

Effect of Youth in Action on Work Readiness and Socioeconomic Outcomes: Findings from Malawi

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Youth in Action (YiA) is a six-year program implemented by Save the Children in partnership with the Mastercard Foundation. The goal of YiA is to improve the socioeconomic status of around 40,000 out-of-school young people (12-18 years), both girls and boys, in rural Burkina Faso, Egypt, Ethiopia, Malawi, and Uganda. The Theory of Change is to achieve this by enhancing youths' work readiness skills (financial literacy, foundational literacy & numeracy, transferable skills, and work supports), facilitating their action in livelihoods opportunities, and building key partnerships to remove barriers to youth's participation in their economies and communities. The project in Malawi aims to reach 7,050 youth in some of the most vulnerable and rural communities of Mchinji, Ntchisi, and Kasungu districts in the Central Region.

Study Design

This study was designed to understand how youth work readiness (financial literacy, work support & resources, academic skills, and transferable skills) might change for a sample of youth over the program period, and how those changes might impact socioeconomic outcomes (income earning status, adequate savings, credit access). It was designed as a pre-post study with no control or comparison group.

Sample

We followed 789 Malawian youth and collected data from 579 at posttest. We did not find any practically significant differences between youth from whom we were and were not able to collect posttest data.

% female	FEMALE		44%
Average age	AGE		16
% who speak program language	PROGRAM LANGUAGE		100%
Average # of languages spoken or understood	LANGUAGES		1
% who last attended school >5 months ago	OUT OF SCHOOL		99%
Average # of household members	FAMILY		5
% of DHS possessions present for average youth	SES		36%
% who have a child	PARENT		13%
% who leave community for >1 month at a time	LEAVES COMMUNITY		17%
% who had job for longer than 1 month	JOB		42%

Research Questions and Analytic Strategy

- What gains in work readiness and socioeconomic outcomes do we observe over the program period?
- Are there any equity considerations (age, sex, or wealth) that explain these changes?

Change analysis: Repeated measures ANOVA to assess the significance of changes in means from pretest to posttest

Equity analysis: Predict changes from step one (above) using youth's sex, age, wealth, schooling and parental status

Predicting change: Multivariate regression models to see if pretest-posttest changes in work readiness outcomes predicted posttest levels of socioeconomic outcomes

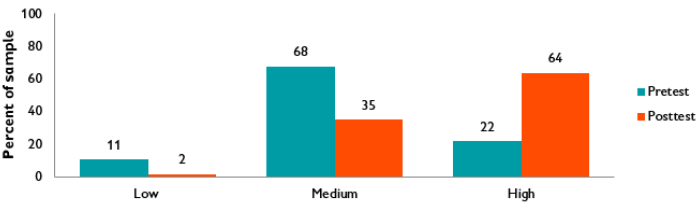
Findings

Over the program period, we found statistically and practically significant improvements in the work readiness skills and socioeconomic outcomes for YiA youth. However, the size of these improvements was small. Most of the equity factors (sex, age, and wealth) did not substantively predict gains in work readiness or socioeconomic outcomes; the few statistically significant effects we found were largely artifacts of measurement error or response invariability.

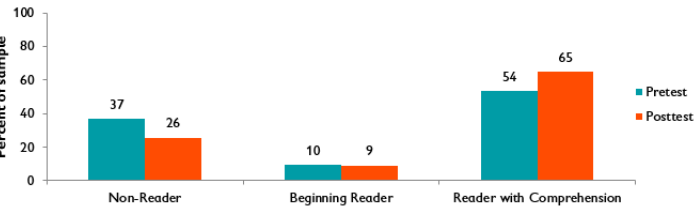
Work Readiness Outcome		Significant and practical gains from pretest to posttest?	Equity differences?
Financial Literacy		64% of youth reported high levels of financial literacy at posttest, compared to 22% at pretest	No
Work Support and Resources	Tangible Assets	Average youth reported having one additional tangible asset by posttest.	No
	Family and Community Support	Because of limited number of youth who provided this information at pretest and posttest, we did not fit predictive models	n/a
Foundational Academic Skills	Literacy	By posttest 65% of youth were able to read with comprehension, as compared to 54% at pretest	No
	Numeracy	Average youth could answer 49% of questions correctly at posttest, compared to 45% at pretest	No
Transferable Skills	DAP	By posttest 71% of youth met or exceeded DAP threshold, compared to 62% at pretest	No
	Self-Employment Skills	Average youth moved from having inadequate to adequate self-employment skills	No
	Workplace Teamwork	Average youth moved from having inadequate to adequate Workplace Teamwork and Drive	No
Socioeconomic Outcome		Significant and practical gains from pretest to posttest?	Equity differences?
Income Earning Status		No. At pretest 42% of youth reported having a job, compared to 37% at the end of the program	No
Adequate Savings		Average youth moved from having a low level of savings to having a medium level of savings	No
Credit Access		Positive gains in financial literacy associated with lower income at posttest.	No

Below, we present some of the important substantive findings.

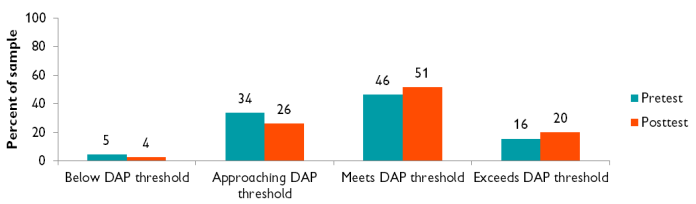
At pretest 22% of youth reported comfort with budgeting and savings: high financial literacy. By posttest nearly all youth reported comfort with either budgeting or savings, with two-thirds of the youth reporting comfort with both sets of skills (see figure below).



We also found significant increases in youth literacy. However, this improvement had a very small magnitude. Youth had a moderately high level of literacy when entering the program. Just over 50% of youth could read with comprehension. Because the literacy curriculum was mostly remedial, the percent of youth who could read with comprehension did not increase markedly by posttest (see figure below).



We found something similar with developmental assets. At pretest 62% of youth met or exceeded the DAP threshold. This did not leave a lot of room for improvement over the program period (see figure below).



Gains in financial literacy and tangible assets were associated with a higher level of savings and credit access at posttest. It is possible that youth were able to translate their savings knowledge into practical skills that allowed them to save more and access more credit. Moreover, youth who were able to grow their tangible assets during the program period may have had more collateral to put down when they went to access a loan, allowing them more access to better credit sources.

Socioeconomic Outcome		Posttest outcome predicted by change in work readiness outcomes?	Equity differences?
Job status	Hours Worked	Yes. Positive gains in tangible assets associated with fewer hours worked at posttest	No
	Income	Yes. Positive gains in financial literacy associated with lower income at posttest.	No
	Productive Employment	No	No
	Hazardous Employment	No	Yes. Male youth reported higher levels of hazardous employment at posttest compared to female youth
Adequate Savings		Yes. Positive gains in financial literacy and tangible assets associated with higher posttest savings amounts	No
Credit Access		Yes. Positive gains in financial literacy and tangible assets associated with higher posttest access to credit	No

Limitations

- Except for the Literacy and Numeracy, all other variables are self-reported; there are no objective indicators of those variables. The data might therefore not be fully accurate if youth responded either in an overly positive or overly negative way.
- We were unable to collect posttest data from 27% of the youth from whom we collected pretest data; it is possible that the youth from whom we were unable to collect posttest data differed on some unobserved (unmeasured) characteristics.
- We were expecting a larger proportion of youth to report working at posttest. The low work rate at pretest and posttest means that we did not have sufficient data on the change in socioeconomic outcomes over the program period.

Messages

1. Youth who attended YiA in Malawi reported improvements in nearly all work readiness outcomes, though the magnitude of improvements was small.
2. Overall, the effect of YiA was similar for both females and males, youth of different ages, as well as more and less affluent youth.
3. Because of underreporting of job status, we have limited evidence of the effect of YiA on the socioeconomic status of youth.

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Background

About 89 million youth between the ages of 12-24 are part of a growing cohort of out-of-school youth, approximately half of whom live in Sub-Saharan Africa². Youth in continental Africa and around the world have “aspirations and dreams of who they want to be, how they will contribute to their communities and the work they would like to do”³. However, many out-of-school rural youth face limited formal socioeconomic opportunities, are often unable to access systems and structures (such as quality formal education or the formal economy)⁴, and lack foundational skills that could support them to pursue the futures they envisage for themselves⁵. In rural contexts, many young people have significant responsibilities in their homes, family farms, or family businesses; they may also move in and out of different informal experiences and seek income from a variety of sources. However, many of these youth are unable to find pathways out of poverty or are unable to explore social and economic opportunities to realize their goals⁶.

Youth under the age of 18 are especially vulnerable; being under the recognized age of majority in most countries, they are often at risk of being engaged in hazardous work⁷. However, this stage in life is typically decisive in how youth will transition from school to work and for the likelihood of transiting out of poverty. Many youth in the majority world are already out of school and are trying to provide for themselves and their families. Yet youth below 18-years of age are often excluded in the design or implementation of policies and programs supporting youth employment.

The situation is especially true for Malawi. Malawi is home to a young population; two-thirds of the population is under 25 years and 40% of the youth population between 15-24 years is unemployed⁸. But these statistics do not capture the fact that Malawi was ranked 170 out of 188 countries and territories in the UNDP Human Development Index in 2016⁹. This lack of development means that a majority of the population in Malawi live in rural areas of the country, and almost 70% of the employed youth population work in the agricultural sector. The Government of Malawi has recognized the important role that agriculture plays as a source of income and livelihood improvement for youth in the country.

Youth in Action Program (YiA)

Youth in Action (YiA) is a six-year program implemented by Save the Children in partnership with Mastercard Foundation. The goal of YiA is to improve the socioeconomic status of around 40,000 out-of-school young people (12-18 years), both girls and boys, in rural Burkina Faso, Egypt, Ethiopia, Malawi, and Uganda. The Theory of Change (see Figure 1) is to achieve this by enhancing youths’ foundational skills and social assets, facilitating their action in livelihoods opportunities, and building key partnerships to remove barriers to youth’s participation in their economies and communities.

YiA supports youth to identify and explore livelihood opportunities through a combination of nonformal education and practice-oriented learning experiences. For many youth, these livelihood opportunities are grounded in

² Inoue, K., Di Gropello, E., Taylor, Y. S., & Gresham, J. (2015). *Out-of-school youth in Sub-Saharan Africa: A policy perspective*. World Bank Publications.

³ Lee, M. (2015). *Mixed livelihoods: A reality for youth in Africa*. The MasterCard Foundation: Toronto, Canada.

⁴ J-PAL. (2013). *J-PAL youth initiative review paper*. Cambridge, MA: Abdul Latif Jameel Poverty Action Lab.

⁵ UNESCO. (2012). *Youth and skills: Putting education to work*. Paris, France: UNESCO.

