GLOBAL PARTNERSHIP
FOR YOUTH EMPLOYMENT

TESTING WHAT WORKS in YOUTH EMPLOYMENT: Evaluating Kenya's *Ninaweza* Program

VOLUME 1: A Summative Report

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international youth foundation

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ABOUT GPYE

With support from the World Bank Development Grant Facility, in 2008 the International Youth Foundation, the Youth Employment Network, the Arab Urban Development Institute, and the Understanding Children's Work Project joined together to form the **Global Partnership for Youth Employment (GPYE)**. Its goal: to build and disseminate evidence on youth employment outcomes and effective programs to help address the challenges facing young people in their transition to work. The GPYE leverages the technical and regional experience of its five partner organizations in youth employment research, programming, evaluation, and policy dialogue. The partnership's work focuses on Africa and the Middle East, regions in need of better evidence on effective approaches to youth employment. This report is one in a series of assessments, research studies, technical guides, and learning papers produced by the GPYE to build the evidence base for improving policies, program design, and practices related to youth employability in the region. These resources can be accessed at ***www.gpye.org***.

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international youth foundation

The **International Youth Foundation (IYF)** invests in the extraordinary potential of young people. Founded in 1990, IYF builds and maintains a worldwide community of businesses, governments, and civil-society organizations committed to empowering youth to be healthy, productive, and engaged citizens. IYF programs are catalysts of change that help young people obtain a quality education, gain employability skills, make healthy choices, and improve their communities. To learn more, visit ***www.iyfnet.org.***

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VOLUME 1: A Summative Report

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Program Summary

The Kenya Youth Empowerment Program, known as Ninaweza, was a 24-month youth employability program targeting young women living in the informal settlements around Nairobi launched in January 2011. The purpose of the program was to improve the employability and earning capacity of young women living in the informal settlements of Nairobi. The International Youth Foundation (IYF) partnered with the Nairobi-based African Center for Women and Information Communication (ACWICT), which was the lead implementing organization. An impact evaluation on the Ninaweza program was coordinated by IYF under the Global Partnership for Youth Employment (GPYE) to test a comprehensive employability skills program model including Life skills training and its impact on employability and income-generation of youth. The GPYE was established in 2008 with support from the World Bank to build and dis-seminate evidence on youth employment outcomes and to test methods to improve them, with a special focus on Sub-Saharan Africa and the Middle East and North Africa (MENA). School-to-School International (STS) conducted the impact evaluation that examined the effects of the program on youth employability in Kenya.

The Ninaweza program provides young women with technical training in Information Communication Technology (ICT), training in life skills, work experience through internships, and job placement support. The program impact was evaluated using a randomized control trial (RCT) design. This evaluation, which took place in concert with the project implementation, aimed at answering three main questions:

1. Does the youth employability program produce technical knowledge and skills that will allow the young women to obtain work in the IT and related sectors?
2. Does the program have a positive effect on income-generating capacity, whether in the formal sector, informal sector, or from self-employment?
3. Does the program lead to improved self-confidence and other attributes of psychosocial and interpersonal empowerment?

Methodology

In order to prevent pre-existing characteristics from impacting the results of the evaluation, participants were randomly assigned to one of three groups. First, those in Treatment 1 received training in ICT and life skills, along with on-job experience through internships and job placement support. Second, those in those in Treatment 2 received everything in Treatment 1 except for the life skills training. Third, those in the control group received none of the interventions. Prior to any interventions, baseline data were collected from all respondents in the three groups. This included a pre-test on knowledge of ICT and life skills as well as a survey capturing earning, employment status and subjective measures of empowerment. After eight weeks, which was the duration of the training, the respondents were tested again on their knowledge of ICT and life skills. After six months, which was the duration of internship and job placement support, the respondents were interviewed again about their earnings, employment and confidence.

Qualitative information was used to provide explanatory support to the study. In-depth interviews were conducted with participants that graduated from the program as well as with internship employers.

Key Findings

Key findings from the impact evaluation were the following:

- The RCT established that the eight-week Ninaweza training in ICT and life skills succeeded in increasing knowledge in both areas:
  - » The knowledge gain in the ICT test was 17.3%-points higher for Treatment 1 than Control and 15.8%-points greater for Treatment 2 than Control, and these gains were statistically significant;
  - » Those in Treatment 1 showed greater knowledge gain than those in Treatment 2 and Control on the life skills test and this increase was statistically significant (7.3%-points and 6.8%-points respectively).
- The RCT established that the Ninaweza program increased the likelihood of program participants obtaining a job:
  - » Those in Treatment 1 were 14% more likely to obtained jobs than those in the Control, and this difference was statistically significant.
- The RCT established that the Ninaweza program was successful in increasing the weekly income of the participants:
  - » The gains in weekly income were 445 KES higher for those in Treatment 1 than Control and 506 KES higher for those in Treatment 2 than in the Control and these differences were statistically different.
- The RCT established that, among the young women who were not confident in their skill set, the Ninaweza program was successful in bolstering their confidence.
  - » Among those that were not confident in their qualification at the beginning of the program, those in Treatment 1 and 2 were 1.4 times more likely to be confident at the end than those in the Control and these differences were statistically significant.
- The results on the life skills test suggested that Treatment 1 participants showed the largest gains on the kinds of life skills items that pertained to workplace behavior and searching for a job.
  - » The assessment conducted at the end-line suggested that Treatment group participants were more likely to apply for a job than their Control group counterparts, and that Treatment and Control group participants differed on the search method used for finding a job.
  - » Treatment group participants were more likely to review job advertisements, use recruiting agencies (or colleges), networks or attend an internship. Those in Treatment 1 were also more likely to attend internships than those in Treatment 2.
- The assessment conducted at the end-line suggested that Treatment group participants were more optimistic about their chances of finding quality employment than those in the Control group.
  - » The optimism was higher for those in Treatment 1 than it was for those in Treatment 2.
  - » The type of employment varied between these groups, with Treatment group participants being more likely to hold a full-time position and Control group participants being more likely to work as casual laborers.
  - » A higher proportion of respondents in Treatment 1 indicated that they received social benefits.
  - » The proportion of respondents that worked in the ICT sector (e.g. cyber cafes) was five times higher for those in Treatment 1 and three times higher for those in Treatment 2 than those in the Control.

INTRODUCTION

With funding from the World Bank and Microsoft, the International Youth Foundation (IYF) is coordinating the Ninaweza project, which is an innovative and comprehensive employability program for young women living in six informal settlements surrounding Nairobi, Kenya: Kangemi, Kawangware, Kibera, Korogocho, Mathare and Mukuru.

The purpose of this project is twofold: to improve the employability and income-generating capacity of disadvantaged young women and to conduct an impact evaluation to build knowledge and evidence on what works in youth employability within Kenya and elsewhere in sub-Saharan Africa.

IYF's local implementing partner, The African Centre for Women, Information and Communication Technology (ACWICT), is a Nairobi-based organization that promotes women's knowledge of and access to Information Communication Technology (ICT). The impact evaluation was conducted by School-to-School International (STS), a non-governmental organization with headquarters in Pacifica, California, under contract to IYF.

The Ninaweza project was designed to provide young women with technical training in ICT, life skills training, work experience through internships, and job placement support. Prior to the training, to ensure that the technical training responds to market demands, ACWICT conducted a study to assess the needs of the local industry. As a result of the study, the training was planned so that the young women would receive training in computer hardware and software, entrepreneurship, and business process outsourcing. The life skills component addressed areas such as self-awareness, emotional intelligence, problem solving, goal setting, job searching, and health practices. The training lasted for 8 weeks. Afterwards, the young women entered an 8-week internship, which was followed by 6 months of job placement support.

The evaluation took place in concert with the project to answer three questions.

- Does the youth employability program produce technical knowledge and skills that will allow the young women to obtain work in the IT and related sectors?
- Does the program have a positive effect on income-generating capacity, whether in the formal sector, informal sector, or from self-employment?
- Does the program lead to improved self-confidence and other attributes of psychosocial and interpersonal empowerment?

METHODOLOGY

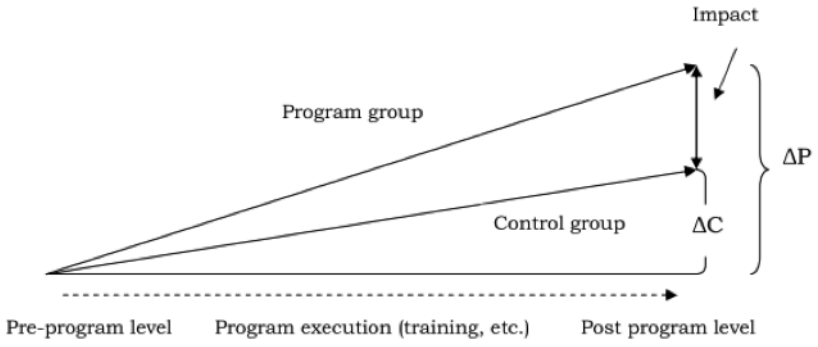
A main source of concern in the evaluation of any program is that the effect might have been driven not by the treatment but by changes in unobservable factors that happened over time (e.g. increase in employment might have derived from overall prosperity of the country instead of from the employability program). Thus, in order to measure the treatment effect, one must estimate how the treatment group would have performed if it had not received the intervention, and then subtract this from the final effect. In order to measure this difference, a comparison group that has similar characteristics but does not benefit from the program is added to serve as a control group (per standard practice for RCT studies). This control group is affected by the changes that might occur to the population over time but not by the program intervention.

Since the control group is composed of other people, another main source of concern in the evaluation of a program is the presence of selection bias. Even when a control group is included, lingering doubts may remain about whether the effect was caused by the program or whether it was driven by pre-existing differences, such as those in the treatment group being better off than those in the control group to start with.

