



AKAZI KANOZE 2

Work Readiness and Employment Outcomes

This final evaluation report is made possible by the generous support of the Mastercard foundation. The contents are the responsibility of Education Development Center, Inc. and do not necessarily reflect the views of Mastercard foundation. A Randomized Controlled Trial of Secondary School Students in Rwanda

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EXECUTIVE SUMMARY

The Akazi Kanoze 2 (AK2) project, funded by the Mastercard Foundation and implemented by Education Development Center (EDC), was a three-year program focused on assisting Rwandan schools, government partners, employers and communities to institutionalize *work readiness* and *transition to work programming* within Rwanda's secondary education system, including both general secondary schools and technical vocational schools. AK2 focused on Kigali and Southern provinces and directly served over 20,000 youth, through 438 public and private secondary schools. AK2 in-school youth participated in a work readiness curriculum and school-to-work-transition opportunities (STWT) (e.g. internships, job shadowing, work exposure) throughout the school-year. Through curriculum revision, teacher capacity building and systems level advocacy, Akazi Kanoze 2 aimed to strengthen the education system so that secondary school students will be more workready when transitioning to the workforce or further education.

Methodology: The evaluation was designed to measure whether as a result of the project youth show a measurable change in employability, soft skills, and employment outcomes. This impact evaluation was built into the initial project design and influenced how schools were selected into the program.

The design is experimental with randomly assigned treatment and control (counterfactual) groups. The randomized control trial (RCT) treatment and control group cohorts were assessed longitudinally at baseline and endline. The baseline was conducted in February-March, 2015 before the treatment group started the Akazi Kanoze 2 training. The endline was conducted in September 2016, about 12 months after students had completed the work readiness curriculum and about 9 months after their STWT opportunities.

At endline, 11.5% of survey participants (n = 179) had already transitioned to the workforce after graduating TVET schools and 88.5% were still in-school (n = 1,380). The distinction between in-school and graduated youth at the time of the endline is especially important for employment analysis.

The EDC team conducted qualitative follow up data collection through individual interviews to better understand several quantitative findings, especially around gender disparities. These findings are featured in textboxes throughout the report.

Employability Outcome Findings: The evaluation findings demonstrate the positive impact of AK2 on cognitive work readiness skills and confidence levels. Two major and statistically significant findings summarize AK2's impact on work readiness:

- 1.) AK2 youth (the treatment group) have larger gains in work readiness knowledge and key competencies than a young person who does not participate in the program;
- 2.) AK2 youth are more confident in key work readiness skills and abilities than those who did not participate.

Despite overall high baseline scores, students in the treatment group demonstrated a larger increase in work readiness knowledge such as the ability to set goals or communicate effectively,

than the control group. This was significant at the p<.001 level. This result indicates that the treatment group attained higher cognitive knowledge of work readiness after AK2 when compared to their peers in the control group. Young women in the treatment group increased their work readiness scores on average by 5.3 percentage points more than young women in the control group, yet still lag behind their male peers in terms of assessment scores. This suggests a need for interventions that offer targeted training and support to young females, in order to help them overcome gender gaps in employability skills.

AK2 youth increased their competency in key work readiness skills and had higher confidence in their ability to improve their livelihoods more than youth who did not go through the program. In all areas assessed, treatment youth reported statistically significantly higher levels of work readiness competence at endline than their control group peers, who saw hardly any increases from baseline to endline (see figure below).

AK2 youth knew more about business plans, goals and communication than the control group. The control group did not increase from baseline to endline, but AK2 youth had significant gains.



Multi-variate regression analysis demonstrate the relationship between these work readiness competencies and employment. For example, analysis showed that youth who report being able to develop a business plan are 17% more likely to be employed (p<.01). Youth who can set personal goals are 15.4% more likely to be employed (p<.01).

AK2 youth reported much higher levels of confidence in their work readiness skills at endline than

the control group. Youth in the treatment group had statistically significant positive gains in confidence in the following work readiness areas:

- Finding work (see Figure to right)
- Improving work
- Starting and growing a business

These statistically significant differences are a positive outcome in and of themselves, but are even more vital considering that these measures are highly correlated with employment



outcomes. Youth who report higher levels of confidence are 12% more likely to be employed at endline (p<.01). AK2 increased youth's level of confidence, thereby also increasing the likelihood of them having work. Employability is proven to be predictive of future success in the workplace and continuing to increase levels of employability for young men and women is significant in creating gender equity in the long-term.

Employment Findings: Overall, the impact evaluation demonstrates two major findings on AK2's impact on work:

- 1. AK2 students are more likely to be employed after completing the program than someone who does not participate in the program;
- 2. Female students who participated in AK2 made larger gains in employment than those females who did not join AK2.

Baseline results showed that there was no difference between treatment and control groups with an average of 44% of youth reporting that they were employed in the last six months. At endline, there are statistically significant differences between AK2 youth and the control group with 14% increase in employment for AK2 youth and only 6% increase for the control group. This means that AK2 youth are 8% more likely to be employed at endline than someone who did not do the program.



For the youth who were still in secondary school at endline, there were statistically significant gains in employment for the treatment group and no significant gains for the control group. Almost 56% of in-school AK2 youth reported being employed, which represents a 10.8% increase from baseline. This is compared to a 4% increase for in-school youth in the control group. For students who had already graduated TVET at endline, there were significant gains in employment for the treatment and control groups. Treatment youth in TVET schools had significantly lower levels of employment at baseline than their control group counterparts, yet experienced a 40.3% gain in employment by endline to catch up and surpass the control group.

Even after controlling for several factors including age, gender, urban vs. rural, school type, and province, AK2 is a significant explanatory factor of employment for this group of youth, with treatment youth 7.6% more likely to be employed at endline than control youth. Youth that participate in AK2 are 8% more likely to be employed after completing the program than someone who does not participate.

While no group of young women totally closed the gap with their male peers, **females in both treatment groups made greater progress than females in control groups.** As a result of AK2, female TVET graduates were able to narrow the gap with their male peers by gaining 47% in employment to nearly catch up to male TVET graduates. This was the largest gain in employment seen by any group in the evaluation. Geography was also a significant predictor of employment outcomes at endline. Youth in both the treatment and control groups in the Southern Province were 8.5% more likely to be employed at endline than youth in Kigali yet **AK2 had a much stronger influence on employment outcomes for youth in Kigali than youth in the Southern Province** – treatment youth in Kigali were 24.2% more likely to be employed at endline than control youth, while there was no statistically significant difference in employment outcomes for treatment and control youth in the Southern Province.

Soft Skills Outcomes Findings: Despite high baseline scores, there were statistically significant increases in soft skills for the AK2 youth. At baseline, AK2 youth's biggest strengths were conscientiousness (grit, determination) and agreeableness (cooperation, forgiveness), and their weaknesses were emotional stability (calmness, self-confidence) and extraversion (assertiveness, boldness). At endline, this pattern stayed the same with conscientiousness scores still being the highest at 4.60 on a 5-point scale and emotional stability scores still being the lowest at 3.84.

AK2 females had more improved soft skills after completing the program than other young women who did not participate. It does appear that AK2 partially closed the gender gap on soft skills, as AK2 young women made larger strides in soft skills than control group women. At baseline, there were no differences between treatment and control group young women. At endline there are statistically significant differences between young women in the two groups, especially on conscientiousness and agreeableness (p<.025). For emotional stability, openness, and extraversion there is a statistically significant difference at the p<.10 level, weaker than for the

other two factors. While there are still differences between treatment females and males at endline, it is a good sign that participation in AK2 resulted in higher gain scores for young women compared to those women who did not participate in AK2.

Conclusion: AK2 is the first of its kind to scale-up a transferable skills national curriculum and is in the vanguard of secondary school education quality and applicability reform. The need for conclusive evidence to define project strengths and weaknesses was clear, hence school selection was designed around the randomized evaluation to make it possible. The positive outcomes from this evaluation validate the anecdotal evidence, yet it also shows ways in which those who attempt to implement similar transferable skills projects can increase their targeted impact on work readiness and employment in the future.

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INTRODUCTION

AKAZI KANOZE 2 PROJECT BACKGROUND

In June 2014, the Mastercard Foundation, through the Partnership to Strengthen Innovation and Practice in Secondary Education (PSIPSE) program, awarded Education Development Center (EDC) the Akazi Kanoze 2 (AK2) project. AK2 aimed to build on the Akazi Kanoze Youth Livelihood Development Program's (AK) previous work by assisting Rwandan schools, government partners, employers and communities to institutionalize *work readiness* and *transition to work programming* within Rwanda's secondary education system, including both general secondary schools and technical vocational schools. The AK2 program focused on Kigali and Southern provinces and directly serves over 20,000 youth, through 438 public and private secondary schools (both general secondary and TVET) over 3 years. AK2's goals, objectives and technical package are presented below:

AK2 Goal and Objectives: EDC seeks to institutionalize AK's two most relevant and successful components—work readiness training and school to work transitional support programming—within Rwanda's secondary school system nationwide. To accomplish this, AK2:

- a) Increased the number of schools offering work readiness training and school to work transition programming in two of Rwanda's five provinces, Kigali and Southern, and thus improved livelihood opportunities for youth in those provinces;
- b) Worked with the Rwanda Ministry of Education and private schools to make work readiness (WR) and school to work transition (STWT) integral parts of the secondary school system; and
- c) Enhanced the Ministry of Education's capacity to use data for decision-making in a scaled-up WR and STWT program, across the nation.