⁶ ILO. (2015). *Global employment trends for youth 2015*. Geneva, Switzerland: International Labour Organization.

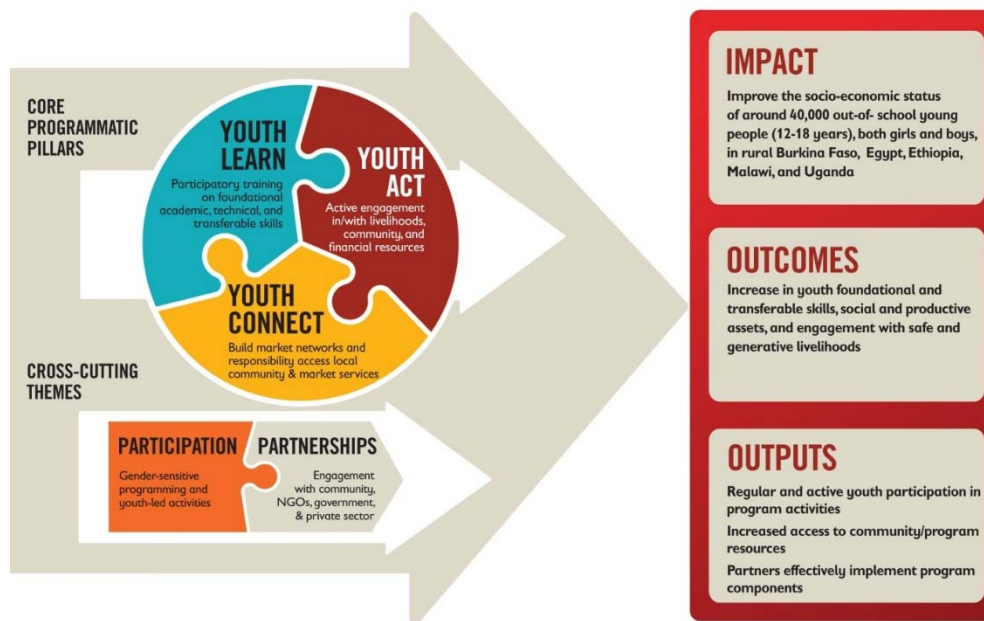
⁷ FAO (2016). *Global forum on food security and nutrition*. Discussion Paper No. 127.

⁸ Population Reference Bureau (2014). Malawi youth data sheet. Retrieved from <http://www.prb.org/pdf14/malawi-youth-datasheet-2014.pdf>

⁹ UNDP (2016). Human development for everyone: Briefing note for countries on the 2016 Human Development Report Malawi. Retrieved from http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/MWI.pdf

agricultural value chains or agri-business. While there is a wide array of programs focusing on education for out-of-school youth or on youth employment, very few incorporate employability, social assets, literacy, numeracy, financial literacy, and real-life experience. YiA integrates all of the above into a participatory learning cycle, designed to increase livelihoods opportunities through the acquisition of a broad spectrum of foundational and work-readiness skills.

Figure 1. YiA Theory of Change



Youth in Action Malawi

In Malawi, Youth in Action was launched in 2012 with the aim of reaching 7,050 young people between 15-18 years, living in the rural communities of Mchinji, Ntchisi, and Kasungu districts in the Central Region of the country.

Malawi follows a three-phase model of the program that rolls out over seven consecutive months. The first phase—selection—deals with the recruitment of rural youth to a program cohort. Community advisory groups help the program recruit and select youth for the program, coordinating the mobilization events and screening process. The second phase—learning—consists of a four-month curriculum focused on foundational literacy, numeracy, financial literacy, and transferable skills. Youth meet three times a week, for three-hour sessions.

The last phase—action—lasts for three months. In this phase, youth apply the skills from the learning phase to a pathway option that allows for active and mentored learning. In Malawi, a majority (88%) of youth focus on a self-employment/entrepreneurship activity in the action phase, with 7% of the youth working on an apprenticeship and 5% attending a vocational training program. During the first-month youth focus on developing business plans, approval for their business, specific business training, cash transfer, youth-led enterprise development, and links to financial systems/markets. Youth are supported with ~USD 90 each. In the last two months, the program focuses on mentoring youth through their business. Youth are connected with adults in their communities who can provide specific mentorship to help them establish their business.

Study Design

This report presents findings on the Youth in Action (YiA) program in Malawi. The pretest and posttest¹⁰ data from this Program Outcomes Study (POS) will be used for two purposes:

- Understand the improvements in Intermediate Work Readiness Outcomes (financial literacy, work support and resources, foundational academic skills, and transferable skills) in youth who have been engaged in the YiA program model.
- Understand how improvements in these Intermediate Work Readiness Outcomes relate to improvements in youth Socioeconomic Outcomes.

The pretest data were collected on March 2017 followed by posttest data collection at the end of youth's full engagement with the program in October 2017. The findings from this study are presented in detail to paint a picture of the demographic and socioeconomic conditions of the youth in the YiA program. In this report we explore the relationships between changes in work readiness skills and changes in socioeconomic outcomes for youth who have been part of the YiA program.

Program Outcomes Study indicators

Quality, meaningful data are foundational for planning, monitoring progress, and documenting results in working with young people. The surveys, on which the Program Outcomes Study is based, include a Demographic Survey, Literacy Assessment, Numeracy Assessment, Developmental Assets Profile (DAP) Survey, and Livelihood Survey.

- **Demographic Survey:** The survey provides background information on youth demographics, socioeconomic status (SES), and household information. We use an adapted version of the wealth questions from the Demographic and Household Survey (DHS) to understand the SES of youth.
- **Literacy Placement Tool:** Primarily designed as a tool to place youth in mixed-literacy groups, this tool also serves as an assessment of the youth's foundational literacy. It provides information on a youth's ability to identify letters, read with fluency & accuracy, and comprehension.
- **Numeracy Assessment:** This survey provides us with a picture of youths' foundational numeracy skills, especially their number identification, mathematical operations, and word problems. The word problems are designed to be practical market-based situations that youth may experience in their livelihood development.
- **DAP Survey:** The DAP Survey consists of 58 items that ask young people how often or how much they experience a variety of possible strengths in themselves, with their friends, and in their families, schools, and communities.
- **Livelihood Survey¹¹:** Since YiA is focused on learning for livelihood readiness, an additional 27 items were administered at the same time as the DAP Survey. These items assess relevant work readiness learning, skills, and experiences. The Livelihood Survey also asks questions about employment and engagement with the labor market.

Research Design

The purpose of the POS is to collect data on the primary outcomes of YiA that are part of the program's Theory of Change. The study is designed to understand how youth work readiness might change for a sample of youth over the program period, and how those changes might impact socioeconomic outcomes.

Table 1 is an overview of the intermediate work readiness outcomes and ultimate socioeconomic outcomes in the study.

¹⁰ We use the terms "pretest" and "posttest" to reflect the waves of data collection. Pretest data for this study are collected at the start of a cohort's engagement with YiA. Posttest data are collected at the end of the cohort's engagement with YiA.

¹¹ This survey was also referred to as the "Plus" section during data collection.

Table 1. Outcomes of the POS at two levels: Intermediate work readiness and socioeconomic outcomes of YiA

Intermediate Work Readiness Outcomes	Socioeconomic Outcomes
<ul style="list-style-type: none"> • <u>Financial Literacy</u> <ul style="list-style-type: none"> • Comfort managing money • Budgeting skills • Savings skills • <u>Work Support & Resources</u> <ul style="list-style-type: none"> • Tangible assets • Family support for work development • Community support for work development • <u>Foundational Academic Skills</u> <ul style="list-style-type: none"> • Literacy • Numeracy • <u>Transferable Skills</u> <ul style="list-style-type: none"> • Developmental assets • Self-employment skills • Workplace teamwork and drive 	<ul style="list-style-type: none"> • <u>Income Earning Status</u> <ul style="list-style-type: none"> • Job status • Hours Worked • Daily income • Productive employment • Hazardous employment • <u>Adequate Savings</u> • <u>Adequate Credit Access</u>

The evidence on the relationship between work readiness skills and socioeconomic outcomes, especially for youth in low- and middle-income countries, is strong and positive¹². Livelihood development programs that include these work readiness skills in a systematic and deliberate manner have demonstrated positive effects on youth economic outcomes, like income and job promotion¹³. Employers also report being more satisfied with youth who have been through rigorous livelihood development programs that have incorporated life skills and financial training¹⁴. Overall, the extant literature suggests that work readiness training for youth is strongly associated with employment opportunities for youth, levels of income among youth in entry-level positions, level of promotion, and employer satisfaction¹⁵.

Research Questions

To establish a starting point and build an evidence base for measuring change brought about by the project over time, we asked the following research questions.

- RQ1. What is the relationship between pretest levels of work readiness skills and posttest levels of work readiness outcomes?
- RQ2. Are there any equity considerations (e.g.: age, sex, or wealth) that explain the change in work readiness outcomes between pretest and posttest?

¹² USAID. (2013a). *State of the field report: Examining the evidence in youth workforce development*. Washington D.C.: USAID.

¹³ Ibarraran, P., et al. (2012). Life skills, employability and training for disadvantaged youth: Evidence from a randomized evaluation design. *IZA Discussion Papers Series*, 6617, 1–24. Kluve, J., et al. (2016). “Do Youth Employment Programs Improve Labor Market Outcomes? A Systematic Review.” *IZA Discussion Paper Series*, no. 10263.

¹⁴ International Youth Foundation. (2014). *Strengthening life skills for youth: A practical guide to quality programming*. Baltimore, MD: IYF.











¹⁵ Brown, A., Rankin, K., Picon, M., & Cameron, D. (2015). *The state of evidence on the impact of transferable skills programming on youth in low- and middle-income countries*. New Delhi, India: International Initiative for Impact Evaluation. Lippman, L. H., Ryberg, R., Carney, R., & Moore, K. A. (2015). *Key “soft skills” that foster youth workforce success: Toward a consensus across fields*. Washington D.C.: Child Trends.

RQ3. What is the relationship between the change in levels of work readiness outcomes and change in socioeconomic outcomes between pretest and posttest?

Sample

The aim of this study was not to offer a representative picture of all youth who go through YiA in Malawi over the six years of the project. Rather, the aim was to understand what changes we see in a sample of youth who attend the program at a point in the project cycle when the YiA program in Malawi is functioning as the program designers intended. The Malawi country team decided to focus the study on cohort 11. In Table 2 we present the demographic characteristics of this sample at pretest.