Both experimental and quasi-experimental designs address the issue of selection bias to some extent, but experimental designs address it more comprehensively. This is because while experimental designs rely on chance (random assignment to the treatment or control group) to create two or more groups that are equal at baseline, quasi-experimental designs select the treatment group(s) first and then base the comparison group on observed characteristics from the treatment group. As a result, comparisons between these groups become valid only under the set of identifying assumptions (the observable characteristics in which the comparison group was based). If the reasons used to justify the selection of these identifying assumptions are challenged, the evaluators will not be able to ensure that the two groups were equal at baseline and that the observed effects were caused by the treatment instead of by pre-existing differences between the two groups. In an experimental design, however, assignment is random, so it can be asserted that the effect was caused by the treatment.

The graph below depicts the model used to estimate the impact of the program. In the left side of the graph, i.e., the pre-program level, all groups are similar. The ΔC at the right side of the graph is the change seen in the control group that is due to unobservable factors (such as country prosperity). The ΔP is the change observed for the treatment group. By subtracting the change due to unobservable factors (ΔC) from the change observed for the treatment group, the impact of the program is estimated (ΔP-ΔC).

FIGURE 1: EVALUATION MODEL



ΔP = Change in level of program group
ΔC = Change in level of control group
ΔP-ΔC = Impact of program (DD)

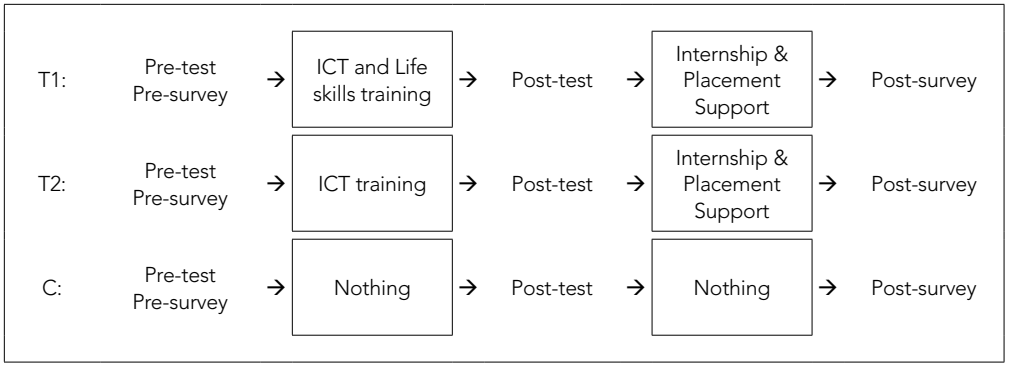
In quantitative research, a study that has at least two groups to which participants are randomly assigned and which are measured at two or more points in time is called a randomized control trial (RCT).The main strength of this design is that it ensures that the impact was caused by the treatment.

In the specific case of the Ninaweza program evaluation, participants were assigned to one of three groups:

- Treatment 1: Life skills+ ICT + internship & job placement support
- Treatment 2: ICT + internship & job placement support
- Control: No intervention

Although each set of outcomes was measured at two points in time, the rounds of data collection corresponded to the specific components being evaluated, as shown below.

FIGURE 2: EVALUATION DESIGN



At the baseline, pre-tests in ICT and life skills were administered to capture respondents' background knowledge of these topics. A pre-survey was also administered to capture background information on earnings, employment status and subjective measures of empowerment. At the mid-line, respondents completed the post-test for ICT and life skills to determine whether there had been a change in their knowledge since the baseline. At the end-line, respondents answered the post-survey, to determine whether there had been a change in earning capacity, employment status and confidence. In-depth interviews were conducted at end-line with a sample of women and internship employers to provide explanatory support to the results of the evaluation.

Due to limited training space at the ACWICT office in Nairobi, participants were recruited and placed in six successive cohorts. The target amount of participants in the program was 700 divided equally between Treatment 1 and Treatment 2. For the evaluation the target was to interview and test all program participants. The evaluation also targeted a control group with 700 respondents with additional 15% added to compensate for potential early attrition.[1] The table below shows the target number of participants per cohort and group for the evaluation. Note that Cohorts 1, 3 and 5 included Treatment 1 participants while Cohorts 2, 4 and 6 included Treatment 2 participants.

TABLE 1: TARGET NUMBER OF PARTICIPANTS BY GROUP AND COHORT

	Cohort 1	Cohort 2	Cohort 3	Cohort 4	Cohort 5	Cohort 6	Total
T1	120	--	120	--	110	--	350
T2	--	120	--	120	--	110	350
Control	135	135	135	135	125	125	810
Total	255	255	255	255	235	235	1,510

1 This oversampling was based on previous experiences of IYF. As a result, the target size of the Control increased from 700 to 810.

Power analyses were conducted based on the sample sizes specified in Table 1 (excluding the 15% oversampling for the control group).The results suggests that statistical comparisons between each treatment group and Control will have an 80% chance to detect a treatment effect of 0.37 (Cohen's d) for a two-tailed (non-directional) t-tests. That is, the evaluation would be able to detect a difference as statistically significant in case the distribution of scores for the treatment group overlapped at most 72.6% with the distribution of scores for the control group.[2]

The fact that participants were randomly assigned to treatment and control does not mean that they were randomly selected from the overall population. Eligibility criteria were used, which means that the findings from the evaluation can only be extrapolated to those that meet these criteria. Six informal settlements were targeted and the number of applicants selected from each settlement was proportional to the proportion of applicants from each settlement that applied to each cohort.

The eligibility criteria are listed below:

1. Female
2. Aged between 18 and 35 years
3. Completed high school
4. Out of school for at least one year
5. Kenyan citizen[3]
6. Residing in any of the six informal settlements around Nairobi[4]
7. Not employed at the time of application[5]

2 Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.
3 There were a few cases of respondents that said that they held other citizenship than Kenyan.
4 There were a few cases of respondents that said in the pre-survey that they came from elsewhere. The six settlements targeted were Kangemi, Kawangware, Kibera, Korogocho, Mathare and Mukuru.
5 There were a few cases of respondents that said they were employed at the time of the pre-survey.

DATA COLLECTION

A representative from each of the six informal settlements was employed as a community mobilizer to raise awareness about the program and to disseminate and receive applications from potential participants on behalf of ACWICT. There was no cost or obligation associated with the application. ACWICT reviewed each application to identify whether participants met the criteria. Those that met the criteria were given a personal identification number (PID).The number selected from each settlement was proportional to the number of applicants from each settlement for each cohort. Within each settlement, those selected were randomly assigned to a group. Applicants assigned to the treatment groups that did not join the program or later dropped out were not excluded from the evaluation, but they rarely came to the training site to take part in later rounds of data collection.

A total of 1,230 applicants were selected to be in the study. This is less than the target of 1,400 respondents and this indicates less interest in the program than anticipated. The take-up rate was also lower than expected with 86.7% of the applicants selected actually joining the program. According to data from the implementing partner, 91.9% of those that joined the program graduated. While M&E data suggests that attrition was not a problem for the program it was an issue for the evaluation: 31.5% of those that took part in the baseline did not take part in the mid-line and 50.2% did not take part in the end-line. Furthermore, although completing the end-line should have been a requirement for graduation, among those that graduated a total of 38.2% did not take part in the end-line.

Randomized methods ensure that the intended allocation of the program is random; however, the actual allocation may not be. This problem was addressed through "intention to treat (ITT)" methods, such as keeping in the evaluation those assigned to treatment and control despite take-up or contamination. Thus, it should be noted that the attrition rate for mid- and end-line were based on the number of people that responded to the baseline and not on those that actually joined the program.

The table below summarizes the take-up, attrition and graduation rates for all the cohorts.

TABLE 2: NUMBER OF PARTICIPANTS BY GROUP AND COHORT

		Eval (STS			M&E (ACWICT)			Take-Up	Attrition Rate		Target
		Base	*Mid*	*End*	*Enrol*	*Grad*	*Pct*	*Enr/Base*	*Mid/Base*	*End/Base*	*End/Grad*
C1	T1	105	82	54	85	75	88.2%	81.0%	78.1%	51.4%	72.0%
	C	116	75	57	--	--	--	--	64.7%	49.1%	--
C2	T2	133	91	29	103	98	95.1%	77.4%	68.4%	21.8%	29.6%
	C	131	77	47	--	--	--	--	58.8%	35.9%	--
C3	T1	92	72	54	80	72	90.0%	87.0%	78.3%	58.7%	75.0%
	C	85	50	40	--	--	--	--	58.8%	47.1%	--
C4	T2	103	83	68	83	78	94.0%	80.6%	80.6%	66.0%	87.2%
	C	106	71	68	--	--	--	--	67.0%	64.2%	--
C5	T1	88	60	42	88	80	90.9%	100.0%	68.2%	47.7%	52.5%
	C	93	58	45	--	--	--	--	62.4%	48.4%	--
C6	T2	90	68	54	91	84	92.3%	101.1%	75.6%	60.0%	64.3%
	C	88	56	55	--	--	--	--	63.6%	62.5%	--
Sub-total	T1	285	214	150	253	227	89.7%	88.8%	75.1%	52.6%	66.1%
	T2	326	242	151	277	260	93.9%	85.0%	74.2%	46.3%	58.1%
	C	619	387	312	--	--	--	--	62.5%	50.4%	--
Total	All	1230	843	613	530	487	91.9%	86.7%	68.5%	49.8%	61.8%

A total of 328 respondents took part only in the baseline, and 289 respondents took part only in the baseline and the mid-line; 59 took part only in the baseline and end-line. A total of 554 took part in all three rounds of data collection.

The STS Evaluation Coordinator supervised all rounds of data collection. At the baseline, the team of enumerators administered the three tools in the following order: first pre-survey, followed by the ICT test and finally the life skills test. At the mid-line the ICT test was administered first, followed by the life skills test. At the end-line the post-survey was administered alone. Prior to the administration of the tools in each round of data collection, participants were reminded of the program design and the reason why they were completing the instrument tool. Participants were then asked to sign a consent form. A detailed description and chronology of the lessons learned are included in the appendix.