The project's theory of change states that the AK2 youth-level interventions will increase work readiness and transferable skills and improve long-term livelihood outcomes (*See Figure 1*).





AK2 WORK READINESS ACTIVITIES

Through curriculum revision, teacher capacity building and systems level advocacy, Akazi Kanoze 2 aims to enable youth to be more work ready when transitioning from secondary school to the workforce or further education. In order to achieve the above-mentioned goals, EDC's local implementing partners worked with schools to provide students with a variety of work readiness educational opportunities and activities. The AK2 objectives are based on two proven youth-level elements of the Akazi Kanoze technical package: work readiness training and school to work transition programming. Active involvement of the private and public sectors is cross-cutting.

• <u>Work Readiness training (WR)</u> uses an engaging, learner-centered approach and materials designed especially for secondary-level Rwandan students. The curriculum employs handson application of the soft skills most demanded by Rwandan employers¹, such as time management, communication, planning, work-appropriate behavior and attitudes, team and independent work, financial literacy, entrepreneurship, workplace health and safety, workplace rights and responsibilities, and customer orientation and satisfaction. Youth learn this information and practice these skills in role-plays and other activities; the youth themselves, their trainers, and external assessors assess mastery. The work readiness skills are then applied through *transition to work opportunities* (described below). This component of our proposed package also includes training and ongoing coaching and performance monitoring of school-based trainers and local and national-level administrators and managers.

¹ Based on a series of employer interviews conducted during AK's curriculum development in 2009.

<u>School to Work Transition programming (STWT)</u> includes youth mentoring by trained teachers in the development and initial implementation of life and career plans, and student placement in a relevant work-based learning (WBL) opportunities. They can include paid/unpaid short or long-term work experience, continued training in a particular skill area via a public or private provider, or self-employment/ entrepreneurship. In each school, teachers work with district-based steering committees to coordinate a portfolio of opportunities, conduct periodic, and localized labor and market demand studies, and garner parent and community support to assist learner with finding relevant opportunities. The 'school to work transition' component of the project includes training, coaching, and performance monitoring of teachers and local and national-level administrators and managers.

The following poster describes the STWT transition process for general secondary students:



IMPACT EVALUATION METHODOLOGY

EVALUATION PURPOSE

From the design stage, the Akazi Kanoze 2 team was planning an impact evaluation that would generate opportunities for learning. The evaluation seeks to answer research questions regarding increases in employability and new or improved livelihoods as a result of the AK2 project. A full overview of the evaluation methodology can be found in Annex 1.

This randomized controlled trial (RCT) examines the following impact evaluation questions:

IMPACT EVALUATION QUESTIONS

- 1. Do youth participants demonstrate improved work readiness skills (soft and hard skills) as a result of project activities?
- 2. Do youth participants demonstrate improved or new livelihoods as a result of project activities? (Improved livelihoods is defined as increased employment/income generation and/or the improvement of employment quality e.g., kind of income, stability, working conditions)

METHODOLOGY

Evaluation Design: The design is experimental with randomly assigned treatment and control (counterfactual) groups. The randomized control trial (RCT) treatment and control group cohorts were assessed longitudinally at baseline and endline. The baseline was conducted in February-March, 2015 before the treatment group started the Akazi Kanoze 2 training. The endline was conducted in September 2016, about 12 months after students had completed the work readiness curriculum and about 9 months after their STWT opportunities.

Sampling: Schools were randomly assigned to the treatment or control groups using a clustered approach. At baseline 97 schools were included in the sample—62 treatment and 35 control schools (2,105 youth—1,360 in the treatment group and 755 in the control group). At endline only 88 schools—53 treatment schools, 30 control schools and 5 schools with equivalent control and treatment groups (1,559 youth—1,001 in the treatment group and 558 in the control group) are used in this final longitudinal (matched pairs) analysis. A total of 22 youth was randomly selected to participate in the study from each randomly assigned school.

Data Collection Tools

- 1. **Employability Assessment**—This 35 item test is based on the Work Readiness Curriculum content.
- 2. **Big Five Inventory**—This 44 question diagnostic on the big five personality traits measures noncognitive skills.
- 3. Youth Employment Survey—This EDC designed survey measures new or improved employment and employability.

In the sections that follow, the analysis is divided into three main sections: 1) Employability, 2) Employment, and 3) Soft Skills. Detailed baseline analysis is included in Annex 2. A demographics section gives a brief overview of the youth surveyed and the conclusion summarizes key findings and provides recommendations.

DESCRIPTION OF PARTICIPANTS

DEMOGRAPHICS

There were minimal changes in the demographics of the sample from baseline to endline. Overall, the group was **46.5% male and 53.6% female** (Total matched pairs sample = 1,559 youth) with a slightly higher percentage of females in the treatment compared to the control group.

Schools were sampled from 11 districts² in two provinces. The total number of youth is almost evenly divided in districts with a range of 7.5% to 12.4% of the sample being from one district.

Although only 21% of the sample schools are from Kigali province, **the sample is almost evenly divided between rural and urban areas—53% are located in rural areas and 47% in urban.** 73.3% of schools surveyed are public or government aided, 26.7% are private.

Overall, general secondary schools (GSS), which include technical secondary schools (TSS), represented 81.8% of the schools sampled



compared to 18.2% being TVET schools. At endline, GSS and TSS students were still in school, whereas TVET students completed school in December 2015 and had transitioned to the workforce.

² Gasabo, Gisagara, Huye, Kamonyi, Kicukiro, Muhanga, Nyamagabe, Nyanza, Nyarugenge, Nyaruguru, Ruhango

AK2 CASE STUDY: PASCASIE



Pascasie is from Munyina, a rural town in southern Rwanda. She completed her secondary school studies in December 2016 in the combination of mathematics, chemistry, and biology at GS Munyina, a local public school in her area. This is where she encountered the Akazi Kanoze 2 work readiness curriculum and school to work transition program during her entrepreneurship classes at school.

When Pascasie first started the work readiness lessons, she didn't really see what the benefit was or how it would

help her. But now, looking back, she feels that what she learned in AK2 was some of the most useful information she gained from her secondary studies.

After graduating, Pascasie decided to start a business venture in vegetable production and trading. Her parents agreed to give her a small plot of land for her to take ownership of and she began growing vegetables like tomatoes and cabbage, which she sells at the local market.

"When I first started doing this business, my peers laughed at me. How could I go back to cultivation when I have an education? But look at where I've reached. Instead of waiting for someone to give me a job, I'm realizing I can create my own work." Using the knowledge she gained from AK2, she decided to expand her business, so she saved the revenue from her vegetable sales to use as capital in the future. From that capital, she started traveling to small markets in more rural areas to buy vegetables which she then brings to Muhanga, the largest urban center in her area, and sells them at a higher rate. She is able to make a sustainable monthly income, allowing her to purchase things like health insurance for her family and start saving for the future.

Prior to participating in AK2, she admits that she was ashamed to do anything with farming and had planned to look for a government or other formal sector job after graduating. But AK2 opened her mind to other possibilities. She began to see cultivation in a much different way and became interested in self-employment.

Now she wishes to continue to strengthen her entrepreneurial skills and dreams of becoming a tailor. She is currently saving a portion of the revenue she earns from her vegetable business so that she can soon start paying for more skills training to improve her technical skills. Pascasie notes that this dream started during her AK2 classes. She learned how to survey market demand and foresees tailoring becoming very important in upcoming years due to recent government policy banning the importation of second hand clothing in lieu of developing a Rwanda made clothing base. Pascasie dreams of becoming an innovative tailor and designing a variety of styles of clothing, which can meet the tastes of her generation.

Pascasie's mom is impressed by the change she has seen in her daughter since she joined AK2. "Before AK2, we didn't see the motivation and drive in Pascasie that she now has. We can't believe that she is out there, on her own initiative, farming and selling vegetables. She is so determined and works really hard. We also see that she is different than other girls her age. Some of them are getting caught up in bad behavior but she isn't living like them and is determined to make her own money and build her own future. That means a lot to us."

STUDY RESULTS

The following findings section is separated into three main themes: 1) Employability Outcomes (e.g. work readiness skills and confidence, 2) Employment Outcomes, and 3) Soft Skills. Changes in outcomes along the theory of change are explored from employability to employment impact as a result of the Akazi Kanoze 2 interventions.

FINDINGS: EMPLOYABILITY OUTCOMES

WORK READINESS ASSESSMENT

Overall Results: Before AK2, the treatment and control groups had nearly equal pretest work readiness knowledge levels. The work readiness assessment measures knowledge of competencies in personal development, leadership, entrepreneurship, financial literacy, communication, safety, and worker rights. At endline, Akazi Kanoze 2 youth had increased scores significantly more than the treatment group on the work readiness assessment. For example, although there was a high level of work readiness knowledge demonstrated at baseline, more treatment youth at endline scored between 81-100% on the test compared to the control group (p<.000 level).