Table 2. Demographic characteristics of the Malawian youth (n=789) who were part of the POS pretest data collection

% female	FEMALE		44%
Average age	AGE		16
% who speak program language	PROGRAM LANGUAGE		100%
Average # of languages spoken or understood	LANGUAGES		1
% who last attended school >5 months ago	OUT OF SCHOOL		99%
Average # of household members	FAMILY		5
% of DHS possessions present for average youth	SES		36%
% who have a child	PARENT		13%
% who leave community for >1 month at a time	LEAVES COMMUNITY		17%
% who had job for longer than 1 month	JOB		42%

Analysis Plan

In this report, we focus on the posttest research questions. As an initial step, we fit models to understand any changes in intermediate work readiness outcome from pretest to posttest. Changes¹⁶ in scores between pretest and posttest were reflected by two scores: (1) changes in the percent of youth at various levels of the outcome (e.g., high, medium,

¹⁶ “Change” in scores from pretest to posttest can only be calculated for youth from whom we have both pretest and posttest data. Because of missing data and youth non-response the sample sizes for our comparisons are often less than n=789.

low); and (2) changes in the mean score of the outcome. We used repeated measures ANOVA to assess the significance of changes in means from pretest to posttest. In addition to presenting statistical significance (a result's p level), we also report effect size (η^2) to show how meaningful a result is in practical terms. Effect sizes of .25 or larger are generally considered substantively important, those between .10 and .25 to be a small effect, and those under .10 to be negligible.

Our second step was to conduct an equity analysis: predict changes from step one (above) using the demographic characteristics of the youth. We used youth's sex, age, and an index of household possessions—an indication of family wealth—to predict gains in each work readiness outcome. In other words, we fit multivariate regression models where we regressed the change score of each work readiness outcome on sex, age, and household wealth¹⁷.

Our last step was to understand whether changes from pretest to posttest in work readiness outcomes predicted changes in socioeconomic outcomes. We fit multivariate regression models for each socioeconomic outcome to see if pretest-posttest changes in work readiness outcomes predicted changes in these socioeconomic outcomes. Our models controlled for the differential effects of age, sex, and household wealth.

Pretest-Posttest Sample Comparison

Of the pretest sample of 789 youth, 579 youth were able to successfully participate and complete the posttest survey at the end of the program cycle. The full sample attrition rate was 27%. In order to understand if our estimates of the effect of the YiA program would be biased due to the missing youth in our final pretest-posttest comparison sample, we fit a model to understand if attrition was predicted by any of the observed demographic characteristics of youth. We found that demographic characteristics including age, sex, household possessions score (an indicator of family socioeconomic status), being a parent and work status were not significant predictors of attrition. Please see [Appendix A](#) for a table with the fitted estimates from our logistic regression model.

Controlling for all other demographic factors, we found that level of schooling was a significant predictor of attrition at posttest. The average youth with primary or lower levels of schooling had 38% higher odds of not returning to take the survey at posttest as compared to youth with secondary or higher levels of schooling. However, we do not believe that this is a substantively important finding. The variable for schooling captures youth level of schooling and not the actual grade completed. So, a one unit difference reflects a change from primary education to secondary education rather than a move from grade one to grade two. Since 83% of the sample reported having completed primary school, there is limited variation. Hence, we believe this finding is an artifact of the data and not substantively important. Although the exact reasons for this attrition are unclear, it is likely that these youth were unable to attend data collection due to conflicting personal, work, or family commitments.

¹⁷ We also collected data on whether or not the youth was a parent, languages spoken, and last level of schooling completed. We decided not to use these demographic variables in our models because of the low variability in each. For example, only 13% of the youth reported having a child. Additionally, the schooling variable asked youth which level (not grade) of schooling they had last completed. Across the five levels (pre-school, primary, secondary, non-formal, and no school), 83% of the youth reported being in the primary school level. This left very few youth spread across the other four levels, and very little predictive capacity in this variable.

Findings

Change in Work Readiness Outcomes from Pretest to Posttest

There were significant changes in intermediate work readiness outcomes from pretest to posttest. For the purposes of this report, work readiness outcomes include financial literacy, work supports and resources, foundational academic skills, and transferable skills (see Table 1). The following pages expand on these results.

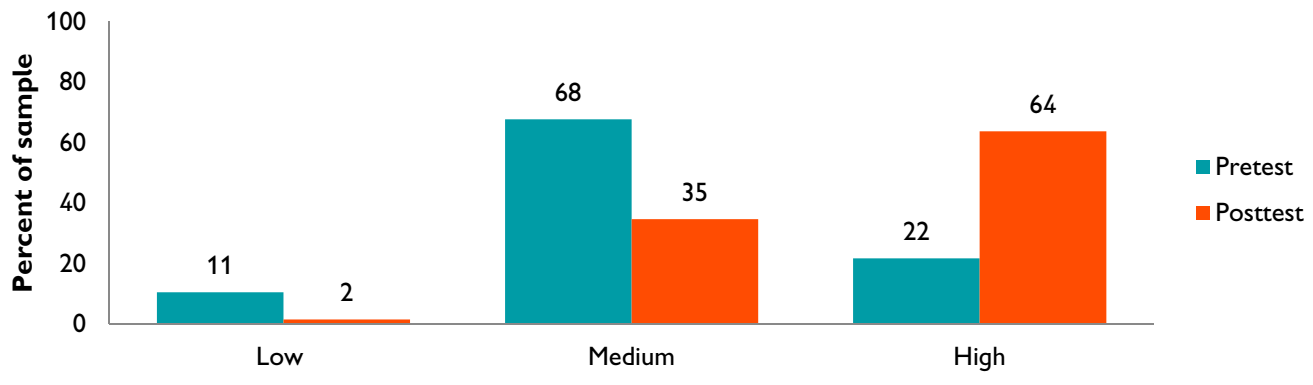
Financial Literacy

The financial literacy score gives an overall sense of youths' comfort managing money and their perception of their budgeting and saving skills. The financial literacy composite score is the sum of youth's responses to five questions that focus on how youth budget their money, methods they use to save money and their overall comfort in managing their money (see [Appendix B](#) for a list of questions and the scoring criteria). Financial literacy score is defined on a 0-5 scale. A youth falls into the "low" category if they scored 0 on all budgeting and savings skills items. The "medium" category captures youth who scored high on one dimension but not the other or those who have some of both budgeting and saving skills. Youth in the "high" category scored high on both dimensions of budgeting and saving.

579 youth in our sample gave us full information on their financial literacy skills at pretest and posttest. At pretest, 11% of these youth had a low financial literacy score, 68% had a medium financial literacy score, and 22% had high financial literacy score. This suggests that a majority of the youth in our sample scored high on one dimension of budgeting or savings skills, but not the other. By posttest, the percent reporting in the low category of financial literacy decreased to less than 2% while 64% of the sample reported in the high category. We present the change in scores from pretest to posttest for the whole sample, disaggregated by sex in [Appendix I](#).

There was a statistically significant difference in the mean financial literacy score between pretest and posttest for the average youth in the population ($F= 311.43$; $p<.001$, $\eta^2=. 35$). Please see [Appendix J](#) for the results of the repeated measures ANOVA we fit. Practically, this finding is meaningful. As we illustrate in Figure 1 (below), nearly all the youth who participated in YiA reported comfort with either budgeting or savings, with two-thirds of the youth reporting comfort with both sets of skills.

Figure 1. Percent of youth (n=579) reporting different levels of financial literacy skills at pretest and posttest



Youth sex, age, and household wealth were not significant predictors of change in financial literacy between pretest and posttest. This means that youth sex, age, and household wealth at pretest did not affect how youth's financial literacy scores changed between pretest and posttest and most youth were able to gain equally in their financial literacy levels.

Work Supports and Resources

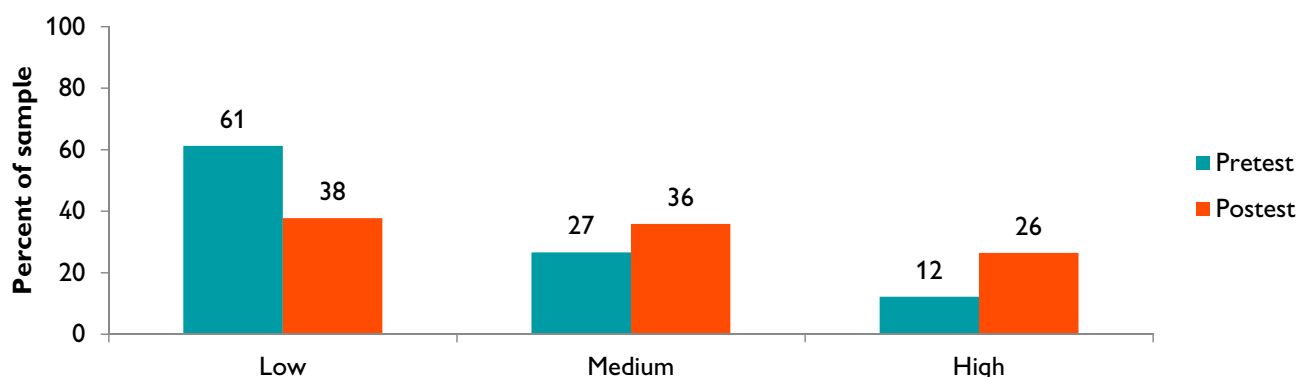
Work supports and resources reflect the encouragement and material assets youth can access to help them in pursuing different livelihoods. See [Appendix C](#) for a list of questions and the scoring criteria.

Tangible Assets

Tangible assets is the sum of youth's responses to six questions that focus on the level of access youth have to resources such as land, livestock, raw materials, tools, and equipment to be able to earn money. The tangible assets score is defined on a 0-6 scale. Youth who scored low have two or fewer tangible assets; youth who scored medium have three or four assets, and youth who scored high have five or six tangible assets.

575 youth gave us information on their tangible assets at pretest and posttest. At pretest, a majority of youth (61%) reported having very little in the way of tangible assets, such as access to land for farming. However, there was a statistically significant difference in the mean tangible assets score between pretest and posttest ($F = 155.87$; $p < .001$, $\eta^2 = .35$). The average youth reported having one additional tangible asset by posttest. The number of youth with a high level of tangible assets increased from less than 12% at pretest to 26% over the course of YiA (see Figure 2, below). Even though tangible assets increased, almost 40% of youth had inadequate resources by the end of the project. This is not surprising because YiA did not target immediate change in the material assets of youth.

Figure 2. Percent of youth ($n=575$) reporting different levels of access to tangible assets at pretest and posttest



We found that youth sex, age, and household wealth at pretest did not affect how youth's access to tangible assets changed between pretest and posttest (see [Appendix K](#) for fitted estimates from the regression model). This suggests that there were no substantive equity issues in the gains in tangible assets that youth demonstrated between pretest and posttest.

Family and Community Support for Work

The support for work development scale is created using the six family support and community support items that look at the support and encouragement youth receive for work from their families and communities. A youth is considered to have inadequate levels of support if the mean score of the six items was lower than three and considered to have adequate levels of support if the mean score was three or greater.