DATA ENTRY

Data entry was conducted subsequently to the completion of the data collection for each cohort. The data were entered in the Evaluation Coordinator's office, in downtown Nairobi and all rounds of data entry were supervised by the Evaluation Coordinator. At the end of every day, the Evaluation Coordinator checked 10% of the data entered. If the error rate was above 5%, the data from that data entry operator were re-entered in the following day. Data cleaning followed, including cross checking that the participants IDs matched in all the tools collected at that particular round (e.g. pre-survey, ICT pre-test and life skills pre-test). The data were then sent to the Evaluation Specialist in U.S. for final checks and data analysis.

DATA ANALYSIS

Several statistical models were used to evaluate the different components of the program. However, the result of these models should be interpreted by taking into consideration the following caveats.

Statistical Tests

To investigate whether the difference between means for continuous variables (e.g. test scores and salary) was statistically significant, t-tests (for categorical variables with two sub-categories) and ANOVAs (for categorical variables with three or more sub-categories) were used. In categories with three or more sub-categories (e.g., six informal settlements), ANOVAs were used with Bonferroni corrections for multiple testing to test the difference between means for each combination of pairs. Multiple regressions were used to investigate the difference of means of for continuous variables between categories controlling for other variables (e.g. measuring difference in post-test scores by group controlling for scores in the pre-test).

To predict the probabilities for different possible outcomes (e.g. finding a job or not), non-linear models were used. Chi-squares were used when the two variables tested were categorical and belonged to the same point in time (e.g., whether employed by group in the pre-survey).Factorial logistic regressions were used when there were two or more categorical independent variables but a dichotomous dependent variable (e.g. whether employed at post-survey by group controlling for whether employed at the pre-survey). Multinomial logistic regressions and log-linear models using a Poisson regression were used when the dependent variable was categorical but had more than two sub-categories (e.g. self-employed, part-time employed and full-time employed in the post-survey by group controlling for employment status in the pre-survey).

Caveats

Take-up: Not all the applicants assigned to the treatment group actually joined the program. Since less people in the treatment group are being affected by the program, lower take-up means lower statistical power to identify the impact of the program. For instance, if there is only an 80% difference in take up between the treatment and control group (either because people in the treatment don't get the treatment or because people in the control also get the treatment) the sample size would have to be 56% larger to achieve the same minimum detectable effect (MDE).

Contamination: There were cases of participants assigned to the control group in earlier cohorts trying to apply again to the program in later cohorts. However, there is no reported case of a control group participant receiving the treatment.

Compliance: Full compliance to the program was less than expected, primarily due to the time commitments required of the young women and transportation costs. Partial compliance means that some participants received more of the intervention than others. In order to increase compliance, IYF provided transportation stipends for the highest need treatment participants to boost their attendance rates.

Attrition: Following-up with the same people from start to end is not always easy. Although the high graduation rate from the M&E data indicates that attrition was not an issue for the program itself, it was an issue to the evaluation[6]. The attrition rates over the 10-month program were fairly high across treatment groups and were particularly high for the control group between the baseline and mid-line. If attrition is purely random there would simply be a decrease of the sample size, thus of statistical power. However, if attrition is systematic, then the control group might no longer be a reasonable counterfactual for the treatment. To boost retention for the control group, data were collected in the settlements instead of in the training site. Other measures also included paying a participation stipend to the respondents in the control group as well as an alumni packet (e.g. computer use and job placement after the end-line data collection). The disadvantage of rewarding participant by the control group is that it might introduce bias to the evaluation. Demographic indicators were similar for treatment and control groups for all rounds of data collection, suggesting that control remained a reasonable counterfactual to the treatment.

Limited training facilities of implementing partner: The intervention involved two full months of training, but the local partner understandably did not have the computers and space to train the full treatment group of 700 young women at once. As a solution, IYF divided the sample into multiple cohorts to maximize the partner's capacity. IYF also directed efforts at expanding local capacity by instituting morning and afternoon shifts, which halved the time necessary to complete the training. However, as a result it is possible that the quality of the training varied somewhat from cohort to cohort and from shift to shift.

6 As discussed in the Data Collection section, randomized methods ensure that the intended allocation of the program is random but the actual allocation may not be; thus, intention to treat (ITT) methods were used and the attrition rate for mid- and end-line were based on the number of people that responded the baseline. Attrition rate for the treatment groups would be lowered in case they included only that actually joined the program.

EVALUATION

Training Component

ACWICT provided Treatment 1 training in ICT and life skills while Treatment 2 received training in ICT only. The ICT training included 150 hours of lessons ranging from how to manage files and folders; to how to make, edit and share digital videos; to how to set up a computer network. The life skills training included 40 hours of lessons in skills for everyday life (e.g. setting personal goals) and skills for the world of work (e.g. workplace ethics) using ACWICT's life skills curriculum. In order to accelerate the completion of the training, morning and afternoon shifts were introduced. The training component took 8 weeks for Treatment 2 and training was extended by 2 weeks for a total of 10 weeks to include the life skills component. For Treatment 1, the life skills lessons were staggered with IT lessons and taught throughout the duration of the training. A more detailed explanation of the content of the training in ICT and life skills can be found in the appendix.

At the end of the six cohorts, a total of 214 participants in Treatment 1, 242 participants in Treatment 2 and 387 participants in Control had responded to the pre- and post-tests developed specifically for the Ninaweza evaluation. The data presented in this section were stratified by cohort. The results of the item analysis and analysis of the internal consistency for each cohort can be found in the appendix.

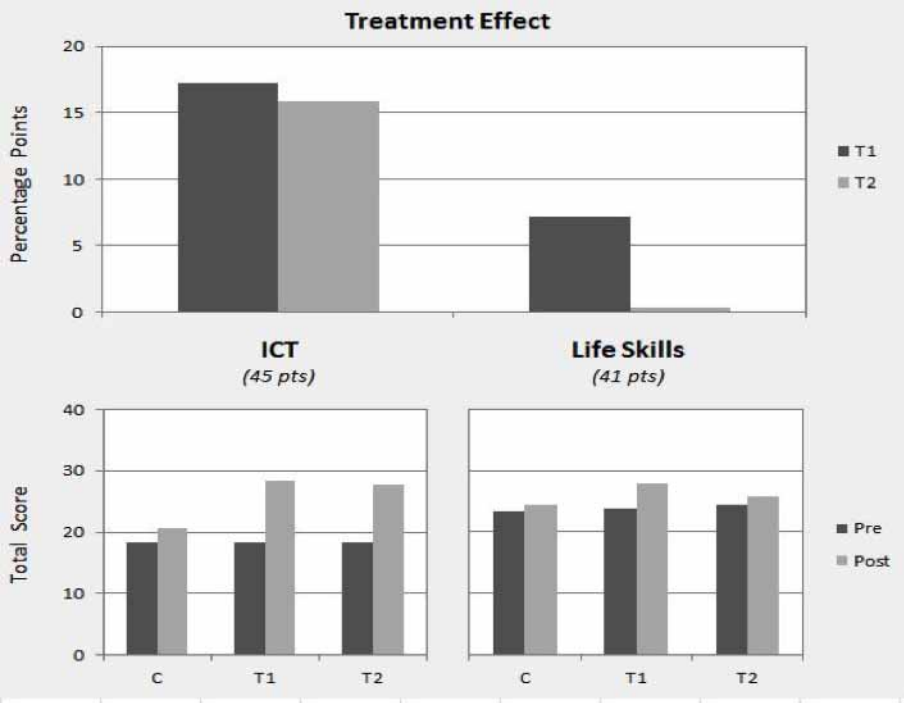
The mean scores in the tests by group show that at the pre-test participants in the three groups answered around 18 out of the 41 questions in the ICT test and around 24 out of the 45 questions in the life skills test correctly. The table below shows with 95% confidence the lower boundary (LB) and upper boundary (UB) for the true mean for each group. Note that at baseline those in Treatment 2 scored higher than those in the Control group. This illustrates the importance of controlling for scores in the pre-test. The table below also shows the scores in the post-test for each group in each test.

TABLE 3: TEST SCORES FOR ICT AND LIFE SKILLS BY GROUP

	Pre				Post			
	Mean	*SE*	*LB*	*UB*	*Mean*	*SE*	*LB*	*UB*
ICT (out of 45 points)								
C	18.2	0.26	17.7	18.7	20.6	0.29	20.1	21.2
T1	18.3	0.37	17.5	19.0	28.4	0.34	27.7	29.1
T2	18.3	0.32	17.7	18.9	27.8	0.32	27.2	28.4
Life skills (out of 41 points)								
C	23.3	0.22	22.9	23.8	24.5	0.25	24.0	25.0
T1	23.9	0.28	23.4	24.5	27.9	0.31	27.3	28.5
T2	24.5	0.25	24.0	25.0	25.7	0.28	25.2	26.3

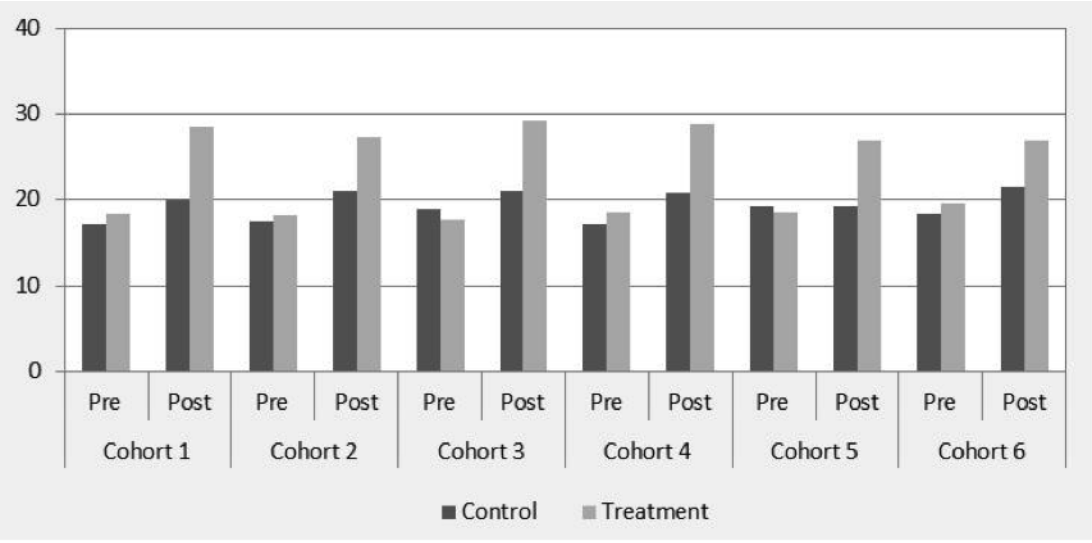
The figure below shows the gains in knowledge controlling for the background knowledge. Anything above zero reflects a gain in knowledge superior to the gain in knowledge observed for the Control group. So, the average Treatment 1 and Treatment 2 participants showed a similar gain of knowledge (around 17%-points and 16%-points respectively) for ICT. However the knowledge gains for life skills was less (around 7%-points) and was found only for the Treatment 1 group. This was according to what was expected because only those in the Treatment 1 group received life skills training. It should be noted that life skills' indicators include a greater degree of subjectivism than technical skills in ICT; thus, life skills are harder to be measured with a test.

