment Program in Southern Province in May 2011 and completed our deliveries in the first quarter of 2012. We delivered 4,751 bicycles to 23 schools and trained 51 field mechanics.



Mumbwa District

6,737 Bikes
37 Schools
70 Mechanics

We completed the Bicycles for Educational Empowerment Program in Mumbwa District with the final deliveries in early June 2011 and a close-out ceremony in July. We delivered a total of 6,737 bicycles to 37 schools and trained 70 field mechanics.



Chibombo District

1205 Bicycles
10 Schools
28 Mechanics

The Bicycles for Educational Empowerment Program in Chibombo District, Central Province, began at the end of 2011. During 2012 we trained an additional 22 field mechanics and distributed 1,099 bicycles to 8 schools.



Pemba/Choma District

1829 Bicycles
13 Schools
30 Mechanics

The launch of the Bicycles for Educational Empowerment Program in Choma District occurred in 2011 with a distribution of 150 bicycles to one school. In total, 1,829 bicycles were delivered to 13 schools and 30 field mechanics were trained.



Chongwe District

5,372 Bikes
45 Schools
90 Mechanics

The Bicycles for Educational Empowerment Program got its start in 2009 with an initial distribution of 100 bicycles to students at Ndapula Community School in Chongwe District, Zambia. In all, we delivered a total of 5,372 bicycles to 45 schools in Chongwe and trained 90 mechanics.

FIELD MECHANICS AND SPARE PARTS

Field Mechanic Training

To promote sustainability and provide livelihood skills, we train field mechanics in communities where the bicycles are distributed. Field mechanic candidates are selected by the Bicycle Supervisory Committee with preference given to those with mechanical or bicycle business experience. Candidates are trained at a central location in groups of up to 20 individuals. The week-long session, conducted by World Bicycle Relief personnel, includes both business and technical skills training.

Each field mechanic receives:

- Business Skills Training Guide and handouts
- Technical Training Manual
- Bicycle, built during training
- Work suit
- Tool set: long nose and regular pliers, combination 88mm to 22mm spanners, pin ball hammer, spoke key, bottom bracket tool, floor pump and carrying bag
- Certificate of completion
- Accommodation, meals and transport refunds



Mary, a field mechanic trained by World Bicycle Relief, works to repair a customer's bicycle.

After training, mechanics sign a service-to-own contract for the materials provided with the commitment to support their assigned schools for a period of two years. The Bicycle Supervisory Committee has oversight of the field mechanics' performance. Trained mechanics are present at bicycle distributions to unload bicycles from delivery trucks, perform final adjustments and train recipients in basic maintenance and repair. One component of the field mechanics' contract is to conduct the first servicing of a recipient's bicycle free of charge; thereafter, recipients are required to pay for field mechanic services.

Spare Parts

Based on lessons learned in 2010, the Bicycle Supervisory Committee continues to collect a minimal contribution (about \$5 USD) from each bicycle recipient to fund the purchase of a communally owned spare part kit. This starter kit is comprised of components commonly replaced within the first year (tubes, tires, spokes, rims, saddles and hubs) and costs about \$400 USD.

As spare parts are required for repair, recipients purchase them from the communal stock, maintaining a revolving fund to purchase new spares. The Bicycle Supervisory Committee manages the fund collection and the spares stock. The spare parts are sold by World Bicycle Relief. We strive to base spare parts distribution on economic principles of supply and demand rather than dependence on philanthropy.



A WBR Field Mechanic being awarded a graduation certificate at a BEEP distribution.

CHALLENGES PRESENTED IN 2012

The team faced some challenges in gathering data during the student self-administered part of the evaluation because the timing coincided with the Grade 9 end-of-year final examination. However, the team patiently and consistently managed to collect the data from the children by respecting the school's examination schedule and making arrangements with students to complete the evaluations in the afternoons, after the day's examinations were complete.

A purposive random sampling was used accordingly. During the household questionnaire administration, the team consistently followed the sampling framework and ensured that all interviewed households were randomly selected, thereby giving each eligible household an equal likelihood of being selected to participate in the evaluation process.

Lessons Learned

The evaluation was successful, with full participation from the Area Development Programs. The participation from the community was encouraging and thus we are looking forward to sharing the findings of the evaluation. Some recommendations that may help in similar undertakings in the future are as follows:

- The evaluation ought to have been given during the same period as the baseline to ensure that factors affecting such studies were also considered. This year, the baseline was done when all grades were in session but the evaluation was given during end-of-year examinations when some students were not attending regular school.
- In an effort to strengthen the Monitoring and Evaluation component of a similar project undertaking, we need to work more closely with the District Education Board Secretary in the Ministry of Education to collect and monitor data. The program had numerous challenges to collecting data from the schools, even after several reminders and visits. Coordinating data collection through the DEBS office may have mitigated these challenges.
- To enhance professional development activities for teachers, the program should consider stocking libraries at zonal resource centers to ensure that they are well-equipped with information about changes in education and the most recent teaching methodologies.
- Measuring the program's performance continued to be a challenge. To meet this challenge and to ensure that there is a common way to collect and analyze data, we believe that data collection should be restricted to two major subjects, mathematics and English. It is hoped that this will make it easier for the schools to provide the data and for our team to develop the quality of data.
- On the other hand, school attendance by the learners was collected through school attendance registers, thus the data was authenticated.
- The Bicycle Educational Empowerment Program worked with the various ADPs during the implementation of the activities. Initially, the program was to be integrated in their programming, especially the education sector. However, the integration process was not fully utilized due to challenges in collecting data. In the future, such undertakings should be incorporated into the ADP DIPs so that the programs may be monitored and evaluated on the outcomes using the same structures put in place by the Bicycles for Educational Empowerment Program.

2013 UPDATE & 2014 FORECAST

In 2013 World Bicycle Relief trained 85 Field Mechanics and distributed 12,469 bicycles to students, teachers, and school volunteers through BEEP.

With the continued cooperation and partnership of the Ministry of Education, World Vision and other program partners, we aim to expand programming in countries where we already work, while continuing to pursue the launch of BEEP programming in new countries.

ACKNOWLEDGEMENTS

World Bicycle Relief would like to thank the Zambian Ministry of Education, as well as the government partners, schools and communities with whom we partner and serve, for helping to compile this report. Most important, we thank the students, families and teachers who continue to be the true heroes of this program.

- Republic of Zambia's Ministry of Education
- World Vision Zambia and World Vision US
- World Vision Zambia Area Development Program Staff
- Mrs. Helen Lungu, World Vision Zambia National Gender Specialist
- The Traditional Leaders in Mumbwa, Kalomo, Choma and Chibombo Districts
- Bicycle Supervisory Committee members, school implementation staff and students who continue to be the true heroes of this program.

Except where other authors and publications are acknowledged, the monitoring data for this report were provided by:

Chibwe Mambwe
Bicycles for Educational Empowerment Program Monitoring & Evaluation Officer
World Vision Zambia

Lameck Kasanga Kasanga
Bicycles for Educational Empowerment Program Officer
World Bicycle Relief

Primary quantitative and qualitative data collected throughout the monitoring and reporting process remain the property of the communities and families described in this document.