106 youth gave us information on their family and community support for work at pretest and posttest. At pretest, 49 of the 106 youth who reported income generation in either cash or goods in the last year also reported that their families and communities were encouraging and helpful in their work development. At posttest, 70 of the 106 youth who reported income generation in either cash or goods also reported that their families and communities were encouraging in their work development. We present the change in scores from pretest to posttest for the whole sample, disaggregated by sex in [Appendix I](#).

Because of the limited number of youth from whom we managed to collect family and community support data at pretest and posttest, we were unable to test whether the pretest-posttest change was significant and if there were differences by sex, age, and household wealth.

Foundational Academic Skills

Before starting YiA, the program conducted a market assessment in each YiA country. This market assessment included conversations with youth, parents, community leaders, and local employers. This assessment brought to light the low levels of literacy and numeracy among youth in the YiA communities. This led to a focus on building the foundational academic skills, both literacy, and numeracy, of the youth in YiA.

Literacy

YiA promotes the development of literacy skills for youth at all skill levels, supporting those at the lowest levels with targeted phonics and word-recognition activities, and embedding reading and writing into the duration of the learning sessions. Youth are encouraged to try to read and write, whether or not they have the full capacity, and to depict images in cases where they cannot yet write words. They are also encouraged to seek peer support as well as support from facilitators. Read-alouds and shared reading are regular activities during the learning phase, designed to both foster interests in reading and to allow for practice. In addition, youth have daily, free access to Book Banks: small libraries stocked with local and national language materials related to life skills and livelihoods and available for youth to borrow and take home. All literacy work is directly linked to the life skills and livelihoods work that form the foundation of the YiA learning phase.

517 youth provided full literacy data at both pretest and posttest. At pretest, the average youth could identify 12 letters, read 31 words correctly in a minute, read 63% of the passage accurately when given additional time, and could answer 2.8 of the comprehension question correctly. At posttest, the average youth could identify 15 letters, read 40 words correctly in a minute, read 72% of the passage accurately, and could answer 3.1 of the comprehension questions correctly.

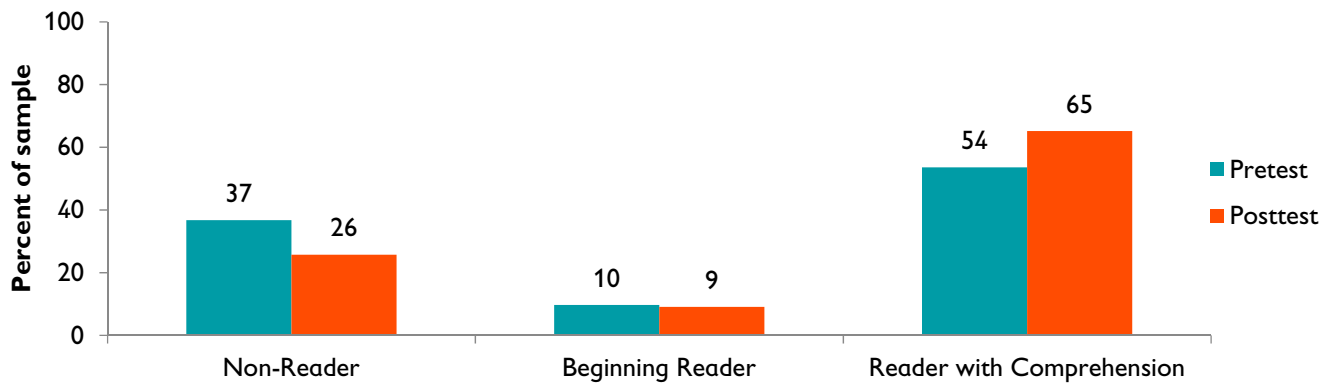
In fitting the repeated measure ANOVA (see [Appendix J](#) for results) we found that there was a statistically significant difference in all of the four literacy skills between pretest and posttest; however, all of the effect sizes were either small (fluency) or negligible (the other three literacy skills): Letter identification ($F= 56.43$; $p<.001$, $\eta^2=.09$), fluency ($F= 71.86$; $p<.001$, $\eta^2=.12$), comprehension skills ($F= 35.92$; $p<.001$, $\eta^2=.06$) and accuracy ($F= 29.02$; $p<.001$, $\eta^2=.05$).

In Figure 3 (below) we present the distribution of youth in our sample across these three reading tiers at pretest and posttest. By posttest, 65% of youth were able to read with comprehension, as compared to 54% at pretest.

While youth with varying levels of household wealth gained literacy skills equally over the program period, we found that the average male youth gained more reading accuracy skills over the program period than the average female youth. Since male youth started the program with slightly lower levels of reading accuracy, this evidence suggests that the program may have helped close the gap, allowing male youth to catch up with their female counterparts. Additionally, we also found that older youth gained more in reading fluency over the program period than their younger counterparts (see [Appendix K](#) for fitted estimates from the regression model). Older youth began the program with slightly higher levels of reading fluency and so this evidence suggests that the programs instruction on reading fluency was more effective for older youth who already had higher levels of fluency to begin with.

Nonetheless, it is important to note that while these findings were statistically significant they had a very small effect size. This means that these equity findings have very limited practical significance. The differences between girls and boys, and older and younger youth, are very small.

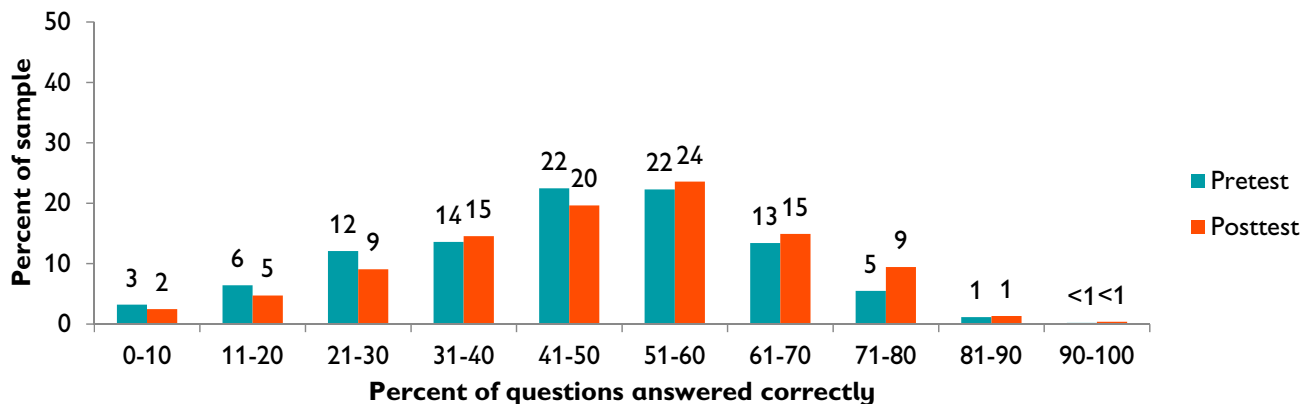
Figure 3. Percent of youth (n=517) who were in the three literacy tiers at pretest and posttest



Numeracy

Functional numeracy is an important component of the learning phase of YiA. Since financial literacy—namely budgeting and saving—are seen as important livelihood competencies for youth, building youth’s capacity to conduct basic numeric functions is seen as a precursor to enabling youth to keep budgets and manage their own money. Through the curriculum, youth are helped in building their foundational numeracy skills—counting and numeric functions like addition, subtraction, multiplication, and division. Youth are given opportunities to use these skills through hypothetical and real examples that deal with market interactions and budgeting.

Figure 4. Percent of youth (n=530) by the percent of numeracy questions they answered correctly at pretest and posttest



We were able to collect full numeracy information from 530 youth at pretest and posttest. There were small improvements in numeracy skills from pretest to posttest ($F=43.49$; $p<.001$, $\eta^2=.07$). At pretest, the average youth in the sample was able to answer 45% of the numeracy questions correctly and only 19 youth could answer 75% or more of the numeracy questions correctly. At posttest, the average youth in the sample was able to answer 49% of the numeracy questions correctly and 24 youth could answer 75% or more of the numeracy questions correctly. Youth age and household wealth did not play a role in gain in numeracy. However, the average male youth gained more in terms of numeracy over the program period compared to the average female youth. However, the model effect size of nearly zero (.01) means these results had limited practical significance.

Transferable Skills

Transferable skills are “higher-order cognitive and non-cognitive skills that individuals can use to be successful in different situations in work and in life”¹⁸. These skills are important across domains of a youth’s life (e.g.: academic, social, livelihood, etc.), and they can be transferred to a domain when learned in the context of another (e.g.: transferring skills learned in school to livelihood pursuits)¹⁹. Also, these skills are malleable and change over a time in an individual; they can be taught and learned.

YiA focuses on transferable skills in three ways. First, YiA focuses on developmental assets²⁰: external (relationships, supports, and opportunities, provided by people in the youth’s life) and internal (beliefs, attitudes, and behaviors within a youth) strengths that are important for youth development. Second, the program assesses a youth’s self-employment capabilities. These questions determine a youth’s self-concept and confidence for starting their own business; skills that can be transferred to a different domain of a youth’s life. Lastly, we measure the workplace teamwork and drive that youth demonstrate, their motivation to work with others.

Developmental Assets Profile (DAP)

Developmental Assets are “developmental vitamins”: positive experiences and qualities identified by Search Institute as being essential to healthy psychological and social development in childhood and adolescence. The Developmental Assets framework, organized into eight categories, recognizes the importance of young people having both internal strengths (internal assets) and opportunities & guidance from family, school, peers, and community (external assets). The DAP score can be understood in terms of four levels of developmental assets: Below DAP threshold (0-29); Approaching DAP threshold (30-41); Meets DAP threshold (42-51) and Exceeds DAP threshold (52-60). See [Appendix D](#) for a more detailed frame of reference for interpreting DAP scores and for the reliabilities of the sub-scales and total DAP scores in Malawi. Each level has been shown to have a meaningful connection to differing levels of youth well-being. Specifically, youth who “meet DAP threshold” have been shown to have adequate academic, psychological, social-emotional, and behavioral well-being, whereas youth only approaching or below the DAP threshold level have been shown to have significantly worse well-being outcomes.²¹

We collected full DAP information from 579 youth at pretest and posttest. There were small improvements in DAP scores from pretest to posttest, with decreases in the percent of youth in the *below DAP threshold* levels (5% at pretest to 2% at posttest) and in the percent of youth *approaching DAP threshold* level (34% at pretest to 26% at posttest). We also observed a small increase in the percent of youth at *meets DAP threshold* level (46% at pretest to 51% at posttest). These improvements were statistically significant ($F=31.01$; $p<.001$, $\eta^2=.05$). We display these findings in Figure 5 below.

The equity analysis we conducted showed that there were no differences in the gain in DAP score by sex, age, or household wealth. Most youth were able to gain equally in their DAP levels.