FIGURE 3: KNOWLEDGE GAINS FOR ICT AND LIFE SKILLS



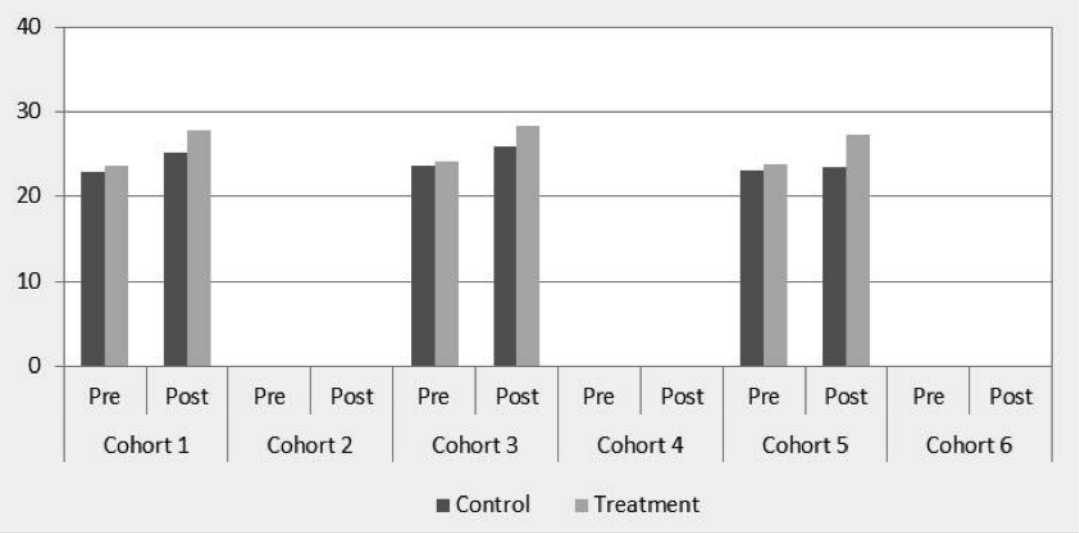
Due to space and equipment limitations, the training was offered successfully for each cohort. Thus, it is possible that the quality of the training varied between cohorts and that the knowledge gains were driven by just a few cohorts. In order to investigate whether a few cohorts were driving the effect, scores for ICT in the pre- and post-test for each cohort were shown below. The bars for the groups are similar in the pre-test but different in the post-test with the results for the treatment group being higher than the results for the Control group in all cohorts. That is, even when the training effect is examined in the six cohorts separately, gains in ICT are observed for all cohorts.

FIGURE 4: KNOWLEDGE GAINS FOR ICT BY COHORT



The pre- and post-test scores were also graphed for the three cohorts that received life skills training. Similarly to what was seen for ICT, gains in life skills are observed for all cohorts that received life skills training.

FIGURE 5: KNOWLEDGE GAINS FOR LIFE SKILLS BY COHORT



In order to evaluate whether the training component was successful in generating knowledge gains, pre- and post-tests were applied to treatment and control respondents before the start of the training and after its completion. The data was fit with a model that uses scores for the pre-tests as covariates in a regression, with the score in the post-test as outcome variable and the groups as predictors.[7]

The results from the statistical tests are described in the table below. For ICT, the average Treatment1 participant had a change in scores between pre- and post-tests 7.8 points higher (out of 45 points) than the change in scores for the average Control group participant, and this difference was statistically significant. Similarly, the average Treatment 2 participant also showed a higher knowledge increase than the average Control group participant, and this difference was also statistically significant. The knowledge gain for the average Treatment 2 participants was lower than for the average Treatment 1 participant. However, the range between the lower and upper boundaries overlaps with zero, which indicates no statistically significant difference between the two treatment groups. For life skills, the average Treatment 1 participants showed greater knowledge gain than the average Control and Treatment 2 participants, and these differences were statistically significant. The average Treatment 2 and Control participants showed similar knowledge gain, as expected given that neither group received life skills training. For more detailed information see the regression table in the appendix.

TABLE 4: IMPACT OF THE TRAINING FOR ICT AND LIFE SKILLS BY GROUP

	ICT				Life skills			
	Mean	*SE*	*LB*	*UB*	*Mean*	*SE*	*LB*	*UB*
T1 vs C	7.8	0.4	7.0	8.5	3.0	0.3	2.4	3.5
T2 vs C	7.1	0.4	6.4	7.9	0.2	0.3	-0.4	0.7
T2 vs T1	-0.6	0.4	-1.5	0.2	-2.8	0.3	-3.4	-2.2

7 Vickers A. &Altman D. (2001). Analysing controlled trials with baseline and follow up measurements BMJ; 323(7321): 1123–1124.

All Components

At the end of the six cohorts, a total of 150 participants in Treatment 1, 151 participants in Treatment 2 and 312 participants in Control answered the pre- and post-tests. The data presented in this section were stratified by cohort.

A total of 600 respondents answered the question about their confidence in their qualifications in the pre- and post-survey. The table below summarizes the changes for each possible outcome. As can be seen below, the increase in the proportion of those that were more confident at the post-survey than at the pre-survey was higher for the treatment groups.

TABLE 5: CHANGE IN CONFIDENCE ON QUALIFICATIONS

	C		T1		T2	
	Freq	*Percent*	*Freq*	*Percent*	*Freq*	*Percent*
Not confident→Not confident	42	13.8	5	3.4	2	1.3
Not confident→Confident	32	10.5	26	17.8	22	14.7
Not confident→Very confident	6	2.0	11	7.5	6	4.0
Not confident→Unsure	13	4.3	1	0.7	1	0.7
Confident→Not confident	15	4.9	3	2.1	0	0.0
Confident→Confident	61	20.1	29	19.9	29	19.3
Confident→Very confident	23	7.6	12	8.2	21	14.0
Confident→Unsure	3	1.0	0	0.0	0	0.0
Very confident→Not confident	10	3.3	1	0.7	0	0.0
Very confident→Confident	25	8.2	18	12.3	23	15.3
Very confident→Very confident	29	9.5	21	14.4	25	16.7
Very confident→Unsure	1	0.3	1	0.7	2	1.3
Unsure→Not confident	11	3.6	0	0.0	2	1.3
Unsure→Confident	17	5.6	11	7.5	10	6.7
Unsure→Very confident	6	2.0	6	4.1	6	4.0
Unsure→Unsure	10	3.3	1	0.7	1	0.7
Total	304	100.0	146	100.0	150	100.0

A log-linear model was used to estimate the effect of the program on respondents' confidence on their qualification. Those that were unsure were excluded for this analysis so that the categories were ordered from "not confident" to "very confident".[8] The result of this model suggests that among those that were not confident at the pre-test, the odds of them being confident or very confident at the post-test was higher for the average Treatment 1 and Treatment 2 participants than it was for the average Control participant, and this was statistically significant. Among those that were confident at pre-test, the odds they would be very confident in the post-test was slightly higher for Treatment 2 than Control and it was also statistically significant.

TABLE 6: IMPACT OF PROGRAM ON CONFIDENCE ON QUALIFICATIONS

	Odds-Ratio	SE	t	P>|t|
T1 vs C for Not Confident in Baseline	1.4	0.09	5.16	0.000
T1 vs C for Confident in Baseline	1.1	0.05	1.21	0.227
T1 vs C for Very confident in Baseline	1.1	0.06	1.61	0.107
T2 vs C for Not Confident in Baseline	1.4	0.09	5.12	0.000
T2 vs C for Confident in Baseline	1.2	0.05	3.66	0.000
T2 vs C for Very confident in Baseline	1.1	0.05	1.91	0.057

8 The model used a Poisson regression and the effects were converted from change in the logs of expected counts to odds-ratio to facilitate their interpretation.

Although not being employed at the time of registration was one of the criteria for applying for the program, respondents were asked in the pre- and post-survey whether they were employed. As shown in the table below, a few respondents answered in the baseline that they were employed. The results of the chi square test indicate that being employed at baseline was not associated with group.

TABLE 7: EMPLOYMENT STATUS AT PRE-SURVEY

	C		T1		T2	
	Freq	Percent	Freq	Percent	Freq	Percent
Yes	48	7.8	19	6.7	16	4.9
No	571	92.2	266	93.3	310	95.1
Total	619	100.0	285	100.0	326	100.0
Pearson chi2(2) = 2.7534 Pr = 0.252						

The table below depicts changes in employment status from the pre-survey to the post-survey. There were four possible outcomes: Respondents could have had a job before the program but lost it after the program; they could have had jobs neither before nor after; they could have had a job before and after; or they could have had no job before but got a job after. Because a few outcomes had an expected frequency of less than five respondents, Fisher's exact test was used instead. The result of this test indicated that change in employment status varied depending on group, especially for those that were unemployed at the start of the program.