Figure 3: Endline distribution of work readiness employability assessment scores by group (n=1559)

The largest increase was 24% in the 81-100% correct category for AK2 youth.

A higher percentage of AK2 youth had increased scores on the work readiness assessment at endline.



Overall, students in the treatment group demonstrated a larger increase in work readiness knowledge than the control group. This was significant at the p<.001 level. An examination of the rank averages³ of their endline work readiness scores demonstrates that the youth in the treatment group had higher work readiness knowledge than those in the control group. This result indicates

³ The rank average of the endline scores of the treatment group youth was 852.25, while the youth in the control group had a posttest score rank average of 650.39.

distribution. It is used for comparing two or more independent samples of equal or different sample sizes.

that the treatment group youth attained higher cognitive knowledge of work readiness after AK2 compared to their peers in the control group. These results were cross validated by a Kruskal-Wallis test⁴, which showed a statistically significant difference in work readiness scores at endline between the treatment and control groups at p<.001 compared to the insignificant baseline.

Gain Score Analysis: The results show that the gain scores from baseline to endline were greater for treatment youth compared to control group youth. Inspection of the 95% confidence intervals around each mean indicated that there was a significant increase in average gain scores for youth in the treatment groups, whereas for youth in the control groups there was a significant decrease in gain scores.

Female treatment youth increased their scores by 8.7% on average, while female control youth by only 3.4%. The difference between treatment and control females is significant at the p<.001 level. Female youth in both the treatment and control groups had larger, but statistically insignificant gain scores than their male peers. At endline, there is still a significant difference in scores by gender in both groups, which shows that overall young women did not catch up to young men in terms of assessment marks.

When analyzed by urban and rural, there are no significant differences in gain scores. With regard to school type, **the results suggest that school type has a significant difference on scores.** In the treatment group, GSS students had higher gain scores compared to TVET youth. In the control group, TVET students had higher gain scores. Although the difference was only statistically significant for the control group, an analysis of covariance showed that school type had a significant effect on youth employability assessment scores (p<.01).

Analysis by Work Readiness Concept: For each skill, the treatment group had larger

increases in scores than the control group. The gain scores in percentage points were statistically significant between the groups for leadership (p= .001), entrepreneurship (p= .045), financial literacy (p= .000), worker's rights and safety (p= .000), interpersonal communication (p= .000), and personal development (p= .000). The only skills area without a significant difference between groups was work habits.

⁴ The Kruskal–Wallis test is a non-parametric method for testing whether samples originate from the same

The AK2 mean test score increased by more than that of the control group.

Figure 4: Mean percent correct, by group



e female control youth by

The scores of AK2 youth rose more and were higher at endline than the control group's scores.

Figure 5: Overall mean percentage correct gain by work readiness concept

AK2 Youth improved their work readiness more than the control youth.

AK2 Youth had significantly larger increases than the control group in seven out of eight work readiness areas.



There was a difference between male and females in the control and treatment groups at baseline. When analyzed by gender, the only difference at endline was a gap between young men and young women in the control group on leadership. This finding reveals that the program helped close the gender gap in work readiness knowledge for young men and women who participated.

AK2 closed the gender gap on knowledge of key work readiness concepts, whereas the gender gap still existed in the control group

INCREASED WORK READINESS SKILLS

At the time of the endline AK2 youth had increased their competency in key work readiness skills and had higher confidence in their ability to improve their livelihoods more than youth who did not go through the program. The work readiness index included in the Youth Employment Survey includes the stepping stones for prepared, confident, and capable youth who are work ready with the proper transferable skills.

Both treatment and control group youth increased their knowledge of key work readiness skills over time, but the **AK2 youth had larger gains in all areas that were assessed:**

- 1. Business plan development
- 2. Ability to set goals

- 3. Ability to communicate effectively with a variety of people
- 4. Ability to solve conflict peacefully in school or at the workplace
- 5. Ability to demonstrate leadership in their community

Figure 6: Gains in work readiness skills

AK2 youth had significant gains in work readiness skills compared to the control group

Higher percentages of youth reported "yes" or "very much" when asked if they have these skills at endline (all p <.001)



It is important to note that knowledge of these key work readiness skills is highly correlated with employment outcomes.

- Youth who have the skills to develop a business plan at endline, for example, are **17% more likely to be employed** (p < .01); see Annex 9.
- Youth who have the ability to set personal goals at endline are **15.4% more likely to be** employed (p < .01); see Annex 10.
- Youth who know how to communicate effectively at endline are **11.8% more likely to be** employed (p < .01); see Annex 11.

INCREASED CONFIDENCE

From baseline to endline there were significant changes in youth's level of confidence in key work readiness skills. At endline, AK2 youth reported statistically significantly higher levels of confidence than the control group in the following areas (p < .001):

 Finding work—At baseline there was a higher percentage of control group youth who reported confidence in their skills to find work, but at endline the control group decreased by 1% and AK2 youth increased significantly by 20% (See Figure 7). The difference at endline was significant at the p < .001 level. Regression analysis indicates that

Figure 7: Increases in confidence

AK2 youth confident in finding work

The control group had a 1% decrease at endline and AK2 youth increased by 20% (p = .000)



youth who are confident in their abilities to find work at endline are 12.7% more likely to be employed (p<.01).

- Improve work—At baseline, the two groups reported almost equivalent levels of confidence in their ability to improve their work position or conditions. At endline, AK2 youth had significant gains and the control group decreased in their levels of confidence. Youth who are confident in their abilities to improve their work positions or conditions at endline are 17.8% more likely to be employed (p<.01).
- Starting and growing a business—Baseline confidence in starting and running a business was quite high with the treatment and control groups. At endline, the control group again decreased by 1% and the AK2 youth reported a 10% increase in the number of youth reporting higher levels of confidence in running a business. Youth who are confident in their abilities to start and run a business at endline are 11.7% more likely to be employed (p<.01).
- **Demonstrating leadership** At baseline, the control group reported slightly higher levels of confidence in their ability to demonstrate leadership in their community. At endline, the control group had gained only 2% and AK2 youth gained 19% with 89% of AK2 youth reporting confidence in their leadership skills (p<.001).

Figure 8: Gains in confidence in work readiness skills

AK2 youth increased confidence in improving work position or conditions

The control group had a 1% decrease at endline and AK2 youth increased by 12% (p = .000)



AK2 youth have greater confidence in starting and running a business

The control group had a 1% decrease at endline and AK2 youth increased by 10% (p = .000)



AK2 CASE STUDY: AKUMUNIGO SCHOOL

In 2016, fifteen Senior 5 students at an Akazi Kanoze 2 school, G.S. Akumunigo, decided to put the skills they were learning in their entrepreneurship class into action, deciding that they didn't need to wait until after finishing school to start a meaningful income generating activity. With the help of their entrepreneurship and work readiness teacher, they surveyed different market needs in their peri-urban area on the outskirts of Kigali and decided to start a vegetable garden on their school's grounds.

They chose to grow vegetables because they realized there was a demand for them right in their own backyard. They researched and found that their school and other schools in the area were paying a lot of money to buy vegetables for school lunch programs and would likely be willing to buy vegetables for them at a more affordable rate. They also identified a nearby city market to sell the vegetables the school did not buy.

"During our Akazi Kanoze classes we had learned selfconfidence and how to persevere even in challenges. Yes, we had faced a loss – but that didn't need to stop us from pursuing our goals." Their school supported them by letting them use a small piece of land on their property that was not being used. They planted their first seeds and to their surprise, their first harvest failed and they found themselves facing a financial loss, rather than the gain they had anticipated. The students were discouraged and nine of the fifteen dropped out of the project at that point.

However, six students decided to look failure in the face and persevered to plant a second crop. With this determination, the

six students garnered the support of their community and pressed forward. Their teacher helped connect them to the sector government official in charge of agribusiness, who helped supply them with much needed fertilizer. Their parents helped them by giving them water to irrigate during the dry season when the water had run out at their school and allowed them to go to school on the weekends to water the crops. The students also started to work small odd jobs to save up money to buy inputs to ensure their crops did not fail.

Their perseverance paid off. They had successful second and third harvests and as of now have made 625,000RWF (roughly \$744), which is a major achievement.

As these six students are now getting ready to graduate secondary school at the end of 2017, they are working on training other younger AK2 students who can continue to manage and learn from this schoolbased project. These successful soon-to-be graduates all have big dreams for their future: from starting a pig farm, to managing a milk business, to becoming a doctor. Regardless of what their next steps will be, all of them agree that the skills they learned from the work readiness curriculum and through this experience has made them confident about their ability to succeed in the future, no matter the initial challenges or initial failures they may face.

"We are so impressed with the success of these students. They will help employ their generation."

Headmaster of G.S.
 Akumunigo

CONCLUSION

Despite overall high baseline scores, the Employability Assessment results at endline demonstrate that the treatment group experienced larger increases in their scores for all modules than the control group. Young women in the treatment group increased their work readiness scores on average by 5.3 percentage points more than young women in the control group, yet still lag behind their male peers in terms of knowledge in key work readiness areas. This suggests a need for interventions that offer targeted training and support to young females, in order to help them overcome initial gender divides in employability skills.