¹⁸ Brown, A., Rankin, K., Picon, M., & Cameron, D. (2015). *The state of evidence on the impact of transferable skills programming on youth in low- and middle-income countries*. New Delhi, India: International Initiative for Impact Evaluation. (p. 1)

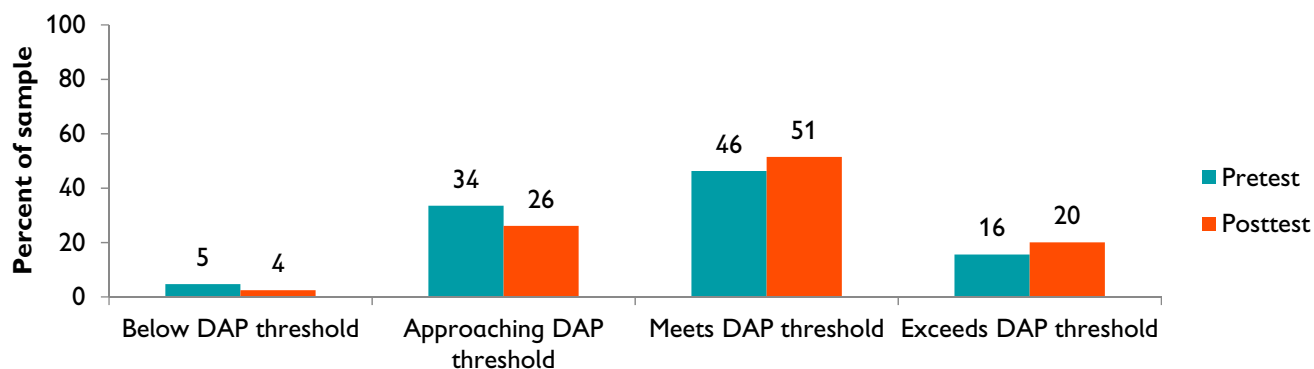
¹⁹ Pellegrino, J. W., & Hilton, M. L. (2012). *Education for life and work: Developing transferable knowledge and skills in the 21st century*. Washington DC: National Research Council.

²⁰ Scales, P. C., Shramko, M., & Ashburn, K. (2016). Developmental assets and sexual and reproductive health among 10-to 14-year-olds in northern Uganda. *International Journal of Child, Youth and Family Studies*, 7(1), 45-64.

Scales, P. C., Roehlkepartain, E. C., & Fraher, K. (2012). *Do Developmental Assets make a difference in majority-world contexts? A preliminary study of the relationships between Developmental Assets and international development priorities*. Minneapolis: Search Institute, Report to U.S. Agency for International Development.

²¹ Scales, P.C., Roehlkepartain, E.C., & Shramko, M. (2016). Aligning youth development theory, measurement, and practice across cultures and contexts: Lessons from use of the Developmental Assets Profile. *Child Indicators Research*. DOI 10.1007/s12187-016-9395-x

Figure 5. Percent of youth (n=579) with varying DAP levels at pretest and posttest



Self-Employment Skills

Self-employment skills is a summary of questions that ask youth about their perceptions of their ability to identify and develop a viable business plan, their comfort in business negotiations, and their confidence in being able to run a profitable business. The self-employment skills scale is the sum of youth's responses to four questions and the scale is defined on a 1-3 scale. We considered youth with a mean score lower than 2.5 to have inadequate Self-employment Skills and youth with a mean score of 2.5 or greater have adequate self-employment skills. See [Appendix E](#) for a list of the items and a description of how this composite was created.

In [Appendix I](#) we illustrate the self-reported self-employment skills, disaggregated by sex, for the 575 youth from whom we collected pretest and posttest information. There were meaningful increases in the percent of youth that reported having the requisite self-employment skills: 65% at pretest and 82% at posttest ($F=114.30$; $p<.001$ $\eta^2=.16$). Between pretest and posttest, the average youth moved from having inadequate to adequate self-employment skills. There were no differences in the gain in self-employment score by sex, age, or household wealth. This would suggest that all youth made very similar gains in self-employment skills over the program period.

Workplace Teamwork and Drive

Workplace teamwork and drive looks at youth's report of motivation for working independently and ability to work well as part of a team. We also look at youths' level of goal setting and interest in learning relevant or new skills. The workplace teamwork and drive scale is the sum of youth's responses to four questions and the scale is defined on a 1-3 scale. We considered youth with a mean score lower than 2.5 to have inadequate workplace teamwork and drive; youth with a mean score of 2.5 or greater have adequate workplace teamwork and drive. We were able to collect full workplace teamwork and drive information from 578 youth at pretest and posttest.

Between pretest and posttest, there were small improvements where average youth moved from having inadequate to adequate workplace teamwork and drive ($F=13.38$; $p<.001$, $\eta^2=.02$). The percent of youth who reported having adequate workplace teamwork and drive increased from 82% at pretest to 85% at posttest. However, the model effect size of nearly zero (.01) means these results had limited practical significance. There were no differences in the gain of workplace teamwork and drive score by sex or age, or household wealth.

Profile of Socioeconomic Outcomes for Youth

There are three main socioeconomic outcomes on which we assessed youth in this study: income earning status, adequate savings, and adequate credit access (see Table 1). The latter two are independent of whether youth reported working during the pretest or posttest assessment. However, the sub-outcomes under income earning status—hours worked, daily income, productive employment, and hazardous employment—are dependent on whether youth reported working during the assessment. This means that for hours worked, daily income,

productive employment, and hazardous employment we can only test differences between pretest and posttest for youth who actually reported having a job at *both* pretest and posttest assessments.

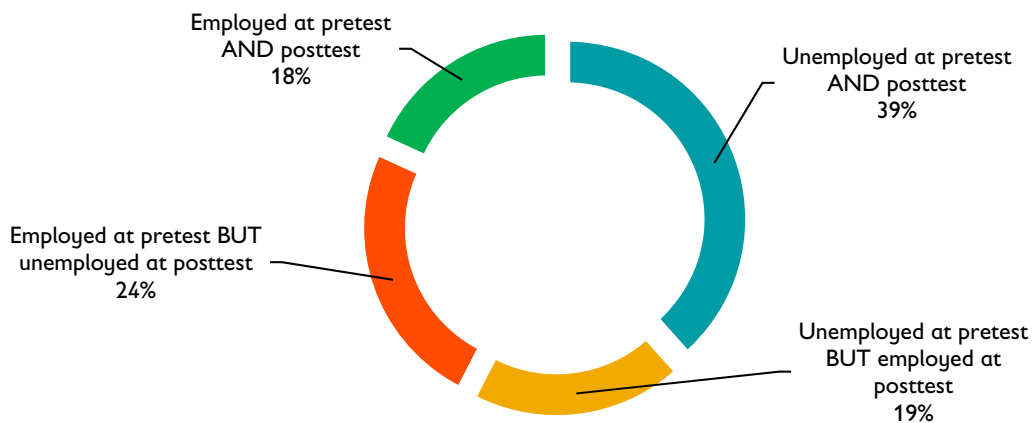
Because of the limited number of youth from whom we managed to collect hours worked, daily income, productive employment, and hazardous employment data at pretest and posttest, we were unable to test whether the pretest-posttest change was significant and if there were differences by sex, age, and household wealth.

Income Earning Status

Job Status

Job and income earning status assesses youth's level of workforce involvement in an income generating activity in the last year. The term *job* in the survey is defined as “any work that you have done for family members or others for which you have been compensated with money, goods, or services.” In Figure 6 we illustrate the frequency with which youth reported experiencing job status change between pretest and posttest. Of the 562 youth for whom we had data for pretest and posttest, 42% were employed at pretest and 37% were employed at posttest.

Figure 6. Percent of youth (n=562) with varying job status at pretest and posttest

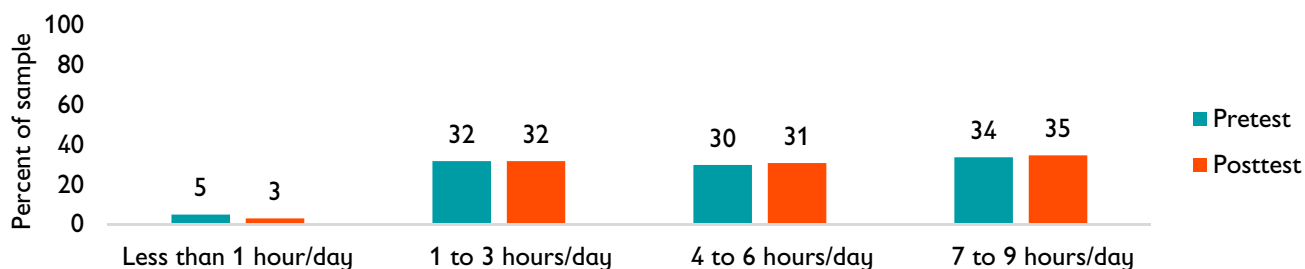


44% of the youth experienced job status change from pretest to posttest including 19% who were unemployed at pretest who reported being employed at posttest. Approximately 39% of youth who reported being unemployed at pretest stayed unemployed at posttest. However, 18% who were employed at pretest also stayed employed at posttest. There were no differences in having a job at posttest by sex, age, or differing levels of household wealth.

Hours worked

We asked youth who reported having a job about the number of hours they worked on a typical day. Both at pretest and posttest close to 35% of youth reported working between 7-9 hours/day (see Figure 6b, below).

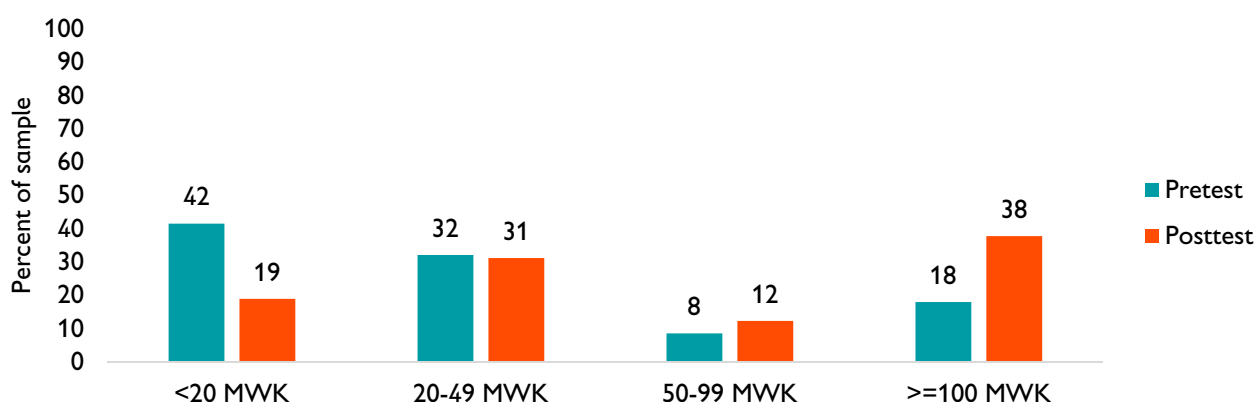
Figure 6b. Percent of youth (n=104) who reported different hours/day worked at pretest and posttest



Daily Income

We asked youth who reported having a job about the amount of money they earned daily. 106 youth gave us information on income at pretest and posttest. At pretest 42% reported earning less than 20 Malawian Kwacha/day. This changed at posttest where 38% reported earning more than 100 Malawian Kwacha/day (see Figure 6c, below).