TABLE 8: CHANGE IN EMPLOYMENT STATUS

	C		T1		T2	
	Freq	Percent	Freq	Percent	Freq	Percent
Employed→Unemployed	7	2.2	7	4.7	4	2.6
Unemployed→Unemployed	208	66.7	81	54.0	90	59.6
Employed→Employed	16	5.1	3	2.0	5	3.3
Unemployed→ Employed	81	26.0	59	39.3	52	34.4
Total	312	100.0	150	100.0	151	100.0
Fisher's exact = 0.029						

A logistic regression was used to assess the effect of the program on those that were unemployed at baseline. Treatment 1 participants' odd of obtaining a job was 1.9 times higher than those in the Control group and this was statistically significant. The odds-ratio for those in the Treatment 2 was also higher than for those in the Control but this was only marginally significant. The odds-ratio for those in Treatment 1 was higher than the odds-ratio for those in Treatment 2 but this was not statistically significant.

TABLE 9: CHANGE IN EMPLOYMENT STATUS

	Odds-Ratio	SE	t	P>|t|
T1 vs C	1.9	0.40	2.90	0.004
T2 vs C	1.5	0.32	1.81	0.071
T2 vs T1	0.8	0.19	-0.95	0.345

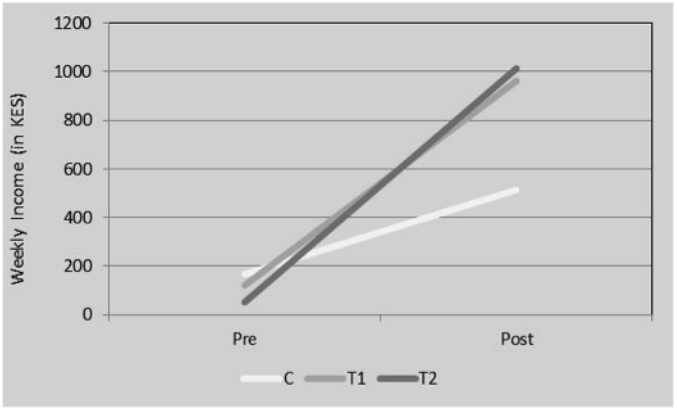
A linear probability model was also used to estimate change in terms of probability.9 For the average participant, taking part in Treatment 1 increased the chance of obtaining a job by 14% and this was statistically significant. Furthermore, as shown in the table below, there is a 95% chance that the true effect of the program has between a 4% and 24% increase in the chance of obtaining a job. The average Treatment 2 participant was 9% more likely to find a job than the Control but this was only marginally significant. Those in Treatment 2 were less likely to obtain a job than those in Treatment 1.

TABLE 10: IMPACT OF THE PROGRAM ON EMPLOYMENT STATUS

	Probability	SE	LB	UB
T1 vs C	0.14	0.05	0.04	0.24
T2 vs C	0.09	0.05	-0.01	0.18
T2 vs T1	-0.06	0.06	-0.17	0.06

Participants were asked about their weekly income at the start and at the end of the program. Across time, the average respondent from all the three groups showed an increase in weekly income. This illustrates the importance of having a control group—otherwise this gain would have been completely attributed to the program. The graph below shows the change in weekly income (in Kenya Shillings) from the pre- to the post-survey.

FIGURE 6: CHANGE IN WEEKLY INCOME



9 A linear probability model was used in addition to the logic so that the parameters are presented in terms of differences in probabilities and ratios of odds. The use of an OLS to estimate the coefficients was possible because this was a fully saturated model.

A multiple regression was used to evaluate the impact of the program on weekly income at the post-survey by group controlling for weekly income at the pre-test. The result of this model indicates that the average Treatment 1 and Treatment 2 participants had a higher weekly income gain than the average Control group participant, and these differences were statistically significant. There was no significant difference between the gain in weekly income for those in Treatment 1 and Treatment 2. For more detailed information about the models described in this section see regression the tables in the appendix.

TABLE 11: IMPACT OF THE PROGRAM ON WEEKLY INCOME

	Mean Diff.	SE	LB	UB
T1 vs C	445	151	147	742
T2 vs C	506	167	178	834
T2 vs T1	62	203	-336	460

DISCUSSION

In addition to measuring whether the gains observed for the treatment groups were higher than the gains observed by the control group, data from the end-line can also be used to assess differences between the groups at the end of the program. This section further investigates aspects related to the three research questions that were measured at the end of the program for 150 Treatment 1, 151 Treatment 2 and 312 Control group participants.

Participants' Profile

Although a systematic loss of participants could result on treatment and control not being comparable at end-line, it is unclear whether this is the case. The statistically significant differences between the groups at end-line were in three areas: having children, education background, and participation in training programs other than Ninaweza. Fewer participants of Treatment 1 had children than those in Treatment 2 or Control. A higher proportion in the treatment group had a technical degree than those in the control group. The opposite was found for secondary school degrees. A greater proportion of respondents in the control group indicated that they had attended another form of training in either ICT or life skills. The effects of these differences is unknown, though some differences likely favored the treatment group (e.g., technical degrees) while other differences likely favored the control group (e.g., control group participants receiving training somewhere else). Thus, this suggests that the control remained a reasonable counterfactual.

TABLE 12: PARTICIPANTS' BACKGROUND

	Control		Treatment 1		Treatment 2	
	No.	%	No.	%	No.	%
2. Marital Status						
Single	236	75.9	117	78	120	79.5
Married	59	19	33	22	26	17.2
Divorced/separated	7	2.3	0	0	1	0.7
Living together	6	1.9	0	0	4	2.6
Widowed	3	1	0	0	0	0
Total	311	100	150	100	151	100
Pearson chi2(8) = 12.1382 Pr = 0.145						
3. Children?						
Yes	139	44.7	48	32	67	44.4
No	172	55.3	102	68	84	55.6
Total	311	100	150	100	151	100
Pearson chi2(2) = 7.3959 Pr = 0.025						
4. Location						
Korogocho	17	5.5	8	5.4	12	7.9
Mukuru	13	4.2	7	4.7	10	6.6
Mathare	32	10.3	14	9.4	5	3.3
Kangemi	45	14.5	15	10.1	30	19.9
Kibera	58	18.6	34	22.8	22	14.6
Kawangware	124	39.9	59	39.6	64	42.4
Other	22	7.1	12	8.1	8	5.3
Total	311	100	149	100	151	100
Pearson chi2(12) = 17.3414 Pr = 0.137						
5. Level of education completed?						
Primary education	7	2.2	3	2	1	0.7
Secondary education	189	60.6	55	36.7	72	48
Technical college	102	32.7	83	55.3	76	50.7
University	12	3.8	7	4.7	1	0.7
Other	2	0.6	2	1.3	0	0
Total	312	100	150	100	150	100
Pearson chi2(8) = 34.7082 Pr = 0.000						
6. Attended any other training?						
Yes	111	35.9	38	25.3	32	21.3
No	198	64.1	112	74.7	118	78.7
Total	309	100	150	100	150	100
Pearson chi2(2) = 12.1238 Pr = 0.002						
7. If yes, training with computers?						
Yes	58	51.3	14	37.8	13	40.6
No	55	48.7	23	62.2	19	59.4
Total	113	100	37	100	32	100
Pearson chi2(2) = 2.6140 Pr = 0.271						
7. If yes, training on life skills?						
Yes	41	37.3	5	15.2	11	34.4
No	69	62.7	28	84.8	21	65.6
Total	110	100	33	100	32	100
Pearson chi2(2) = 5.7140 Pr = 0.057						

Although those in Treatment 1 were less likely to have children, among those that had children, the average number of children was higher for those in this group. This difference, however, was not statistically significant.

TABLE 13: NUMBER OF CHILDREN

	N	Mean	SE	LB	UB
C	132	1.61	0.10	1.43	1.80
T1	45	1.78	0.22	1.35	2.20
T2	62	1.48	0.09	1.30	1.67
Total	239	1.61	0.07	1.47	1.75

Change in Psychosocial Attributes

The results on the life skills test give an indication of changes in psychosocial attributes. The participants showed positive results on almost all of the life skills items, particularly those with psychosocial implications. The six items with the greatest increases were the following:

- Determining the correct behavior in an interview scenario
- Knowing what to include in a good curriculum vitae
- Recognizing the best personal attributes for an employer
- Realizing the kinds of actions that constitute workplace deviance
- Making decisions based on what is necessary to succeed in the workplace
- Being aware of current influences in the world of work

In general, the participants showed the largest gains on life skills items that pertained to workplace behavior and searching for a job. The smallest gains were on items that related to health, including emotional and physical health, such as recognizing the consequences of tobacco use and understanding about HIV transmission and contraceptive use.

In addition, treatment group participants were more likely to apply for a job then their control group counterparts, and this was statistically significant. It is interesting to note the distribution of number of applications between those in Treatment 1 and Treatment 2 and those in Control. While those in Control group tended to send too few applications, those in the treatment group tended to be more pro-active—this difference was especially accentuated for those sending between 6-10 applications. This suggests that treatment group participants may be taking measures such as spending time researching positions that are a good fit for their skill set.

TABLE 14: PRO-ACTIVENESS IN SEEKING FOR A JOB

	Control		Treatment 1		Treatment 2	
	No.	%	No.	%	No.	%
18. Since joining the program, have you looked for employment?						
Yes	236	75.9	132	88	134	89.3
No	75	24.1	18	12	16	10.7
Total	311	100	150	100	150	100
Pearson chi2(2) = 17.1133 Pr = 0.000						
19. Since joining the program, how many job applications submitted?						
0 – 5	163	69.4	75	57.3	89	65.9
6 – 10	40	17	34	26	37	27.4
11 – 15	5	2.1	8	6.1	3	2.2
16 – 20	8	3.4	6	4.6	2	1.5
Over 20	19	8.1	8	6.1	4	3
Total	235	100	131	100	135	100
Pearson chi2(8) = 17.6461 Pr = 0.024						

Treatment and control group participants also differed on the search method used for finding a job. Treatment group participants were more likely to review job advertisements, use recruiting agencies (or colleges), network or attend an internship. It is worthwhile noting that those in Treatment 1 were also more likely to attend internship than those in Treatment 2. This suggests that the life skills training might have provided candidates with certain advantages during the selection process for securing an internship.