AK2 youth had larger gains in work readiness knowledge for all areas that were assessed. At the time of the endline, AK2 youth had increased their competency in key work readiness skills and had higher confidence in their ability to improve their livelihoods more than youth who did not go through the program.

AK2 youth reported much higher levels of confidence at endline than the control group. These statistically significant differences are a positive outcome in and of themselves, but are even more vital considering that these measures are highly correlated with employment outcomes. Youth who report higher levels of confidence are more likely to be employed at endline. AK2 increased youth's level of confidence, thereby also increasing the likelihood of them having work. Employability is proven to be predictive of future success⁵ in the workplace and continuing to increase levels of employability for young men and women is significant in creating gender equity in the long-term.

⁵ Employability is defined as "a set of achievements, skills, understandings and personal attributes that make a person more likely to gain and retain employment, be successful in their chosen occupation and be professionally and personally satisfied with their employment. To increase employability for a target group means to increase their capabilities for gaining and maintaining employment, thereby improving the probability of sustainable employment" (Knight & Yorke, 2002).

FINDINGS: EMPLOYMENT OUTCOMES

Employment includes the status of employment. For youth who are working, employment data captures type of employment, amount of days and hours spent working, and the perception of earnings and savings meeting needs and goals. For unemployed youth, the data captures job seeking behaviors and strategies.

Overall Results: Baseline results showed that there was no difference between treatment and control groups with an average of 44% of youth reporting that they were employed in the last six months. At endline, there are statistically significant differences between AK2 youth and the control group with 14% increase in employment for AK2 youth and only a 6% increase for the control group.

Figure 9: Employment for AK2 youth increased more

Employment for AK2 youth increased by 14% compared to 6% for the control group. The difference between the groups at endline is statistically significant at p<.05 level.



At endline, 11.5% of survey participants (n = 179) had already transitioned to the workforce and 88.5% were still in-school (n=1,380). This distinction is important to make when analyzing employment data since the in-school youth are less likely to be pursuing full-time work than those who have already graduated.

For in-school youth at endline (GSS and TSS students), there were statistically significant gains in employment for the treatment group and no significant gains for the control group. Almost 56% of in-school treatment youth reported being employed, which represents a 10.8% increase from baseline. This is compared to a 4% increase for in-school youth in the control group.

For students who had already graduated TVET at endline, there were significant gains in employment for the treatment and control groups. Treatment youth in TVET schools had significantly lower levels of employment at baseline than their control group counterparts, yet experienced a 40.3% gain in employment by endline to catch up and surpass the control group.

Figure 10: Employment from baseline to endline by group

Akazi Kanoze 2 youth outperform control group at endline

TVET out-of-school treatment group caught up and surpassed control group with 40.3% increase



Results by Gender: At baseline, there was a statistical difference in the employment status by gender for both the treatment and control groups. At endline, for in school youth, there was a statistically significant difference in the employment status between genders for both the treatment and control groups (p=.000).

In the graph below, the lack of increase in employment of the in-school females in the control group is striking. Starting over 20% behind their male counterparts, the control group females only increased by 1.8%. While no group of young women totally closed the gap with their male peers, **females in both treatment groups made greater progress than females in control groups.** Analysis show that there are statistically significant differences between the in-school female youth in the treatment and control groups (p<.01), with in-school treatment females gaining experiencing 11% increases in employment compared to in-school control females only gaining 1.8%.

Figure 11: Employment by gender for in-school study participants

In-school youth: Female control only increased by 1.8% compared to 11% for AK2 females There was a significant gender gap at baseline, but no significant gender gap at endline for AK2 youth.



For TVET graduates who were out of school there was not a statistical difference between genders for the treatment group at endline. This means that as a result of AK2, female TVET graduates were able to narrow the gap with their male peers. Despite starting over 20 percentage points behind male treatment group participants, female AK2 TVET participants gained 46.8% in employment to nearly catch up to male TVET graduates. This 46.8% gain was the largest seen in any group in the evaluation.

Figure 12: Employment by gender for TVET graduate study participants

TVET Graduates: AK2 females closed gender gap, and control females ended where their male peers began.

All females started significantly behind males and AK2 females gained 47% to catch up to males.



What recently graduated GSS females have to say about finding work:

Findings from GSS female students who reported being unemployed at endline

A sample of female GSS students who reported not working at endline were contacted by EDC staff a year after the endline to see if their employment outcomes were the same or had improved. A total of 5 treatment and 5 control GSS females were interviewed. The endline took place when they were still full-time students and the qualitative follow-up happened approximately 9 months after they had graduated school.

Treatment group females: Of the 5 treatment females interviewed, two had found employment, one was studying at university, and another planned to start university in the fall. One of the employed females was working at a shoe factory, which she had found through radio and TV advertisements. She originally paid a 124,000 RWF internship fee for a 6-month unpaid internship, but the employer began paying her after 4 months. This was her only job since graduation.

The other working youth was working at a men's clothing store, which she found through a connection from her sister.

Treatment youth voiced several challenges to finding a job, including it being difficult to find time while studying, competition searching for jobs, employers looking for more experience or bachelor's degree, and complicated online application processes.

Of the two working youth, both believed that their self-confidence helped them secure the job, and one specifically credited Akazi Kanoze with helping her gain confidence, manage her time, and work on a team.

<u>Control group females</u>: Of the 5 control females interviewed, none were employed, one was studying at university and one was planning to attend university in September. Several were asking friends and family for job opportunities, but were unsuccessful.

Control youth voiced similar challenges to finding a job, including lack of transportation money to search for a job, employers looking for more experience or bachelor's degree, a lack of jobs, and lack of money for transportation to apply to jobs.

Conclusion: Although the responses mentioned above are in no way representative of all female GSS students, they support the story found in the quantitative data. All the females interviewed were unemployed at endline while studying full-time, but despite similar challenges cited two AK2 females had since found work whereas the control females were still not working. It is not surprising that several of them were continuing onto further education after GSS since many GSS students have plans to attend university.

WORKING YOUTH

For the 862 youth who reported being employed at endline, the type of work, earnings, workload and satisfaction are important measures of employment quality. To better understand the quality of employment of working youth at baseline, working youth were asked a series of eleven questions to gain a better understanding of the employment situation of working youth.

Type of Work: There are some surprises in the change in type of work at endline.

- Self-employment: Interestingly, the number of youth overall who had their own businesses decreased. This drop in self-employment was statistically significant for both the treatment and control groups. The reduction in self-employment was true for both female and males in both groups. There were no statistically significant differences in the changes between sexes.
- Paid internships: For in-school youth, the increase in paid internships was higher than the increase in other types of work, which is not surprising since internships were one of the main school-to-work transition opportunities through the AK2 project. In-school treatment youth increased internships by 10.1% and control group by 6.8%, but the difference in these gains was not statistically significant.
- **Casual and permanent wage employment**: Out of school TVET graduates saw the most significant gains in casual and permanent employment. Treatment TVET graduates saw significant increase in casual emplyment with a gain of 12.7%. The control group had significant gains in permanent contracts compared with the treatment group. The reason behind these unexpected changes will need to be explored qualitatively. There were no statistically significant differences in the changes between genders.

Similar to baseline, analysis by geographic location (urban/rural) at endline showed statistical differences in the type of employment only in the treatment group. The treatment group showed

significant disparities at baseline, which continued to endline. For internal validity, this is an important difference between the treatment and control groups and is controlled for in the regressions. As seen in the graph below, still at endline rural youth have overall significantly lower rates of employment than urban youth.



Figure 13: Type of AK2 youth employment by rural (n=375) urban (n=487)

Earnings: At endline, there were significant differences in **level of earnings between the treatment and control groups** (p<.001). Over 81% of the treatment group said that their earnings had increased in the past six months compared with 71% of the control group.

Despite reporting increases in earnings, youth did not report an increase in their ability to meet families' basic needs.

Despite increases in income, AK2 and control group youth did not report an increase in the ability to provide for their

families at endline. At baseline about three-quarters of youth reported only being able to meet "a little" of their basic family/household needs. At endline, this stayed relatively stagnant for both control and treatment groups.

Overall gains and losses in the ability to meet youth's needs are similar by gender for both in school and TVET graduates. However, out of school males in the control group had a higher consistency to meet their needs through saving whereas out of school females in the control group were more consistently unable to meet their needs from baseline to endline.

Savings: There were significant differences in frequency of savings between the treatment and control groups (p<.025). The control group saw very tiny changes in frequency of savings, which are not significant. The treatment group's changes were stastically significant, showing a small but significant increase in frequency of savings as a result of AK2.

Figure 14: Savings by Group

Akazi Kanoze 2 youth save more frequently.

AK2 youth increased their frequency of saving from baseline to endline more than the control group (p<.025)



Working Conditions: Youth were asked whether they like their work situation and if they felt emotionally and physically safe at their job. A feeling of satisfaction was nearly consistent from the baseline with nearly three-quarters of youth stating that they "liked their work a lot."

Concerning security at work, while, two-thirds of in-school youth stated that they felt "very safe" from baseline to endline, only 50 percent of TVET graduates stated that they felt "very safe" at endline compared to the two third at baseline. The change in feeling of safety was not statistically significant from baseline to endline for in-school youth, but it was for TVET graduates (p<.025).