Figure 6c. Percent of youth (n=106) who reported different daily income in (Malawian Kwacha) at pretest and posttest



Type of work

99 youth gave us information on productive employment at pretest and posttest. We observed some changes in the type of work from pretest to posttest, with increases in the percent of youth who reported working for someone else outside their family (58% at pretest to 71% at posttest) and decreases in the percent of youth reporting that they worked in their family business (30% at pretest to 14% at posttest). We also observed a small increase in the percent of youth reporting that they owned their own business (10% at pretest to 13% at posttest).

Productive employment

Productive work is work that allows youth to meet current spending needs, save a little, and work that does not keep them from going to school. The productive employment scale was created using six items and then calculating the mean score of these six items. See [Appendix G](#) for a list of items included in productive employment. We considered youth with a mean score lower than 2.5 to have low levels of productive employment; youth with a mean score of 2.5 or greater have high levels of productive employment.

104 youth gave us information on productive employment at pretest and posttest. At pretest, only 40% of those were engaged in productive work as compared to 49% at posttest who reported being engaged in productive work. [Appendix I](#) illustrates changes in productive employment from pretest to posttest, disaggregated by sex.

Hazardous employment

Hazardous work is work that is dangerous or negative working conditions in which the youth feels unsafe. For youth who report working, we asked them if the main way they earn money exposes them to dangerous equipment and tools, excessive workload, as well as a hazardous environment that poses a health and safety risk. See [Appendix G](#) for a list of items included in hazardous employment. The hazardous environment scale is created using three items and then calculating the mean score of these three items. We considered youth with a mean score lower than 2.5 to have lower levels of hazardous work environments; youth with a mean score of 2.5 or greater have higher levels of hazardous work environments.

104 youth gave us information on productive employment at pretest and posttest. At pretest 81% reported hazardous working conditions or work environments that number decreased at posttest to 73%. [Appendix I](#) illustrates changes in productive employment from pretest to posttest, disaggregated by sex.

Adequate Savings

Adequate savings measured youths' self-reported level of savings to cover basic expenses such as groceries, school supplies, clothes, and incidentals, as well as having start-up capital to develop a business. Adequate Savings is a summative scale comprised of five items. Youth were considered to have "low" levels if they scored 2 or lower; "medium" levels if they scored 3 or 4; and "high" levels if they answered affirmatively to all 5 items. See [Appendix H](#) for a list of the items and a description of how this composite was created).

579 youth provided information on their access to savings at pretest and posttest. There were significant changes in the average savings: at pretest 83% of youth reported having low levels of adequate savings; this decreased to 48% by posttest. The average adequate savings score increased from 1.03 at pretest to 2.62 at posttest ($F = 284.09$; $p < .001$, $\eta^2 = .32$). Over the course of the project the average youth moved from having a low level of savings to having a medium level of savings. There were no differences in the gain of adequate savings by age or household wealth.

We found that female youth were slightly more likely than male youth to have adequate savings at posttest. However, the model effect size of nearly zero (.01) means these results had limited practical significance. There were no differences in the gain of workplace teamwork and drive score by sex, age, or household wealth.

Adequate Credit Access

Adequate credit access measured youths' ability to obtain adequate credit or loans from either formal or non-formal institutions to cover basic expenses and incidentals, or as startup capital to develop a business. Adequate credit access is a summative scale comprised of five items. Youth were considered to have "low" levels if they scored 2 or lower; "medium" levels if they scored 3 or 4; and "high" levels if they scored all 5 items. See [Appendix H](#) for a list of the items and a description of how this composite was created.

579 youth provided information on their access to credit at pretest and posttest. There were significant changes in the average credit access: at pretest 77% of youth reported having low levels of credit access; this decreased to 57% by posttest. The average credit access score increased from 1.18 at pretest to 2.15 at posttest ($F = 84.92$; $p < .001$, $\eta^2 = .12$). Over the course of the project the average youth moved from having a low level of credit access to having a medium level of credit access at the end of their engagement with the program.

There were no differences in the gain of adequate savings by sex, age, or household wealth. This would suggest that males and females, and older and younger youth with differing levels of household wealth made very similar gains in credit access over the program period.

Association of Work Readiness and Socioeconomic Outcomes

In this section, we examine how levels of changes in the work readiness outcomes predict the levels and changes in socioeconomic outcomes from pretest to posttest. The POS was a one-group pre-post design. Additionally, the low numbers of youth who reported having a job in the Livelihoods Survey at pretest meant that we had limited sample sizes to predict changes in socioeconomic outcomes between pretest and posttest. To deal with these two limitations, we fit a linear regression model for all the socioeconomic outcomes. These models attempted to predict the posttest level of youths' socioeconomic outcomes—income, hours worked, productive employment, hazardous employment, adequate savings, and credit access—using the youths' demographic characteristics and the gains in their work readiness outcomes as predictors. The fitted regression models can be found in [Appendix M](#).

Among the demographic predictors, youth sex was predictive of three posttest socioeconomic outcomes. The average female youth reported earning a higher income and saving more at posttest as compared to her male counterpart. On the other hand, the average male youth reported working in jobs that were more hazardous at posttest compared to his female counterpart. The effect sizes for these findings were small and so they have limited substantive meaning. However, the trend in the findings by gender does suggest that the program may be more effective for female youth, helping them earn more and save more after the program. In order to understand if these trends are substantively meaningful we would need additional evidence from other studies to triangulate our findings.

Among the intermediate work readiness outcomes, changes in youth financial literacy and tangible assets were predictive of some of the posttest socioeconomic status of youth. Gains in financial literacy between pretest and posttest were associated with a higher level of savings and credit access at posttest. Gains in access to tangible assets were also positively predictive of adequate savings and credit access. It is possible that youth were able to translate their savings knowledge into practical skills that allowed them to save more and access more credit. Moreover, youth who were able to grow their tangible assets during the program period may have had more collateral to put down when they went to access a loan, allowing them more access to better credit sources. Counterintuitively, gains in financial literacy were associated with a lower level of posttest income, and gains in tangible assets were associated with fewer hours worked at posttest. It is possible that youth who gained more skills in financial literacy were not necessarily earning more at posttest but rather saving more of their money.

The effect sizes for these findings about financial literacy and tangible assets were small and so they have limited substantive meaning. However, the trend in the findings does suggest that youth in the program may have been able to translate some of their knowledge about savings and budgeting into real life skills that allowed them to grow their savings and credit access.

Discussion

In this report, we have attempted to understand how youth work readiness might change for a sample of Malawian youth over the eight to ten months of participating in YiA. We also attempted to determine the relationship between the change in these work readiness outcomes and the ultimate socioeconomic outcomes—income earning status, adequate savings, and adequate credit access—that are part of the YiA Theory of Change. In this final section, we summarize the main findings of the study before discussing the main limitations. We end with a short discussion on the implications of our findings for future research and youth livelihood programming in these communities in Malawi.

Summary of Findings

In Table 3 we provide a quick-view of the main findings for each work readiness outcome. This summary table offers a picture of gains in work readiness outcomes between pretest and posttest, and whether there were any equity dimensions to these gains.

Table 3. Summary of key findings about change in Work Readiness Outcomes between pretest and posttest

Work Readiness Outcome		Description	Significant gains from pretest to posttest?	Significant and practical equity differences?
Financial Literacy		Change in financial literacy from pretest to posttest	Yes. 64% of youth reported high levels of financial literacy at posttest, compared to 22% at pretest	No
Work Support and Resources	Tangible Assets	Change in number of material assets from pretest to posttest	Yes. Average youth reported having one additional tangible asset by protest. Percent of youth with a high level of tangible assets increased from 12% to 26%	No
	Family and Community Support for Work	Change in amount of family and community support between pretest and posttest	Because of the limited number of youth who provided this information at pretest and posttest, we did not fit predictive models of change	n/a
Foundational Academic Skills	Literacy	Change in letter recognition, fluency, accuracy, and comprehension between pretest and posttest	Yes. By posttest 65% of youth were able to read with comprehension, as compared to 54% at pretest	No
	Numeracy	Change in percent of correct responses to numeracy assessment between pretest and posttest	Yes. Average youth could answer 49% of questions correctly at posttest, compared to 45% at pretest	No
Transferable Skills	DAP	Change in asset score between pretest and posttest	Yes. By posttest 71% of youth met or exceeded the DAP threshold, compared to 62% at pretest	No
	Self-Employment Skills	Change in level of self-employment comfort between pretest and posttest	Yes. Average youth moved from having inadequate to adequate self-employment skills	No
	Workplace Teamwork & Drive	Change in level of workplace teamwork & drive between pretest and posttest	Yes. Average youth moved from having inadequate to adequate Workplace Teamwork and Drive	No

In Table 4 we provide a quick-view of the main findings for each socioeconomic outcome. The first half of this summary table offers a picture of gains in job status, adequate savings, and adequate credit between pretest and posttest, and whether there were any equity differences to these gains. The second half of Table 4 provides a summary of whether gains in work readiness outcomes predicted posttest levels of socioeconomic outcomes.

Table 4. Summary of key findings about status of Socioeconomic Outcomes

Socioeconomic Outcome		Significant gains from pretest to posttest?	Significant and practical equity differences?
Income Earning Status	Job Status	No. At pretest 42% of youth reported having a job, compared to 37% at the end of the program	No
Adequate Savings		Yes. Average youth moved from having a low level of savings to having a medium level of savings	No
Credit Access		Yes. Average youth moved from having a low level of credit access to having a medium level of credit access	No
Socioeconomic Outcome		Higher levels of posttest outcome predicted by change in work readiness outcomes?	Significant and practical equity differences?
Job status	Hours Worked	Yes. Positive gains in tangible assets associated with fewer hours worked at posttest	No
	Income	Yes. Positive gains in financial literacy associated with lower income at posttest.	No
	Productive Employment	No	No
	Hazardous Employment	No	Yes. Male youth reported higher levels of hazardous employment at posttest compared to female youth
Adequate Savings		Yes. Positive gains in financial literacy and tangible assets associated with higher posttest savings amounts	No
Credit Access		Yes. Positive gains in financial literacy and tangible assets associated with higher posttest access to credit	No

Limitations

A broad limitation is that, except for the Literacy and Numeracy assessments, all the other variables in the POS are self-reported by youth; that is, there are no objective indicators of those variables. The data might therefore not be fully accurate if youth responded either in an overly positive or overly negative way. Nevertheless, youth did not seem to respond in a systematically positive or negative way; their responses varied depending on the content of the questions asked, and so we can have greater confidence in the quality of the responses. As a result, these pretest POS data provide a reasonably clear picture of YiA youth in Malawi.