TABLE 15: SEARCHING METHOD USED FOR FINDING A JOB

	Control		Treatment 1		Treatment 2	
	No.	%	No.	%	No.	%
20. None						
Yes	7	3	0	0	2	1.5
No	227	97	131	100	132	98.5
Total	234	100	131	100	134	100
Pearson chi2(2) = 4.3436 Pr = 0.114					2.6	
20. Reviewed job advertisements			0		0	
Yes	104	44.3	77	58.8	75	56
No	131	55.7	54	41.2	59	44
Total	**235**	**100**	**131**	**100**	**134**	**100**
Pearson chi2(2) = 8.7678 Pr = 0.012					44.4	
20. Submitted unadvertised job applications			68		55.6	
Yes	57	24.3	33	25.2	39	29.1
No	178	75.7	98	74.8	95	70.9
Total	**235**	**100**	**131**	**100**	**134**	**100**
Pearson chi2(2) = 1.0826 Pr = 0.582					7.9	
20. Networked with people					6.6	
Yes	150	63.8	104	79.4	99	73.9
No	85	36.2	27	20.6	35	26.1
Total	235	100	131	100	134	100
Pearson chi2(2) = 10.7598 Pr = 0.005					42.4	
20. Used recruiting agencies					5.3	
Yes	28	12	28	21.4	23	17.2
No	206	88	103	78.6	111	82.8
Total	234	100	131	100	134	100
Pearson chi2(2) = 5.8228 Pr = 0.054					0.7	
20. Attended job fairs or career fairs			36.7		48	
Yes	17	7.3	17	13	10	7.5
No	217	92.7	114	87	124	92.5
Total	234	100	131	100	134	100
Pearson chi2(2) = 3.8265 Pr = 0.148					100	
20. Enrolled in an internship						
Yes	10	4.3	33	25.4	21	15.7
No	225	95.7	97	74.6	113	84.3
Total	235	100	130	100	134	100
Pearson chi2(2) = 34.7482 Pr = 0.000					100	
20. College placement services						
Yes	3	1.3	11	8.4	7	5.2
No	232	98.7	120	91.6	127	94.8
Total	235	100	131	100	134	100
Pearson chi2(2) = 11.0755 Pr = 0.004					100	
20. Became an entrepreneur						
Yes	19	8.1	12	9.2	8	6
No	215	91.9	119	90.8	125	94
Total	234	100	131	100	133	100
Pearson chi2(2) = 0.9554 Pr = 0.620					100	

Treatment and control group also differed in subjective measures of employability. As observed in the evaluation, the program was successful in bolstering the confidence on their qualification for those that were not confident at the beginning. The assessment suggests that treatment group participants were also more optimistic about their chances of finding quality employment than those in the control group. Furthermore, the optimist was higher for those in Treatment 1 than it was for those in Treatment 2.

TABLE 16: SUBJECTIVE MEASURES OF EMPLOYABILITY

	Control		Treatment 1		Treatment 2	
	No.	%	No.	%	No.	%
58. At this point in time, how difficult is it for you to find quality employment?						
Not difficult	50	16.1	54	36	35	23.3
Difficult	116	37.4	56	37.3	64	42.7
Very difficult	130	41.9	25	16.7	36	24
Unsure	14	4.5	15	10	15	10
Total	310	100	150	100	150	100
Pearson chi2(6) = 48.7227 Pr = 0.000						

Interviews were also conducted with internship employers from Cohorts 1, 3 and 5 (Treatment 1). During the interview, employers were asked to compare interns from Ninaweza with the other interns working in the company. Several employers mentioned that "the other interns are well trained from college and have better skills" and that "[the others] are more dynamic and focused". This suggests that both technical and life skills of program participants have room for improvement. It also suggests that Ninaweza participants might be breaking into positions that before were limited to people from a higher socio-economic status (i.e. college students). It is also telling that when asked whether they would like to have other interns from Ninaweza, most employers answered "yes".

Change in Employability

As observed in the evaluation, the program was successful in increasing the odds for finding employment for those in Treatment 1. It should be noted that a positive effect was also found for Treatment 2 but that effect was not statistically significant. The type of employment varied between these groups, with treatment group participants being more likely to hold a full-time position and control group participants being more likely to work as a casual laborer. Only a few respondents had signed contracts. Among those that had signed contracts, the proportion was higher among those in the treatment groups (although the difference was not statistically significant). These changes are especially relevant in place like Nairobi that has very low rates of youth employment in the formal sector. The M&E system of the implementing partner kept a tally on the number of program participants that participated in internships and found jobs and this can be found in the appendix.

TABLE 17: EMPLOYMENT STATUS

	Control		Treatment 1		Treatment 2	
	No.	%	No.	%	No.	%
22. Current employment status?						
Self employed	24	24.7	6	10.2	10	17.5
Employed: permanent full time	14	14.4	17	28.8	15	26.3
Employed: temporary full time	34	35.1	27	45.8	24	42.1
Casual or part-time	24	24.7	9	15.3	8	14
Other	1	1	0	0	0	0
Total	97	100	59	100	57	100
Pearson chi2(8) = 13.6872 Pr = 0.090						
27. Do you have a signed employment contract with your employer?						
Yes	31	33.7	27	45.8	23	42.6
No	61	66.3	32	54.2	31	57.4
Total	92	100	59	100	54	100
Pearson chi2(2) = 2.4812 Pr = 0.289						

Among respondents that were currently unemployed, around 1 in every 5 had been employed at least once in the months following baseline and this was similar for those in the treatment and those in the Control. The number of respondents that indicated their previous employment was too small to analyze. The distribution of activities performed while unemployed were different across the treatment and Control groups, with a higher proportion of those in Control indicating that while unemployed they performed activities that benefited their communities. About 1 in every 3 participants said that while unemployed they helped neither their family nor their community.

TABLE 18: UNEMPLOYMENT

	Control		Treatment 1		Treatment 2	
	No.	%	No.	%	No.	%
34. If you are currently not employed, were you employed at any point in time during the Ninaweza program?						
Yes	48	20.9	19	21.3	12	12.9
No	182	79.1	70	78.7	81	87.1
Total	230	100	89	100	93	100
Pearson chi2(2) = 3.0578 Pr = 0.217					2.6	
35. What was your previous employment?						
Self-employed	7	14.6	4	21.1	0	0
Employed: permanent full-time	4	8.3	4	21.1	0	0
Employed: temporary full-time	**14**	**29.2**	**5**	**26.3**	**5**	**41.7**
Casual or part-time position	23	47.9	5	26.3	7	58.3
Other	0	0	1	5.3	0	0
Total	48	100	19	100	12	100
Pearson chi2(8) = 11.8366 Pr = 0.159						
33. If you are currently not employed, are you performing one of the following:						
Working in a family business	52	24.6	23	26.7	23	26.1
Community or volunteer	83	39.3	22	25.6	19	21.6
Both	4	1.9	2	2.3	5	5.7
Neither	65	30.8	31	36	32	36.4
Other	7	3.3	8	9.3	9	10.2
Total	211	100	86	100	88	100
Pearson chi2(8) = 18.2002 Pr = 0.020						

A higher proportion of respondents in Treatment 1 indicated that they received social benefits. Among the possible benefits, a higher proportion of participants in the treatment groups mentioned paid leaves. However, the small number of participants with benefits reduced the power of statistical analysis to assess difference between groups.

TABLE 19: EMPLOYMENT QUALITY

	Control		Treatment 1		Treatment 2	
	No.	%	No.	%	No.	%
30. Do you receive any social benefits?						
Yes	30	30.9	29	50	22	39.3
No	67	69.1	29	50	34	60.7
Total	97	100	58	100	56	100
Pearson chi2(2) = 5.6081 Pr = 0.061						
31. Paid leave						
Yes	5	16.7	10	34.5	8	34.8
No	25	83.3	19	65.5	15	65.2
Total	**30**	**100**	**29**	**100**	**23**	**100**
Pearson chi2(2) = 3.0374 Pr = 0.219						
31. Retirement Pension (NSSF)						
Yes	8	38.1	16	55.2	15	65.2
No	13	61.9	13	44.8	8	34.8
Total	**21**	**100**	**29**	**100**	**23**	**100**
Pearson chi2(2) = 3.3043 Pr = 0.192						
31. Health Insurance (NHIF)						
Yes	14	48.3	18	62.1	16	69.6
No	15	51.7	11	37.9	7	30.4
Total	29	100	29	100	23	100
Pearson chi2(2) = 2.5557 Pr = 0.279						
31. Unemployment Insurance						
Yes	1	3.4	2	6.9	0	0
No	28	96.6	27	93.1	23	100
Total	29	100	29	100	23	100
Pearson chi2(2) = 1.7188 Pr = 0.423						
31. Year-end bonus						
Yes	5	17.2	9	31	3	13
No	24	82.8	20	69	20	87
Total	29	100	29	100	23	100
Pearson chi2(2) = 2.8860 Pr = 0.236						
31. Performance bonus						
Yes	13	44.8	12	41.4	10	43.5
No	16	55.2	17	58.6	13	56.5
Total	29	100	29	100	23	100
Pearson chi2(2) = 0.0712 Pr = 0.965						

Participants were asked to describe their job, and based on this description were placed in a job sector category by the Evaluation Coordinator. The proportion of respondents that worked in the ICT sector (e.g. cyber cafes) was five times higher for those in Treatment 1 and three times higher for those in Treatment 2 than those in the Control.

TABLE 20: JOB SECTOR

	Control		Treatment 1		Treatment 2	
	No.	%	No.	%	No.	%
Construction	0	0.00	1	1.72	0	0.00
Education	9	9.68	6	10.34	1	1.92
Finance	1	1.08	4	6.90	1	1.92
Health	1	1.08	0	0.00	1	1.92
Hospitality	17	18.28	6	10.34	11	21.15
ICT	6	6.45	19	32.76	9	17.31
Insurance	0	0.00	1	1.72	0	0.00
Public sector	2	2.15	0	0.00	0	0.00
Retail	47	50.54	20	34.48	26	50.00
Security	1	1.08	0	0.00	0	0.00
Social service	8	8.60	0	0.00	1	1.92
Transport	0	0.00	1	1.72	1	1.92
Could not specify	1	1.08	0	0.00	1	1.92
Total	93	100.00	58	100.00	52	100.00
Pearson chi2(26) = 53.2222 Pr = 0.001						

Change in Earning Capacity

A similar number of respondents in treatment and control knew their weekly household income. Among those that knew their weekly household income, a third less households that belonged to a treatment group participant had a weekly income below 1,000 shillings.