From baseline to endline, **TVET females that participated in AK2 gained 46.8% in employment** – the largest gain seen in any group in the evaluation. Yet **this same group of young women reported significant declines in feelings of safety at work** – while 68.4% reported feeling very safe at work at baseline, only 43.5% reported the same at endline – nearly a 25 percentage point decrease. TVET females in the control group

Working treatment females' feeling of safety decreased significantly from 68% to 43% at endline.

also experienced decreased feelings of safety in the workplace – the percentage of those who felt very safe at work decreased from 66.7% at baseline to 60% at endline. These results were futher explored in the qualitative follow-up summarized below.

What Young Women have to Say about Feeling Unsafe at Work

Findings from female RCT participants who reported feeling unsafe at work at endline.

In order to discern what safety issues young women face when they enter the workforce, and address these in future project design, interviews were conducted with a sample of 8 TVET females that reported feeling 'very unsafe' or 'a little unsafe' in their job at endline.

The majority of females surveyed reported having held multiple jobs, and all surveyed females had been self-employed at least once.

The women faced several safety challenges and discrimination when looking for work:

- 2 of the 8 females interviewed had been asked for sex in exchange for a job offer; 1 of the 2 had been asked 3 separate times by different employers. A third noted that this behavior was widespread, which made it difficult to look for jobs, especially in the hotel industry.
- 1 woman was unable to find a job in the field she studied welding and carpentry because most employers told her it was a man's job, and required more energy than women could offer. This forced her to take a job cultivating and selling vegetables, which is frustrating as she wanted to be doing something she studied.
- Many women must travel long distances in order to apply for jobs, which is difficult when they do not have much money and have children to care for at home.
- Because young women often do not have collateral in the form of land or other property to offer when they apply for loans, it is difficult for them to be approved for loans.

Other safety challenges arose while in the workplace:

- 1 woman noted that *while waitressing, clients often touched her inappropriately*, and, though she didn't want them to touch her, she wanted the tips. She addressed this by telling clients she could get fired, asking for their phone numbers, and telling them she would call after work, which usually stopped the inappropriate touching.
- 1 woman worked in a café and *was asked repeatedly by her employer for sex in exchange for a raise*. At one point, her employer tried to rape her, but she was able to escape and quit her job.
- 1 woman previously sold beer, and felt unsafe when people would drink it in her shop, as they would get drunk and occasionally fight.
- 1 woman was unable to afford rent, so sold food out of her house, illegally averting paying taxes, which made her feel unsafe.
- The majority of women noted that low salaries, inconsistent work, and long working hours made them feel insecure.
- One woman noted that it is difficult to concentrate at work when you don't feel safe.

None of the women interviewed had worked in places or heard of workplaces with policies to protect women employees against discrimination or violence. Several had heard about campaigns at the sector level, which encouraged young women to report violence to the police.

When asked about jobs that are safer, two women believed that working in a bank was one of the safest jobs for females, since there is a security guard which makes it difficult for men to harass women. One female responded that jobs that people view as "specifically designed for women," like sewing, are safest, while another believed that any job that allows women to stay close to home, and close to young children, is the safest. Another respondent believed that entrepreneurship, in which women do not have to rely on anyone else, is a safe career path.

AK2 CASE STUDY: OLIVIER



Olivier, a 2015 AK2 graduate is a great example of what students have achieved through the school to work transition program – a workbased learning exposure program that allows students to gain practical work and entrepreneurship skills and experience in a sector they are interested in.

Oliver has a unique passion and talent for knitting and beading. He runs a small business out of a peri-urban area near the capitol city Kigali in which he makes a variety of

handicraft products like bags, jewelry, sweaters that he sells across Rwanda. He has become so successful that he now travels across East Africa, even as far as Ethiopia, in order to source more raw materials for his products.

Olivier attributes his entrepreneurial success to the skills he learned in the AK2 training he participated in during his secondary school studies. The work based learning experience, in particular, left a big impact on him. He interned with a beading and knitting entrepreneur, with whom he quickly realized his passion and talent for creative design and handicrafts. His mentor was so impressed by Olivier's dedication that at the end of his internship, she gave him a knitting machine worth 400,000 RWF (roughly \$480) as a form of capital for him to start his own business.

And that is exactly what Olivier has done. In just two years, Olivier has managed to buy three more knitting machines and grow his business. As his business and income grow, he wants to give back to his community. He has opened up a training center where he currently teaches 24 women and girls handicraft skills with the goal of helping them form a cooperative, so that they can earn a sustainable income. With his own income, he has also been able to support two secondary school students by paying their school fees.

"The skills I acquired through the Akazi Kanoze 2 program including personal development and financial fitness among others, gave me the right attitude to navigate towards a successful future...and I can say that I succeeded."

Olivier's momentum is only increasing. He was recently featured on a prominent Rwandan Radio Show 'Akazi ni Kazi' which discusses different issues related to youth working in Rwanda. After hearing his story, hundreds of young people around the country began calling him, asking for his advice on how they could also turn their passions into a sustainable income. He organized a large meeting with a number of these interested youth and encouraged them to also open their eyes to self-employment opportunities around them. Olivier is an inspiration and testament to what is possible when youth are exposed to work based learning opportunity.

NON-WORKING YOUTH

Overall Results: Overall, there was a statistically significant difference between treatment and control groups in the percentage of non-working youth who were actively seeking work (p<.001) with more treatment youth currently searching. At endline, only a third (31.2%) of in-school youth are actively seeking work as opposed to 94% of the out-of-school TVET graduates. The amount of out-of-school youth at endline not looking for work was too small to analyze with only 3 TVET graduates citing not looking for work. This is not surprising since this group was in-school at the time of baseline and had transitioned to the workforce at endline, increasing the need and desire to pursue work. The graphs below outline the patterns in job-seeking behaviors of in-school youth:



Figure 15: Percent of Non-Working in-school Youth that are Job Seeking

Job Seeking Activities: The 697 youth sampled (that were currently not working,) were asked to respond to several questions on their job-seeking strategies – actions taken towards obtaining a job, internship, or self-employment.

Due to the majority of in-school youth reporting doing "nothing" to find a job, the overall average is low for job seeking activities. The majority of non-working youth overall (64.3%) at endline said that they were not looking for work, but this average is pulled down by in-school youth.

Only 16% of non-working TVET graduates said that they were not seeking work. 50% of non-working TVET graduates reported applying for jobs, 18% reported developing business plans, 8% reported interviewing for a job, and 4% reported attending job fair events. Since the in-school youth were not as actively seeking jobs at endline, the behavior of the TVET graduates is a better indication of the job seeking tendencies of youth. It appears that we can expect to see the level of job seeking activities increase once all of the in-school youth graduate.

Only 36% of unemployed inschool youth were doing activities to find work as opposed to over 84% of youth already in the workforce. Overall, higher levels of female students than male said that they were doing nothing to find work. Interestingly, out-ofschool AK2 females are more aggresively applying for jobs with 50% applying for jobs compared to 40% of their male peers. This does not seem to translate to job interviews for young women though, with 30% of males and only 4.2% of females interviewing for jobs.

Female graduates are more actively applying for jobs, but are interviewing less than their male peers.

Figure 16: TVET graduates job seeking activities

More AK2 females are applying for jobs, but applications are not translating into interviews.

Only 4% of AK2 females reported **interviewing for a job** compared to 31% of their male peers.



IMPACT OF AKAZI KANOZE 2 ON EMPLOYMENT

Due to the random selection of the sample, the significant employment difference can be attributed to the AK2 interventions:

- At the endline, statistically significantly more AK2 youth were employed than the control group;
- More AK2 young women were employed at the time of the endline than control group young women.

Overall Employment: In order to isolate the AK2 intervention and measure its direct impact on employment, multivariate regression analysis was used. The analysis explored the strength of the relationship between AK2 and employment outcomes and demonstrates which other variables may also explain who is employed and who is unemployed:

- The regression findings (Annex 1) show that AK2 youth were 7.6% more likely to be employed at endline than control youth (p < .01)⁶. The dependent variable is employment, defined as any type of work for renumeration that the youth reported at endline. This regression controlled for the following variables: age, gender, urban vs. rural, school type, and province.
- Analysis of employment gains shows that **AK2 youth were 5.8% more likely to have gained employment from baseline to endline than control youth** (p<.01). This regression controlled for the following variables: age, gender, urban vs. rural, school type, and province.

Employment by gender: Overall, females in the treatment and control groups were 18.1% less likely to be employed than males at endline (p<.01). **Treatment females, however, were 15.3% less likely to be employed than treatment males at endline, while control females were 23% less likely to be employed than control males at endline (p<.01).** This 8 percentage point difference is evidence that Akazi Kanoze 2 is helping young women narrow the gender gap in employment outcomes. There is no statistically significant difference between treatment or control males and females in employment gains from baseline to endline.

Treatment females are 12.2% more likely to be employed after completing AK2 than young women who do not go through the program.

When analyzing female employment outcomes between treatment and control groups, the regressions show that **treatment females were 12.2% more likely to be employed at endline than control females** (p<.01) and 9.4% more likely to have gained employment from baseline to endline than control females (p<.01).

Employment by school type: Overall, TVET youth in the treatment and control groups were 10.5% more likely to be employed at endline than GSS students, and 15.3% more likely to have

If youth go through AK2, their chances of being employed increase by 7.6%.