Another limitation, which we have referenced above, was the attrition rate in our sample. We were unable to collect posttest data from 27% of the youth from whom we collected pretest data. While we did not find practically and

statistically significant demographic differences between the pretest and posttest sample, it is possible that the youth from whom we were unable to collect posttest data differed on some unobserved (unmeasured) characteristics. For example, one possibility is that youth who were working during the posttest data collection could not come to the learning center to take the survey. This could affect our estimates of the number of youth who were working at the end of the program.

Another limitation is the sample size for the pretest-posttest gains in some of the socioeconomic outcomes. ~58% of youth reported that they were not working during the pretest data collection. This finding matches our expectations; based on data from the pre-program market assessments and discussions with the country team, we expected that a big proportion of our sample would not report working during the pretest data collection. However, we were expecting a larger proportion of youth to report working at posttest. The low work rate at pretest and posttest means that we did not have sufficient data on the change in socioeconomic outcomes over the program period. This restricted our analysis. We were unable to fit models predicting the *change* in socioeconomic outcomes and only could predict the posttest levels of youth's socioeconomic outcomes.

Implications

Our findings provide **partial support for the YiA Theory of Change. It is clear from this study that YiA can help build work readiness skills in rural Malawian youth who have had limited access to formal education and the formal labor market.** Because we do not have a comparison group, we cannot disaggregate the effect of the program to understand how much of the effect was directly because of YiA and how much was because of general maturation and growth. We expect that as youth grow they will develop some work readiness skills and may have more access to the labor market. However, the preponderance of evidence that YiA youth developed work readiness skills on all fronts suggests that the program did have a positive effect on the lives of youth.

However, the **magnitude (size) of the improvements in work readiness outcomes was mostly small.** For example, youth had a moderately high level of literacy when entering the program. 54% of youth could read with comprehension. Because the literacy curriculum was mostly remedial, the percent of youth who could read with comprehension did not increase markedly by posttest (64%). We found something similar with developmental assets. At pretest 62% of youth met or exceeded the DAP threshold. This did not leave a lot of room for improvement over the program period. By posttest 71% of youth met or exceeded the DAP threshold. These findings suggest that the **youth in Malawi entered the program with a moderately high level of some of the work readiness outcomes.** This was unexpected; data from the pre-program market assessments, qualitative operations research, and pilot testing of the DAP highlighted the low levels of skills among Malawian youth in the YiA communities. In the future the program will need to do more to ensure that the right youth are targeted so that youth who have more limited exposure to academic and developmental assets can grow their skills over the program period.

Nonetheless, we did not find any practically meaningful differences based on the equity factors that we tested: youth sex, age, or household wealth. This finding is reassuring. It suggests that **the positive effects of YiA in Malawi are, for the most part, not limited to particular kinds of youth, but rather are mostly being experienced equitably for both females and males, youth of different ages, and youth from more and less affluent backgrounds.** The lack of differential demographic significance in these results suggests that YiA is a broadly effective instrument for promoting greater economic potential and well-being in a largely agriculture-based economy.

One surprising finding was that a smaller proportion of youth reported working at posttest compared to pretest. Over 80% of youth chose to start their own business during the YiA action phase; so, we expected that a majority of youth would report working at posttest. The low rate of work

at posttest could be because youth misunderstood the question that asks about job/work and so did not perceive self-employment as work. Because we do not have additional data collection planned in Malawi, we have limited ways in which to triangulate our findings and understand this drop in work status.

While it is clear that nearly all work readiness and socioeconomic outcomes improved from pretest to posttest, improvement in work readiness outcomes was linked to posttest levels of just a few socioeconomic outcomes, and those statistically significant relationships were not large enough in size to be practically meaningful. Increases in youths' work readiness skills and supports are valuable in themselves in terms of promoting overall positive youth development. But we had expected more meaningful linkages between increase in those work readiness outcomes and levels of the socioeconomic outcomes at posttest. **The fact that the increase in work readiness outcomes were demonstrated in the relatively short-term of 7-8 months suggests that the full potential economic opportunity-enhancing effect of YiA may take more time to become visible.** Economic opportunities take more time to find and develop than the work readiness skills and supports, especially opportunities lasting a month or more (the definition of having a job). Having just two data points—start and end of program cycle—may simply be too short a “pre-post” timeline and too few a number of observation times to accurately capture the ebbs and flows of more frequent workforce entry and exit that are the realities for many rural Malawian youth. **The fact that nearly all of the work readiness and socioeconomic outcomes increased suggests that parts of the YiA program may be having a near-term positive effect and that, if participating youth could be followed for longer periods, there might be even greater positive effect observed over a longer time period of these and the other work readiness outcomes addressed by the program.** Subsequent evaluations of the YiA program in Malawi would benefit from longer-term follow-up to determine if there are additional delayed positive changes in the socioeconomic condition of program participants.

Appendix

Appendix A: Fitted estimates from logistic regression predicting posttest data collection attrition

Table 1. Logistic regression predicting program attrition prior to endline survey (i.e., youths who took only the baseline survey).

Independent Variables	Attrition							p
	β	SE	OR	Inverse OR	%	95% CI		
						Lower	Upper	
Gender (ref: female)	-0.32	0.19	0.73	1.38	-27.34	-0.69	0.05	.092
Age	0.14	0.08	1.15	0.87	15.22	-0.02	0.30	.085
Cumulative DHS score	-0.03	0.04	0.97	1.03	-2.89	-0.11	0.05	.486
Highest level of schooling	-0.99	0.34	0.37	2.68	-62.74	-1.66	-0.32	.004
Had a job last year	0.03	0.18	1.03	0.97	2.61	-0.32	0.37	.885
Have child	-0.22	0.28	0.80	1.25	-19.94	-0.77	0.33	.428
Constant	-0.96	1.50	0.38	2.61	-61.63	-3.90	1.98	.523
Pseudo R ²	.018							
Effect Size (f ²)	0.018							

Appendix B: Items and structure of Financial Literacy composite

Item #	Question
C3a	I can track how much money I have compared to what I'm spending and thus I can budget money to meet my needs
C3b	I can decide what to do with the rest of my money after paying my expenses
C3c	I feel comfortable in managing my own money
C4	Over the past 12 months, did you put some money aside to cover future expenses?
C5a	Have you deposited any of your money in a formal financial institution (such as a bank or microfinance bank)?
C5b	Have you deposited any of your money in an informal financial institution (such as Saving and Credit Cooperatives or Village Savings & Loan Associations)?
<p>The "Financial Literacy" scale is a summative scale consisting of Budgeting Skills (c3a, c3b) and Savings Skills (c4, c5a, c5b). The budgeting skills items were coded with response options 1 through 3, while the three saving skills items were coded with response options 0 and 1. To create the Financial Literacy scale the coding for the saving skills items were left as-is (0 and 1). We recoded the budgeting skills items as 0 if survey participants responded with "Does not resemble me" (1), and 1 if "Resembles me a little" (2) or "Resembles me a lot" (3). The items were then added up to create the Financial Literacy Scale. To summarize, budgeting skills contribute 2 of the 5 Financial Literacy points; saving skills contribute the other 3 points. In other words, youth with budgeting but no saving skills can have a maximum of 2 points; youth with saving skills but no budgeting skills can have a maximum of 3 points.</p>	

Appendix C: Items and structure of Work Supports & Resources composite

Item #	Question
C8	I am able to access land for the cultivation of food crops or for earning money
C9	I am able to access a place to raise animals for getting food or for making money
C10	I am able to access fishable areas to get food or earn money
C11	I am able to get access to natural resources (such as coal mines, stone-pits, marble quarry) which I can use to make money
C12	I am able to get the tools or equipment I need to earn money
C13	I am able to attain the raw materials or the substances I need to earn money
C22	My family helps me to learn the skills and ideas that I can use in my work
C23	My family supports my ideas to work or to earn money
C24	My family helps me to see how the things that I am doing now will help me in the future
C25	Others in my community help me learn the skills and ideas that I can use in my work

C26	Other people in my community support my ideas for work or for earning money
C27	Other people in my community help me to see how the things that I am doing now will help me in the future









The "Work Support and Resources" scale was created combining two scales: "Tangible Assets" and "Support for Work Development" which looks at family and community support for work.

"Tangible assets" is a summative scale of items c8 through c13. Youth who scored LOW have 2 or fewer tangible assets. Youth who scored MEDIUM have 3 or 4 tangible assets. Youth who scored HIGH have 5 or 6 tangible assets.

The "Support for Work Development" scale is created using the six family support (c22 through c24) and community support (c25 through c27) items. We calculated a mean score from these six items: we considered youth with a mean score lower than 3 to have inadequate levels of support; youth with a mean score of 3 or greater have adequate levels of support.

Appendix D: Items and structure of Developmental Assets Profile (DAP)

External assets are positive experiences, relationships, and encouragement and support young people receive from peers, parents, teachers, neighbors, and other adults in the community. They include positive role models, boundaries and expectations, as well as young people's constructive use of time. Internal assets are characteristics and behaviors that reflect positive personal and psychological development in young people. They include strengths such as positive values, positive identity, social competencies, and commitment to learning. The DAP also shows youth perspectives of the support in the different settings in their lives: family, school, peers, and community. For example, young people with good social skills are more likely to have a strong web of supportive relationships. Similarly, if youth are part of effective, engaging, and safe schools, they are more likely to develop an internal commitment to learning.

THE EIGHT CATEGORIES OF DEVELOPMENTAL ASSETS MEASURED IN THE DAP	
External Assets	Internal Assets
 SUPPORT Measures whether children have caring adults in their lives, which may include parents, neighbors, and/or teachers.	 COMMITMENT TO LEARNING Asks questions related to whether children care about school and completing their homework, as well as appreciate learning new things.
 EMPOWERMENT Asks questions about how safe children feel at school and at home, as well as their perception of being valued and appreciated.	 POSITIVE VALUES Seeks to understand if children value taking responsibility for their actions and helping others, are honest and have respect for others and their community.
 BOUNDARIES AND EXPECTATIONS Hones in on whether a child feels he or she must abide by boundaries and expectations set at home, in school and in their neighborhood.	 SOCIAL COMPETENCIES Measures a child's willingness to express his or her feelings, establish relationships with others, say no to activities or suggestions that are dangerous, and can find positive ways to deal with hardships.
 CONSTRUCTIVE USE OF TIME Evaluates whether children are involved in outside activities like clubs, music or art programs or religious groups.	 POSITIVE IDENTITY Measures a child's self-worth.