TABLE 21: HOUSEHOLD'S INCOME

	Control		Treatment 1		Treatment 2	
	No.	%	No.	%	No.	%
49. Do you know your weekly household income?						
Yes	137	43.9	65	43.3	63	41.7
No	175	56.1	85	56.7	88	58.3
Total	312	100	150	100	151	100
Pearson chi2(2) = 0.1994 Pr = 0.905						
50. What is the weekly income of your household in Kenyan shillings?						
0 to 1000	54	40.6	16	26.2	20	32.7
1001 to 2000	35	26.3	22	36.1	18	29.5
2001 to 3000	25	18.8	10	16.4	11	18
Over 3000	19	14.3	13	21.3	12	19.7
Total	133	100	61	100	61	100
Pearson chi2(6) = 6.5131 Pr = 0.590						
48. Who is the primary wage earner in your household?						
Yourself	65	21.2	28	19.6	23	15.5
Father	79	25.7	35	24.5	34	23
Mother	61	19.9	30	21	43	29.1
Sibling	33	10.7	20	14	14	9.5
Spouse	49	16	25	17.5	20	13.5
Aunt or uncle	10	3.3	1	0.7	7	4.7
Cousin	3	1	1	0.7	3	2
Grandparent	2	0.7	0	0	1	0.7
Friend	2	0.7	2	1.4	3	2
Other	3	1	1	0.7	0	0
Total	307	100	143	100	148	100
Pearson chi2(18) = 17.4982 Pr = 0.489						

The number of hours worked by the average respondent was similar across group. The number of people per household was also similar. However, the number of people working on Treatment 1 was higher than those in Control group and this difference was statistically significant.

TABLE 22: HOUSEHOLD'S EARNING CAPACITY

	N	Mean	SE	LB	UB
28. How many hours do you typically work each week?					
C	96	34.84	2.58	29.76	39.93
T1	55	36.55	2.91	30.81	42.29
T2	53	38.83	2.63	33.64	44.02
Total	204	36.34	1.60	33.18	39.50
46. Including yourself, how many people currently live in your household?					
C	304	5.08	0.12	4.84	5.32
T1	144	5.10	0.17	4.77	5.44
T2	147	5.17	0.18	4.81	5.53
Total	595	5.11	0.09	4.94	5.28
47. Including yourself, how many people in your household are working?					
C	306	1.47	0.05	1.38	1.57
T1	146	1.71	0.07	1.57	1.86
T2	147	1.65	0.08	1.49	1.80
Total	599	1.57	0.04	1.50	1.65

Participation in the program seemed not to have had any short-term change on the participants' financial inclusion. The proportion of participants with accounts, applying for loans, and having loans approved was similar across the two groups.

TABLE 23: FINANCIAL INCLUSION

	Control		Treatment 1		Treatment 2	
	No.	%	No.	%	No.	%
51. Do you currently have an account with a bank, micro financing institution or SACCO?						
Yes	136	44.6	71	48.3	73	48.7
No	169	55.4	76	51.7	77	51.3
Total	305	100	147	100	150	100
Pearson chi2(2) = 0.9215 Pr = 0.631						
52. Have you ever applied for credit or a loan from a bank, micro financing institution or SACCO, in order to start a business or microenterprise?						
Yes, individually	13	9.5	6	8.2	6	8
Yes, in a group	13	9.5	5	6.8	2	2.7
No	111	81	62	84.9	67	89.3
Total	137	100	73	100	75	100
Pearson chi2(4) = 3.7789 Pr = 0.437						
53. Have any of the loans you applied for been approved?						
Yes, individually	7	29.2	3	27.3	4	50
Yes, in a group	9	37.5	5	45.5	2	25
No	8	33.3	3	27.3	2	25
Total	24	100	11	100	8	100
Pearson chi2(4) = 1.6293 Pr = 0.804						

The program also did not seem to have had any short-term impact on participants' entrepreneurship drive. A slightly greater proportion of Control group participants owned a business. The majority of these businesses was not registered with the city council and did not have any employees.

TABLE 24: ENTREPRENEURSHIP

	Control		Treatment 1		Treatment 2	
	No.	%	No.	%	No.	%
55. Do you currently own a business or microenterprise?						
Yes, individually	9	15.3	15	10.2	14	9.4
Yes, in a group	0	0	2	1.4	4	2.7
No	50	84.7	130	88.4	131	87.9
Total	59	100	147	100	149	100
Pearson chi2(4) = 3.4454 Pr = 0.486						
56. Is your current business or microenterprise registered with the city council?						
Yes	8	26.7	4	23.5	5	27.8
No	22	73.3	13	76.5	13	72.2
Total	30	100	17	100	18	100
Pearson chi2(2) = 0.0893 Pr = 0.956						
57. Do you currently have any employees?						
Yes	9	26.5	7	38.9	5	27.8
No	25	73.5	11	61.1	13	72.2
Total	34	100	18	100	18	100
Pearson chi2(2) = 0.9213 Pr = 0.631						

Only a small proportion of participants owned a business with employees and statistical tests regarding the number of employees in such a small sample would not be meaningful.

TABLE 25: NUMBERS OF EMPLOYEES

	N	Mean	SE	LB	UB
28. How many hours do you typically work each week?					
C	7	1.71	0.00	1.71	1.71
T1	6	1.33	0.00	1.33	1.33
T2	5	1.80	0.00	1.80	1.80
Total	18	1.61	0.00	1.61	1.61

PROGRAMMATIC CONSIDERATIONS

At the end-line participants were asked about their impression of the program and ways the program could be improved. These are discussed below. Participants were also asked about the types of support they received during the internship and job placement support and these can be found in the appendix.

Participants' Assessment of the Ninaweza Program

Participants in the treatment group were asked specific questions about the training program. The majority of respondents that answered the questions said that the Ninaweza training program helped them prepare for employment and helped them get employed.

TABLE 26: IMPORTANCE OF THE PROGRAM

	Treatment 1		Treatment 2	
	No.	%	No.	%
61. Did Ninaweza help you get employed?				
Yes	46	65.7	31	59.6
No	24	34.3	21	40.4
Total	70	100	52	100
Pearson chi2(1) = 0.4767 Pr = 0.490				
66. Did Ninaweza help you prepare for employment?				
Yes	75	91.5	87	94.6
No	7	8.5	5	5.4
Total	82	100	92	100
Pearson chi2(1) = 0.6497 Pr = 0.420				

The majority of treatment group participants said that the ICT training was very important on their preparation for employment and on helping them gain employment.

TABLE 27: IMPORTANCE OF THE ICT TRAINING

	Treatment 1		Treatment 2	
	No.	%	No.	%
62. How important was the ICT training in helping you get employed?				
Not important	5	7.2	2	3.7
Important	13	18.8	20	37
Very important	51	73.9	32	59.3
Total	69	100	54	100
Pearson chi2(2) = 5.3706 Pr = 0.068				
67. How important is the ICT training in preparing you for employment?				
Not important	3	3.7	0	0
Important	18	22	21	22.8
Very important	59	72	69	75
Unsure	2	2.4	2	2.2
Total	82	100	92	100
Pearson chi2(3) = 3.4487 Pr = 0.327				

Similarly with the ICT training, the majority of the Treatment 1 participants said that the life skills training was very important on their preparation for employment and on helping them gain employment (Treatment 2 participants did not receive training in life skills).

TABLE 28: IMPORTANCE OF THE LIFE SKILLS TRAINING

	Treatment 1	
	No.	%
63. How important was the Life-skills training in helping you get employed?		
Not important	2	2.9
Important	6	8.7
Very important	61	88.4
Unsure	0	0
Not applicable	0	0
Total	69	100
Pearson chi2(4) = 17.6864 Pr = 0.001		
68. How important is the Life-skills training in preparing you for employment?		
Not important	3	3.7
Important	11	13.4
Very important	67	81.7
Unsure	1	1.2
Total	82	100
Pearson chi2(3) = 6.2746 Pr = 0.099		

The majority of treatment group participants also said that the internship component was very important on their preparation for employment and on helping them gain employment. However, the proportion of respondents stating that it was very important was smaller than the proportion that answered the same way for the training components of the program.

TABLE 29: IMPORTANCE OF THE INTERNSHIP COMPONENT

	Treatment 1		Treatment 2	
	No.	%	No.	%
64. How important was the internship in helping you get employed?				
Not important	7	10.8	2	4.1
Important	7	10.8	15	30.6
Very important	36	55.4	14	28.6
Unsure	6	9.2	0	0
Not applicable	9	13.8	18	36.7
Total	65	100	49	100
Pearson chi2(4) = 22.5658 Pr = 0.000				
69. How important is the internship in preparing you for employment?				
Not important	2	2.5	0	0
Important	21	26.6	20	22
Very important	46	58.2	59	64.8
Unsure	2	2.5	2	2.2
Not applicable	8	10.1	10	11
Total	79	100	91	100
Pearson chi2(4) = 3.0241 Pr = 0.554				

Similarly to the internship component of the program, the majority of treatment group participants said that the job placement support was very important on their preparation for employment and on helping them gain employment. However, as with the internship component of the program, the proportion of respondents stating that it was very important was smaller than the proportion that answered the same way for the training component.

TABLE 30: IMPORTANCE OF THE JOB PLACEMENT SUPPORT

	Treatment 1		Treatment 2	
	No.	%	No.	%
65. How important was the placement support in helping you get employed?				
Not important	7	10.8	2	4
Important	17	26.2	7	14
Very important	34	52.3	24	48
Unsure	3	4.6	4	8
Not applicable	4	6.2	13	26
Total	65	100	50	100
Pearson chi2(4) = 11.8207 Pr = 0.019				
70. How important is the placement support in preparing you for employment?				
Not important	3	3.7	0	0
Important	22	27.2	29	31.5
Very important	46	56.8	50	54.3
Unsure	4	4.9	4	4.3
Not applicable	6	7.4	9	9.8
Total	81	100	92	100
Pearson chi2(4) = 4.0444 Pr = 0.400				

Although the majority of treatment group participants stated that the time allocated for the training was adequate, about one-third mentioned that the training should have had more time allocated to it.