⁶ See regression models in Annex. Controlling for age, gender, urban/rural, school type, and province type

gained employment (p<.01). This is unsurprising since these youth graduated between baseline and endline, and many entered the workforce.

Employment by geography: Overall, youth in the treatment and control groups in the Southern Province were 8.5% more likely to be employed at endline (p<.05), and 9% more likely to have gained employment from baseline to endline (p<.01) than youth in Kigali. **Treatment youth in Kigali were 24.2% more likely to be employed at endline, and 16.9% more likely to have gained employment from baseline to at endline, than control youth in Kigali (p<.01).** Treatment youth in the Southern Province, in contrast, showed no statistically significant difference in likelihood of employment at endline than control youth in the Southern Province, though they were 4.3% more likely to have gained employment from baseline to endline to endline than control youth (p<.1). The reason behind this discrepancy will need to be explored qualitatively.

AK2 CASE STUDY: THEOPISTA



Theopista is a third-year vocational student at VTC Centre des Metiers Assomption Kabuye (CMAK) studying culinary arts. She recently completed a two-month internship at the Saint Paul Hotel and Restaurant in Kigali.

Theopista studied work readiness as part of her core modules and her internship was the culmination of her work-based learning experience.

She began her work based learning experience by doing 1-day observations at different restaurants prior to the internship. Through the observations, she was exposed to different techniques and tools, and increased her motivation to search for internships. The first employer she approached to do an observation denied her, saying they didn't have enough time, but she persevered and found another workplace where she did a day-long observation and employer interview.

After this exposure, she searched for different potential internship locations, until she secured one at Saint Paul in Kigali city center. Theopista noted that she felt comfortable approaching the employer because she had learned how to do so through the work-based learning approach and she knew he had taken on interns in the past.

Theopista noted that she really enjoyed her internship. She was learning valuable new skills from experienced chefs and was being exposed to new equipment (washing machines, pastry makers, etc.) that she had never seen at school. She particularly found that the skills she had learned through work readiness helped her feel confident working, talking with customers, and being a team-player. Moreover, she was confident the skills she was learning at the internship would help her get a job or start her own restaurant.

"After practicing talking to employers in the work-based learning modules of Akazi Kanoze, I felt comfortable approaching employers for observations and internships." As she will soon be graduating, Theopista is hopeful that her internship experience will aid her in finding formal work. The employer she worked for has hired other (non-Akazi Kanoze) interns in the past so she sees some potential there. She will also continue reaching out to other employers using the confidence and networking skills she gained through AK2.

CONCLUSION

Even after controlling for several factors including age, gender, urban vs. rural, school type, and province, **AK2 had a significant impact on employment outcomes, with treatment youth 7.6% more likely to be employed at endline than control youth**. Controlling for these same factors also shows that youth who went through AK2 were 5.8% more likely to gain employment from baseline to endline.

Moreover, while females still lag behind their male counterparts in terms of employment outcomes, the gap in employment outcomes between treatment females and males was much smaller than the gap in employment outcomes between control females and males. **TVET treatment females in particular experienced a remarkable 46.8% gain in employment – and though their average baseline employment levels were over 20% lower than their male peers, that gap narrowed to just 7% by endline.** It's important to note that this same group of females also reported feeling significantly less safe at work. While increasing the number of women in the workforce – especially in male-dominated sectors – is an important achievement, it is crucial that mechanisms to ensure their safety are developed and prioritized.

Geography was also a significant predictor of employment outcomes at endline, and youth in both the treatment and control groups in the Southern Province were 8.5% more likely to be employed at endline than youth in Kigali. **AK2 had a much stronger influence on employment outcomes for youth in Kigali than youth in the Southern Province** – treatment youth in Kigali were 24.2% more likely to be employed at endline than control youth, while there was no statistically significant difference in employment outcomes for treatment and control youth in the Southern Province. Qualitative research will be conducted to assess what contributed to these differences.

FINDINGS: SOFT SKILLS

Overall Results: Baseline results showed that the Rwandan survey participants in general scored themselves higher than youth in other African countries. **Despite baseline scores being high, there were statistically significant increases in soft skills for the AK2 youth (p < .025).** Scores for AK2 youth for all five factors increased with conscientiousness and openness seeing the biggest increases. The control group saw insignificant gains or losses at endline.

At baseline AK2 youth's biggest strengths were conscientiousness (hard-working, determination) and agreeableness (cooperation, forgiveness), and their weakness were emotional stability (calmness, self-confidence) and extraversion (assertiveness, boldness). At endline, this pattern stayed the same with conscientiousness scores still being the highest at 4.60 on a 5-point scale and emotional stability scores still being the lowest at 3.84.



Figure 17: Differences in average personality factor scores baseline/endline by group

* statistically significant at p<.025 level

** statistically significant at p<.01 level

*** statistically significant at p<.001 level

Analysis by Gender: At baseline, there were significant differences between males and females in both groups in conscientiousness, emotional stability, openness, and extraversion. Only on agreeableness did male and females score themselves similarly. For treatment youth at endline, male and female AK2 youth scored themselves significantly different on agreeableness, openness, extraversion and emotional stability (p < .05). For control youth at endline, male and female youth scored themselves significantly different on conscientiousness, openness, and emotional stability (p < .05). For both groups the largest endline differences by gender were on openness and emotional stability. Openness is ranked internationally and by Rwandan educators and youth as being the most important factor in a school environment due to its influence on openness to new ideas and

learning⁷. Emotional Stability, on the other hand, is ranked by Rwandan youth and employers as being one of the most important soft skills for the workplace.

Figure 18: Differences in soft skills by gender and group



AK2 Youth closed the gender gap only on conscientiousness

At endline there is still a difference in soft skills between male and female students across both groups.

* statistically significant at p<.05 level

** statistically significant at p<.01 level

*** statistically significant at p<.001 level

Gain scores analyzed by sex show that there were no significant differences between control males and females, but that there were statistically significant differences between AK2 males and females on conscientiousness, agreeableness and emotional stability (at the p < .05 level). For conscientiousness, treatment males gained only 0.07 points and females gained 0.14 (difference significant at p < .05 level). For agreeableness, the difference was even greater since treatment males decreased by -0.02 and females gained by 0.08 (difference significant at p < .001 level). For emotional stability, males did not increase from baseline, but females increased by 0.93 (difference significant at the p < .025 level). The difference in gain scores within the treatment group is a positive sign given that females started significantly behind their male peers at baseline. Additionally, since there were no significant differences by sex in the control group, this shows that the difference in gain scores in the treatment group was due to the AK2 interventions.

⁷ Pagel, R., Olaru, G., Alcid, A., Beauvy-Sany, M. (2017). *Identifying Cross-Cutting Non-Cognitive Skills for Positive Youth Development: Final Report.* Youth Power Learning. Education Development Center: Washington, DC

Figure 19: Changes in soft skills by gender for AK2 students

AK2 female participants made more significant gains in 3 soft skills

AK2 females did not completely close the gender gap, but managed to surpass or fall even with male peers on conscientiousness and agreeableness

Significant at p<.05 level AgreeablenessSignificant at p<.001 level Agreeableness Significant at p<.001 level Agreeablenes

It does appear that AK2 partially closed the gender gap on soft skills, as AK2 young women made larger strides in soft skills than control group women. At baseline, there were no differences between treatment and control group young women. At endline there are statistically significant differences between young women in the two groups, especially on conscientiousness and agreeableness (p < .025). For emotional stability, openness and extraversion there is a statistically significant difference at the p < .10 level, weaker than for the other two factors. While there are still differences between treatment females and males at endline, it is a good sign that participation in AK2 resulted in higher gain scores for young women.

CONCLUSION

Despite high baseline scores, there were statistically significant increases in soft skills for the AK2 youth. The youth's pattern of strengths and weaknesses stayed the same at endline with conscientiousness being the highest and emotional stability being the lowest.

Gain scores on the BFI showed that there were differences between genders. For the treatment group, there were statistically significant differences between AK2 males and females on conscientiousness, agreeableness and emotional stability. Since there were no significant differences by sex in the control group, this shows that the difference in gain scores for AK2 youth was due to the AK2 intervention.

Extensive research in Rwanda on the big five soft skills found that Rwandan female youth are further behind employer and educator ideal soft skill levels than males⁸. Employers and educators were asked to rate the soft skills of their "ideal employee" or "ideal student" and youth were asked the same. While female and male youth rated themselves largely the same, there were differences by gender between the size of the gap between self-ratings and employer and educator ideals. Young women's self-ratings were significantly lower than the "ideal" than male self-ratings. This was especially true with emotional stability and extraversion. This supports the finding in this study that there are gender differences in BFI

Why Emotional Stability is Important in the Workplace

Emotional stability involves a person's ability to remain calm and stable. A person who is low in emotional stability tends to be moody, depressed, and susceptible to stress. In the workplace, an employee with low emotional stability may tend to be distracted from work by stress, family problems, or deadlines. An employee with high levels of this trait are better able to control their emotions and feelings on the job.

scores in Rwanda and shows that young women have to catch up to the "ideal" in order to be competitive with their male peers. Additionally, more so than in other countries, youth in Rwanda scored the ideal in emotional stability much higher than they rated themselves. This shows a more widespread trend in low emotional stability amongst Rwandan youth.

⁸ Pagel, R., Olaru, G., Alcid, A., Beauvy-Sany, M. (2017). *Identifying Cross-Cutting Non-Cognitive Skills for Positive Youth Development: Final Report.* Youth Power Learning. Education Development Center: Washington, DC

CONCLUSION

This randomized evaluation provides detailed analysis of the impact of the AK2 project on work readiness, employment and soft skills of Rwandan youth in Kigali and Southern Province. The results of this evaluation contribute to the body of research on transferable skills programming and provides insight on what is working and possible areas for further consideration.

The results demonstrate that AK2 youth (the treatment group) had higher employment outcomes at endline, and strong increases in work readiness knowledge, skills development, and the Big Five personality traits.

Employability: Overall, the evaluation demonstrates that AK2 youth have higher work readiness knowledge, skills and confidence at endline than the control group.

- Work Readiness Assessment—AK2 youth overall experienced larger increases in their scores for all 8 work readiness concepts tested than the control group. Although AK2 young women increased their scores more than the control group females, they still lagged behind in general on overall scores. This suggests the need to offer additional support to young females to help them keep up in the classroom.
- Work Readiness Skills—Youth in the treatment group had statistically significant positive gains in the following work readiness areas:
 - Understanding business plan development;
 - Ability to set goals;
 - Ability to communicate effectively with a variety of people;
 - Ability to solve conflict peacefully in school or at the workplace;
 - Ability to demonstrate leadership in their community.
- **Confidence**—AK2 youth reported significantly higher levels of confidence at endline than the control group. The treatment group saw larger gains in confidence in the following areas:
 - Confidence in knowing how to apply for a job;
 - Confidence in knowing how to improve their work position or condition;
 - Confidence in knowing how to start and run a business.

Employment: Overall, the evaluation demonstrates two key findings on AK2's impact on employment:

- 1. AK2 youth are more likely to be employed after completion than a young person who does not participate in the program;
- 2. Females who participate in AK2 are more likely to be employed after completion than a young female who does not participate in the program.

At endline, AK2 youth reported earning significantly more than control group youth. Despite increases in income, AK2 and control group youth did not report an increase in the ability to provide for their families at endline. There were significant differences in reported frequency of savings between the treatment and control groups.

One of the most surprising results of the evaluation is the 46.8% increase in employment for female TVET graduates. At baseline, they were significantly behind TVET males and all GSS students.

Extraordinarily, as a result of AK2 they had nearly caught up to their male peers at endline. This should be celebrated as a success and points to the project closing the gender divide for TVET graduates. Although the increases for in-school females was not as significant as TVET females, the control group of in-school females did not increase at all from baseline to endline, which again shows that AK2 programming is beneficial for helping in-school and out-of-school young women find and continue work.

The multivariate analysis shows that there is a strong relationship between participating in AK2 and employment. Youth who completed AK2 are more likely to be employed after completion and are more likely to gain employment than a young person who does not participate. The regressions showed that there is still a significant employment gap between male and female youth, which AK2 did not completely close. Although AK2 young women are more likely to be employed than control group young women, young women did not achieve the same employment levels at endline as their male peers. This is an area that deserves closer consideration with future programming.

Soft Skills: Because the baseline scores were so high, it was unexpected to find any statistically significant differences at endline. **Gain scores on the BFI showed that there were significant increases in soft skills for the AK2 youth compared to the control group.** Conscientiousness, which is considered a vital soft skill for success in school and the workplace, continued to have the highest score, while emotional stability was scored the lowest.

There were differences in soft skills by gender only in the treatment group. For conscientiousness, agreeableness, and emotional stability AK2 young women's scores rose more than their male peers. Since there were no significant differences in gain scores for the control group, this result shows that the positive increase for females was due to the AK2 intervention.

Overall: The findings demonstrate that AK2 had a positive impact on the transferable skills and employment outcomes of youth participants. The endline occurred when General Secondary School students were still in school and only TVET students had fully transitioned to the workforce. Longitudinal research would be helpful to see employment outcomes when all of the sample had transitioned to higher education or work.

AK2 is the first of its kind to scale-up a transferable skills national curriculum and is in the vanguard of secondary school education quality and applicability reform. The need for conclusive evidence to define project strengths and weaknesses was clear, hence school selection was designed around the randomized evaluation to make it possible. The positive outcomes from this evaluation validate the observed changes in the AK2 youth, yet it also shows ways in which those who attempt to implement similar transferable skills projects can increase their targeted impact in the future.

ANNEXES

ANNEX 1: DETAILED EVALUATION METHODOLOGY

EVALUATION PURPOSE

From the design stage, the Akazi Kanoze 2 team was planning an impact evaluation that would generate opportunities for learning. The impact evaluation not only informs data-driven decision-making, but will also demonstrate the project's accomplishments and lessons learned. The evaluation seeks to answer research questions regarding increases in employability and new or improved livelihoods as a result of the AK2 project.

The randomized controlled trial (RCT) examines the following impact evaluation questions:

IMPACT EVALUATION QUESTIONS

- 1. Do youth participants demonstrate improved work readiness skills (soft and hard skills) as a result of project activities?
- Do youth participants demonstrate improved or new livelihoods as a result of project activities? (Improved livelihoods is defined as increased employment/income generation and/or the improvement of employment quality e.g., kind of income, stability, working conditions)

METHODOLOGY

Evaluation Design: The design is experimental with randomly assigned treatment and control (counterfactual) groups. The RCT treatment and control group cohorts were assessed longitudinally at baseline and endline. The baseline was conducted in February-March, 2015 before the treatment group started the work readiness training. The endline was conducted in September 2016, about 12 months after students had completed the work readiness curriculum and about 9 months after their STWT opportunities.

Sampling: The sampling frame of the study is all general secondary (GSS), technical secondary (TSS), and technical vocational education and training (TVET) schools in Southern Province and Kigali. The TVET schools where Akazi Kanoze was implemented under the USAID-funded project were excluded. The sampling unit is schools. Schools were randomly assigned to the treatment or control groups using a clustered approach. At baseline 97 schools were included in the sample—62 treatment and 35 control schools (2,105 youth—1,360 in the treatment group and 755 in the control group). At endline only 88 schools—53 treatment schools, 30 control schools and 5 schools with equivalent control and treatment groups (1,559 youth—1,001 in the treatment group and 558 in the control group) are used in this final longitudinal (matched pairs) analysis. This is due to concerns with the data quality for 9 schools, which will be discussed in the Limitations section below. The unit of analysis is individual youth. At each school, a secondary sampling unit was selected. A total of 22 youth was randomly selected to participate in the study from each randomly assigned school.



Data Collection Tools

- 4. Employability Assessment—This 35 item test is based on the Work Readiness Curriculum content.
- 5. **Big Five Inventory** This 44 question diagnostic on the big five personality traits measures noncognitive skills.
- Youth Employment Survey—This EDC designed survey measures new or improved employment and employability.

Independent T-Test: effect size= 0.19, alpha=0.025, beta= 0.90, 25% attrition							
	Intervention Group		Control Group				
	Per School	Number of Schools (clusters)	Sub-Total	Per School	Number of Schools (clusters)	Sub-Total	Total Youth Surveyed
Baseline Survey	22	65	1,430	22	35	770	2,200

Data Analysis: Data were analyzed using Statistical Package for Social Sciences (SPSS) utilizing standard statistical methods. Data were disaggregated by sex, district, and by treatment versus control status of the participants. Central tendency analysis (e.g. mean, median) were conducted for continuous demographic variables. Comparison of means statistical tests were conducted to examine differences at baseline between treatment and comparison groups. Comparison of means statistical tests were conducted on the results of change between pretests/surveys and posttests/surveys (independent samples t-test, paired-sampled t-test) and disaggregated by county and sex, where appropriate. Bivariate statistical analyses (e.g., correlations) were conducted to examine the relationship between different variables. Multivariate analyses (e.g., regression) were used to determine relationships between variables. For comparison purposes, the analysis focused on the 1,559 matched cases from baseline to endline.

Limitations: Ensuring fidelity in the randomized selection for the final longitudinal data collection was a challenge for data quality. For a few schools in the treatment group, the youth that participated in baseline were not the same youth that received the treatment. Since using the endline data of a treatment school of youth who were not trained would have compromised the

endline results, these schools were omitted. Additionally, as a few control schools from the baseline began to implement some components of the curriculum, they were also omitted to preserve data validity. Within the control group, two school were omitted from this analysis as these participants were previously treated under the preceding USAID-funded AK project.

ANNEX 2: DETAILED BASELINE ANALYSIS

EMPLOYABILITY AT BASELINE

The Employability Assessment measures youth's knowledge of eight key work readiness areas that are covered in the Work Readiness Curriculum (WRC) that students in the treatment group were trained in. The assessment gauges youth's foundational skills and knowledge in the following topics:

- Personal Development
- Interpersonal Communication
- Work Habits and Conduct
- Leadership

- Safety and Health at Work
- Rights and Responsibilities of Workers and Employers
- Financial Fitness
- Introduction to Entrepreneurship

At baseline both the treatment and control groups demonstrated high levels of work readiness knowledge. Overall, on average, youth were able to answer 65.9% of the questions on the work readiness employability assessment correctly at baseline. As seen in the figures below, for both the treatment group and control group, the majority of students answered between 61-80% of questions correctly, which demonstrates a high level of knowledge of work readiness concepts and skills at baseline.