TABLE 31: SATISFACTION WITH THE DURATION OF THE PROGRAM

	Treatment 1		Treatment 2	
	No.	%	No.	%
71. In your opinion was the time allocated for training adequate?				
Yes	101	68.2	97	65.1
No	47	31.8	52	34.9
Total	148	100	149	100
Pearson chi2(1) = 0.3300 Pr = 0.566				

In addition to the participants' general sense about the program's usefulness in preparing them for employment and helping them gain employment, the overwhelming majority of treatment group participants that completed the program stated that they would recommend the Ninaweza program to a friend. This provides a strong indication of participants overall satisfaction with the program.

TABLE 32: SATISFACTION WITH THE PROGRAM

	Treatment 1		Treatment 2	
	No.	%	No.	%
75. Would you recommend the Ninaweza program to a friend?				
Yes	137	97.9	145	100
No	3	2.1	0	0
Total	140	100	145	100
Pearson chi2(1) = 3.1402 Pr = 0.076				

The outcomes of the in-depth interviews provided more contextual information on the benefits of the program. Respondents were asked about how the program on its entirety assisted them in getting their current employment. Participants said that the program taught them how to write a CV; how to prepare for an interview, how to prepare them to work in busy office environment; and how to cope with changing technology. It also improved their typing skills. Treatment 1 participants also listed that the program provided them with insights on how to work with colleagues of different temperaments.

Respondents were also asked about specific examples of how each component helped them prepare for employment. The respondents listed several benefits. They were also asked about how each component could be improved and what was not covered by the components but that could help them find employment.

Q11: How did the following components of the program prepare you for employment?

- **ICT training:** Learning Microsoft Office suite (Word, Excel, Power Point, etc.). Learning how to write a CV in Word. Learning how to use internet and email. Being comfortable using and fixing computers. Learning how to type and do data entry. Learning to write a report.
- **Life-Skills training:** Helping to think about skills that could be added to a CV. Learning how to communicate with potential employers. Improving interview skills. Learning how to better manage time. Improving interpersonal skills. Learning how to maximize available resources.
- **Internship:** Gaining experience in an office environment. Learning skills that helped secure current job. Meeting the people that helped secure current job. Learning how to better manage time. Learning marketing skills. Improving interpersonal skills.
- **Job placement support:** Improving interview skills. Learning how to better write a CV. Learning how to search for a job using multiple methods.

Q12. In what ways can the following components be improved to better prepare you for employment?

- **ICT training:** More computers; more teachers; more time for the trainings; teach computer repair in smaller groups; more individual attention specially for the slow learns; more practices with the operational system; internet access for all computers; books available for studying; providing transport stipend(this was later added to the program); upgrading Word and Excel packages.
- **Life-Skills training:** Provide more example of problem solving techniques; teach on dressing code; more opportunity to practice public speech; training in debating; more role-play during the lessons.
- **Internship:** Ensuring that all individuals get an internship and in a timely fashion; providing transportation stipend throughout entire internship; identifying better employers or allow employers to be switched midway

through internship; better relating what is taught at ACWICT to the internship obtained; relating internship to ICT training.
- **Job placement support:** Sending an appropriate number of interviewees based on the number of positions a company has to fill; providing transportation stipend; providing more seminars; more help in securing a job and/or an internship.

Q13: Beyond the components of the program, what else may assist you in preparing for employment?
- Course on entrepreneurial skills;
- Provide funds to start a business;
- Create a network community with former program participants;
- More attention to be given to music edition;
- Handwriting lessons;
- Link program with a formal education degree because some companies do not accept just a certificate;
- Provide transcripts with grades.

Participants in the in-depth interview were asked about positive changes they had experience as a result of the program, what they had enjoyed the most about the program and how the program could be improved. The responses were ranked based on their frequency.

Q15.1: What positive change have you experienced as a result of the Ninaweza program?
- Gained computer skills;
- Learned how to repair computers;
- Learned how to fix projectors;
- Improved interpersonal skills;
- Improved work ethics;
- Gained confidence;
- Learned how to be more pro-active;
- Learned how to network;
- Learned job search techniques.

Q16: What did you enjoy most about the Ninaweza program?
- Working with and learning about computers;
- Typing skills;
- Learning how to repair a computer;
- Browsing the internet;
- BPO training;
- Learning life-skills techniques;
- Learning how to interact with customers;
- Learning how to deal with angry clients;
- The teachers.

Q17: How can the Ninaweza program be improved in the future?

- Adding more computers with internet access;
- Providing more and continued training;
- Adding more training sites;
- More individual attention during the training;
- Improving internship and job placement assistance;
- Offer more internship and to a more diverse pool of companies;
- Providing textbooks;
- Providing more transportation stipend;
- Accepting more participants;
- Including young men in the program.

Internship Employers' Assessment of the Program

Following the exit survey interview, Treatment 1 participants were grouped into job categories based on their internship. Focus group discussions (FGD) were conducted with internship employers for those in Cohort 1. For Cohorts 3 and 5 the FGD were replaced with interviews. The job categories used were: administration assistant; support technician and; sales, marketing or BPO.

Administration Assistants:

These were employers of interns that answered the phone and took notes, made lists of tasks, cleaned office and assisted supervisor in general ways.

What types of skills are required for the positions that the young women have been filling in your companies?

- Life skills;
- Customer service;
- Public relations;
- Computers;
- Accounting and administration.

What skills are the young women coming from Ninaweza lacking?

- Stronger life-skills;
- More updated ICT skills;
- Background on public relations;
- Background on accounting and administration.

What difference do you see between other interns and the ones coming from Ninaweza?

- Some of the employers complained that the women from Ninaweza were not as punctual and motivated to learn as the other interns.

What should Ninaweza do to better prepare young women for the kind of work they are doing with you?

- Improve life-skills training;

- Teach them work ethics;
- Improve ICT training;
- Add classes on public relations to their training;
- Add classes on accounting/administration to their training.

How satisfied are you with the work the young women performed under your supervision?

- About three fourths of the employers were satisfied with the Ninaweza interns.

Support Technician:

These were employers of interns that did computer repair, maintenance and network setup.

What types of skills are required for the positions that the young women have been filling in your companies?

- Computer hardware skills;
- Customer service;
- Life-skills;
- Knowledge of Microsoft Office Suite;
- Typing.

What skills are the young women coming from Ninaweza lacking?

- Software skills (better knowledge of Excel was the most mentioned);
- Faster typing;
- Enthusiasm for ICT sector;
- Exposure to different types of machines;
- Customer service;
- Proper life-skills;
- Confidence;
- Positive attitude towards work.

What difference do you see between other interns and the ones coming from Ninaweza?

- Most employers thought that women from Ninaweza were fast learners but had worst computer skills than some of the other interns.

What should Ninaweza do to better prepare young women for the kind of work they are doing with you?

- Lengthen the training period;
- Improve their self-esteem;
- Train them on financial management;
- Train them on leadership skills.

How satisfied are you with the work the young women performed under your supervision?

- Almost all employers were satisfied or very satisfied with the interns from Ninaweza.

Salesman, Marketer and BPO employee:

These were employers of interns that called clients, sold products, helped prepare marketing materials and worked in call center.

What types of skills are required for the positions that the young women have been filling in your companies?

- Interpersonal skills;
- Basic computer skills.

What skills are the young women coming from Ninaweza lacking?

- Software skills;
- Faster typing;
- Better life skills.

What difference do you see between other interns and the ones coming from Ninaweza?

- A number of employers thought that interns from the Ninaweza program lacked positive attitude towards work, were not attentive, were not punctual and could not multi-task.

What should Ninaweza do to better prepare young women for the kind of work they are doing with you?

- Provide counseling to improve their attitude towards work;
- Remove culture of vulnerability because it seems they are waiting for handouts;
- Spend more time on their training before transitioning them to an internship.

How satisfied are you with the work the young women performed under your supervision?

- About four fifths of the employers were satisfied or very satisfied with the interns from Ninaweza.

CONCLUSION

The impact evaluation established that the training component in ICT and Life skills of the Ninaweza program succeeded in providing those treated with technical knowledge in IT and knowledge of Life skills that otherwise they would not have acquired.

The impact evaluation also established that among those who were not confident in their skill set, the program was successful in bolstering their confidence.

Finally, the impact evaluation indicates that, those who participated in Treatment 1 showed greater gains in their likelihood of obtaining a job than those in the Control group. Those who participated in Treatment 1 or 2 showed greater gains in their weekly income than those in the Control group.

The assessment suggested that treatment group participants were more likely to apply for a job then their control group counterparts. Among those who applied for a job, treatment and control group participants also differed on the search method used for finding a job. Treatment group participants were more likely to review job advertisements, use recruiting agencies (or colleges), network or attend an internship. Those in Treatment 1 were also more likely to attend internship than those in Treatment 2. Treatment group participants were also more optimistic about their chances of finding quality employment than those in the control group, and the optimist was higher for those in Treatment 1 than those in Treatment 2.

While the number of people per household was also similar across group, the number of people working on households that belonged to Treatment 1 was higher than those in Control group. The assessment also suggested that the type of employment varied between these groups, with treatment group participants being more likely to hold a full-time position and control group participants being more likely to work as a casual laborer. Quality employment was also reflected on social benefits with a higher proportion of respondents in Treatment 1 indicating that they received social benefits than those in the Control and paid leave was the most mentioned benefit.

These findings suggest that the life skills training might have provided advantages that helped participants obtain more desirable jobs.

GALLERY

Top left: Graduates showcase the computer maintenance and repair skills they acquired through the Ninaweza program.
Top right: ACWICT staff conduct an orientation for new Ninaweza participants.
Bottom: Ninaweza participants complete the baseline survey.

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