Figure 3: Distribution of Work Readiness Employability Assessment Scores by Group (n=2106)

When compared by sex, males were able to answer more questions correctly on the employability assessment than girls at baseline with males answering on average 67.2% of questions correctly and females answering 64.8% of questions correctly. This difference was significant at the p<.001 level. This trend was consistent in both the treatment and control groups.

Interestingly, results also showed that youth in TVETs performed significantly worse (p<.001) than GSS or TSS students on the employability assessment at baseline with TVET youth on average answering 60.0% of questions correctly. Comparisons of average results by school type showed that youth in GSS and TSS performed similarly on the assessment with youth answering on average roughly 67% of questions correctly.

EMPLOYMENT AT BASELINE

The Youth Employment Survey (YES) gathers information on youth employment and work readiness. To assess youth's employment status as well as their employability, the YES inquires after the following information:

Demographics	Employment	Work Readiness
• Sex • Age	 Employment Status Type of Employment Hours and Days Spent Working 	 Confidence in Job Search Skills Confidence in Key Soft Skills Confidence in Technical Skills
• School Type	 Earnings and Savings Information 	 Confidence in Entrepreneurial Skills

At baseline, 44.0% of youth overall reported that they were employed in the last six months. Within the treatment group, 44.4% of youth indicated they were employed, and 43.2% of the control group indicated so. This difference between treatment and control groups was not statistically significant.

Figure 4: Employment Status of Youth Respondents (n=2,105)



Analysis by sex showed significant (p<.001) differences in employment status between females and males. Overall, of the total respondents, more males were currently employed at baseline. In fact, more than half (55.8%) of male respondents reported that they were employed, compared to only a third (34.3%) of females.

Students in TVET schools had significantly lower work experience than youth in GSS or TSS at baseline. About 46% of students in GSS, 44.5% of TSS students, and only 36.8% of TVET reported working in the past six months. When analyzed by geographic location, employment levels of youth were consistent across both rural and urban areas.

At baseline, the majority (60.7%) of working youth were engaged in casual/temporary labor. Nearly a quarter (23.0%) of working youth reported that they have their own business. A relatively small percent of working youth had permanent contracts (6.8%) or an internship/apprenticeship (9.5%). The type of work youth engage in was consistent for both treatment and control groups.

CONFIDENCE AT BASELINE

At baseline, youth were also asked about confidence in their ability to obtain work and succeed. Youth were asked to respond to three questions using the following scale: *not confident at all, hardly* *confident, somewhat confident,* and *very confident.* Results were consistent across the treatment and control groups. Overall, the majority of youth reported that they felt confident in their skills to get the job that they want, improve their position at work and to start and grow a successful business of their own. Figure 5 below shows the distribution of results. As seen below more than a third of youth respondents reported that they felt very confident in their skills to improve their position at work and to start and grow their own business. Nearly half of respondents felt that they were somewhat confident in all three skills. Less than 10% of all youth respondents reported that they had no confidence at all in these key skills.



Figure 5: Youth Confidence in Skills Needed to Find Work and Succeed (n=2105)

When analyzed by sex, males were slightly more confident than females in these three key skills; the differences were statistically significant at the p<.05 level. There were not significant differences in confidence level when disaggregated by rural/urban or school type.

SOFT SKILLS AT BASELINE

The Big Five Inventory (BFI) measures the five broadest dimensions of personality in an organizing framework that has emerged to guide research on soft skills. The Big Five framework includes the following broad personality factors:⁹

- **Conscientiousness** (work ethic, detail focused, dependable/responsible, industrious, achievement orientated, grit, time management)
- Agreeableness (teamwork, cooperative, trusting, humility, sympathetic, altruistic collaborative, kind)
- Emotional Stability (resilient, stress tolerant, calm and relaxed, self-controlled, restrained)
- **Openness** (intellectual curiosity including both one's propensity to adopt analytical and divergent thinking strategies, innovation, creativity, reflective, aesthetics, culture)
- **Extraversion** (social boldness, talkative, assertive, energetic, socially dominant)

⁹ Sackett, P. R., & Walmsley, P. T. (2014). Which personality attributes are most important in the workplace? *Perspectives on Psychological Science*, 9, 538-551.

The BFI consists of 44 simple statements that the respondent agrees or disagrees to using a fivepoint Likert scale.¹⁰ The tool has been translated into 28 languages and scores higher in reliability than other similar assessments.¹¹

On the five-point scale, students in both the treatment and control groups scored themselves between a 3.78 on emotional stability and 4.46 on conscientiousness with one (1) being the lowest score and five (5) being the highest score. Since the BFI is a diagnostic without a set benchmark, the AK2 averages were compared to the overall averages from Schmitt et al.'s data collection in seven African nations¹²:



Figure 6: AK2 averages versus Africa regional averages

At baseline, there were no statistically significant differences between the treatment and control groups in any of the five personality factors. This means that the AK2 youth's biggest strengths at baseline were conscientiousness (hard-working, determined) and agreeableness (cooperative, forgiving), and their weakness were emotional stability (calmness, self-confidence) and extraversion (assertiveness, boldness).

While there were no differences between the treatment and control group youth, when disaggregated by sex, there were statistically significant differences between males and females in both groups. For both groups, there were statistically significant differences between male and female participants in conscientiousness, emotional stability, openness, and extraversion (at the p < .001 or p < .01 level). Males scored themselves higher than females in all factors. The only personality factor for which there was no statistically significant difference was agreeableness, on which boys and girls scored themselves relatively the same.

¹⁰ John, O. P., Donahue, E. M., & Kentle, R. L. (1991). The Big Five Inventory--Versions 4a and 54. Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.

¹¹ Gosling, S., Rentfrow, R., Swann Jr., W.B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, 37, 504-528.

¹² Schmitt, D., Allik., J., McCrae, R., Benet-Martinez, V., (2007). The Geographic Distribution of Big Five Personality Traits: Patterns and Profiles of Human Self-Description Across 56 Nations. *Journal of Cross-Cultural Psychology*, 173-211.

ANNEX 3: REGRESSIONS

Employment Regressions

ression Model 1: Imp loyment at endline	oact of AK2 on	Regression Model 2: Imp employment gains	bact of AK2 on
VARIABLES	y1	VARIABLES	y1
treatment	0.0756***	treatment	0.0575***
	(0.0255)		(0.0219)
age	0.00485	age	-0.000655
	(0.00577)		(0.00473)
female	-0.181***	female	0.0186
	(0.0235)		(0.0208)
urban	0.0497	urban	0.0241
	(0.0309)		(0.0252)
TVET	0.105***	TVET	0.153***
	(0.0331)		(0.0252)
Southern	0.0847**	Southern	0.0898***
	(0.0376)		(0.0317)
Observations	1,559	Observations	1,559

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Regress employ	ion Model 3: Impact ment, by urban/rura	of AK2 on I	Regression Model 4: In employment, by provir	npact of AK2 on nce
	VARIABLES	y1	VARIABLES	y1
	treat_kigali	0.242*** (0.0519)	treat_southern	0.0371 (0.0293)
	Observations	326	Observations	1,233
Regress employ control	ion Model 5: Impact ment gains between females	of AK2 on treatment and	Regression Model 6: In employment outcomes control females	npact of AK2 on endline between treatment and
V	ARIABLES	y1	VARIABLES	y1
tre	eat_females	0.0941*** (0.0311)	treat_females	0.122*** (0.0354)
Oł	oservations	835	Observations	835

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Regression Model 7: Impact of AK2 on endline employment outcomes between treatment and females and males Regression Model 8: Impact of AK2 on endline employment outcomes between control and females and males

VARIABLES	y1	VARIABLES	y1
T_female	-0.153***	C_female	-0.230***

			(0.0374)
	(0.0299)	Observations	558
Observations	1,001		

Work Readiness Regressions

Regression Model 9: Impact of the skills to develop a business plan on endline employment outcomes

Regression Model 10: Impact of the ability to set personal goals on endline employment outcomes

VARIABLES	y1	VARIABLES	y1
e_know_busplan	0.170***	e_set_goals	0.154***
	(0.0260)		(0.0313)
Observations	1,559	Observations	1,559

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Regression Model 11: Impact of the ability to communicate effectively on endline employment outcomes		Regression Model 12: Impact of the confidence in one's ability to find work on endline employment outcomes	
VARIABLES	y1	VARIABLES	y1
e_know_communicate	0.118***	e_know_find_job	0.126***
	(0.0335)		(0.0252)
Observations	1,559	Observations	1,559
Regression Model 13: Impact of the confidence in one's ability to improve work position on endline employment outcomes		Regression Model 14: Impa in one's ability to start and endline employment outcom	ct of the confidence run a business on mes

VARIABLES	y1	VARIABLES	y1
confidence_improve_work	0.178***	e_confidence_start_bus	0.117***
	(0.0333)		(0.0384)
Observations	1,559	Observations	1,559

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1