All 58 individual DAP items have values ranging from 0 through 3. The DAP sub-domains are the means of the items that make up each Asset Category, multiplied by 10 (i.e., all 8 sub-domains have values ranging from 0 through 30). The Internal and External DAP scores are the means of their respective constituent four Asset Categories (so they also range from 0 through 30). The total DAP score is the sum of the Internal and External DAP scores, thus its possible values range from 0 through 60.

Internal Consistency Reliabilities for the DAP in Malawi POS Pretest

Alpha reliabilities of DAP scales, Malawi Pretest, n=789		
Asset Scale	Alpha Coefficient	Meaning
Total DAP	.93	Excellent
External Asset Scale	.87	Good
Internal Asset Scale	.89	Good
SUPPORT: Young people need to be surrounded by people, who love, care for, appreciate, and accept them.	.70	Acceptable
EMPOWERMENT: Young people need to feel valued and valuable. This happens when youth feel safe and respected.	.61	Promising
BOUNDARIES AND EXPECTATIONS: Young people need clear rules, consistent consequences for breaking rules, and encouragement to do their best.	.79	Acceptable
CONSTRUCTIVE USE OF TIME: Young people need opportunities—outside of school—to learn and develop new skills and interests with other youth and adults.	.51	Low
COMMITMENT TO LEARNING: Young people need a sense of the lasting importance of learning and a belief in their own abilities.	.75	Acceptable
POSITIVE VALUES: Young people need to develop strong guiding values or principles to help them make healthy life choices, including responsibility, empathy, and self-control.	.74	Acceptable
SOCIAL COMPETENCIES: Young people need the skills to interact effectively with others, to make difficult decisions, and to cope with new situations.	.69	Promising
POSITIVE IDENTITY: Young people need to believe in their own self-worth and to feel that they have control over the things that happen to them.	.66	Promising
PERSONAL CONTEXT: Internal strengths that shape the character of young people, including their self-concept, values, attitudes, and capabilities.	.77	Acceptable
SOCIAL CONTEXT: Social assets are experienced through personal relationships with others, particularly their friends.	.81	Good
FAMILY CONTEXT: Assets experienced in the family (e.g.: family support, positive family communication, useful roles in the family, family boundaries)	.77	Acceptable
SCHOOL CONTEXT: Assets experienced in school (e.g.: achievement motivation, school engagement, caring school climate, school boundaries)	.88	Good
COMMUNITY CONTEXT: Assets experienced in community settings other than school (e.g.: community values youth, youth programs, religious community, caring neighborhood)	.73	Acceptable
Notes. An alpha reliability coefficient of .70 or higher is considered acceptable; a coefficient of .60 and above is promising.		

Interpreting the DAP

Total DAP Score for youth and the percent of your youth who fall into four levels based on their survey results are: Below DAP Threshold, Approaching DAP Threshold, Meets DAP Threshold, and Exceeds DAP Threshold. Quartile level scores for all DAP sub-scales are defined on a 0-30 scale. The total DAP score, however, is defined on a 0-60 scale. The table below shows each quartile score definition.

Description of Eight DAP categories		
	Total DAP Scale (out of 60)	DAP Asset Categories and Context View Scales (Out of 30)
Below DAP Threshold	0-29	0-15
Approaching DAP Threshold	30-41	16-20
Meets DAP Threshold	42-51	21-25

Exceeds DAP Threshold	52-60	26-30
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Appendix E: Items and structure of Self-Employment Skills composite

Item #	Question
C16a	I am able to develop a business plan
C16b	I am comfortable negotiating prices when buying or selling items
C16c	I feel able to identify a business idea that is safe and through which you can make money
C16d	I am confident that I have the skills to run a profitable business
The "Self-employment Skills" scale is created using items c16a through c16d and then calculating the mean score of these four items. We considered youth with a mean score lower than 2.5 to have inadequate Self-employment Skills; youth with a mean score of 2.5 or greater have adequate self-employment skills	

Appendix F: Items and structure of Workplace Teamwork and Drive composite

Item	Question
C2a	I work well on my own without the need for someone to guide me on what I have to do
C2b	I work well as a team member
C2c	I work hard to achieve success and reach my goals
C2d	I am good at learning new skills
The "Workplace Teamwork and Drive" scale is created using items c2a through c2d and then calculating the mean score of these four items. We considered youth with a mean score lower than 2.5 to have inadequate Workplace Teamwork and Drive; youth with a mean score of 2.5 or greater have adequate Workplace Teamwork and Drive	

Appendix G: Items and structure Hazardous Employment & Productive Employment

Item	Question	Hazardous Employment
	Which of the following is true about your main work or your main way to earn money or earn a living: I am exposed to...	
C21a	Dangerous equipment or tools (such as heavy machinery, knives	
C21b	Excessive workload	
C21c	Hazardous environment	
The "Hazardous Environment" scale is created using items c21a through c21c and then calculating the mean score of these three items. We considered youth with a mean score lower than 2.5 to have lower levels of Hazardous work environments; youth with a mean score of 2.5 or greater have higher levels of Hazardous work environments		
Item	Question	Productive Employment
	My method of making money or earning living may.....	
C20a	Prevent me from going to school	
C20b	Help me pay for school	
C20c	Help me contribute to my family	
C20d	Make me enough money to cover my daily expenses	
C20e	Pay me enough to spare some money for the future	
C20f	Help me pay for goods (such as make-up, clothes, mobile phone	
The "Productive Environment" scale is created using items c20a through c20fc and then calculating the mean score of these six items. We considered youth with a mean score lower than 2.5 to have lower levels of Productive Employment; youth with a mean score of 2.5 or greater have higher levels of Productive Employment.		

Appendix H: Items and structure of Adequate Savings & Adequate Credit Access composite

Item	Question
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	<i>I have enough savings to:</i>
C14a	Support my family for one week
C14b	Buy the necessary materials to start or develop a business.
C14c	Pay expenses if one of my family members is affected by sudden illness
C14d	Pay for books or tools necessary for school
C14e	Buy suitable work clothes
	<i>I can get a formal or informal loan to:</i>
C15a	Support my family for one week
C15b	Buy the necessary materials to start or develop a business.
C15c	Pay expenses if one of my family members is affected by sudden illness
C15d	Pay for books or tools necessary for school
C15e	Buy suitable work clothes
<p>"Adequate Savings" and "Adequate Credit Access" are both summative scales. Adequate Savings consists of items c14a through c14e; Adequate Credit Access consists of items c15a through c15e. In both measures, youth were considered to have LOW levels if they scored 2 or lower; MEDIUM levels if they scored 3 or 4; HIGH levels if they scored all 5 items.</p>	

Appendix I: Average Workforce Readiness and Socioeconomic Outcome scores at pretest and posttest, disaggregated by gender

	Scale range	Aggregate		Female		Male	
		Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
		M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Financial Literacy	0-5	2.49 (1.02)	3.42 (0.89)	2.34 (1.03)	3.44 (0.89)	2.59 (1.00)	3.40 (0.90)
Tangible Assets	0-6	2.09 (1.80)	3.22 (1.80)	1.91 (1.80)	3.21 (1.74)	2.22 (1.80)	3.22 (1.85)
Work Development Supports	1-4	2.78 (0.75)	3.01 (0.67)	2.73 (0.80)	3.10 (0.61)	2.80 (0.72)	2.95 (0.70)
LITERACY							
Letters Known	0-20	12.49 (8.87)	14.86 (7.48)	12.65 (8.71)	14.90 (7.31)	12.37 (9.01)	14.84 (7.61)
Fluency	0-n*	31.07 (28.33)	40.28 (28.94)	32.58 (28.55)	42.48 (30.24)	29.87 (28.14)	38.63 (27.87)
Accuracy	0-1	.63 (0.47)	.72 (0.44)	.63 (0.46)	.72 (0.43)	.62 (0.47)	.72 (0.44)
Comprehension Total	0-5	2.83 (2.22)	3.34 (2.11)	2.77 (2.18)	3.27 (2.10)	2.88 (2.26)	3.38 (2.12)
Numeracy	0-1	.45 (0.18)	.48 (0.18)	.43 (0.19)	.46 (0.19)	.46 (0.17)	.51 (0.17)
DEVELOPMENTAL ASSETS PROFILE							
Support	0-30	22.44 (4.93)	23.84 (4.30)	22.23 (5.01)	23.96 (4.37)	22.59 (4.88)	23.75 (4.25)
Empowerment	0-30	20.36 (5.21)	21.95 (4.89)	20.26 (5.21)	22.19 (4.73)	20.44 (5.21)	21.77 (5.01)
Boundaries and Expectations	0-30	23.78 (4.59)	24.41 (3.86)	23.45 (4.45)	24.61 (3.83)	24.02 (4.68)	24.26 (3.88)
Constructive Use of Time	0-30	21.39 (5.53)	21.95 (5.42)	21.81 (5.32)	22.34 (5.24)	21.07 (5.66)	21.66 (5.54)
Commitment to Learning	0-30	23.55 (4.60)	23.11 (4.79)	23.22 (4.81)	23.09 (4.78)	23.79 (4.43)	23.12 (4.81)
Positive Values	0-30	21.21 (4.44)	22.31 (4.13)	20.56 (4.49)	21.95 (4.28)	21.69 (4.35)	22.58 (4.00)
Social Competencies	0-30	22.53 (4.36)	23.22 (4.15)	21.81 (4.59)	22.83 (4.26)	23.06 (4.11)	23.52 (4.04)
Positive Identity	0-30	20.74 (5.29)	22.81 (4.66)	20.39 (5.04)	22.77 (4.67)	21.00 (5.46)	22.84 (4.66)
External DAP	0-30	21.99 (4.09)	23.04 (3.75)	21.94 (4.13)	23.27 (3.64)	22.03 (4.06)	22.86 (3.82)
Internal DAP	0-30	22.00 (3.87)	22.86 (3.76)	21.49 (3.89)	22.66 (3.87)	22.38 (3.82)	23.01 (3.68)
DAP Total	0-60	44.00 (7.51)	45.90 (7.13)	43.43 (7.58)	45.93 (7.18)	44.41 (7.44)	45.87 (7.10)
Self-Employment Skills	1-3	2.46 (0.54)	2.73 (0.38)	2.36 (0.55)	2.70 (0.41)	2.54 (0.52)	2.75 (0.35)
Workplace Teamwork & Drive	1-3	2.66 (0.36)	2.73 (0.33)	2.64 (0.35)	2.70 (0.33)	2.68 (0.36)	2.75 (0.33)
Productive Employment	0-1	.39 (0.49)	.54 (0.50)	.39 (0.49)	.58 (0.50)	.37 (0.48)	.52 (0.50)

Hazardous Employment	0-1	.84 (0.36)	.76 (0.43)	.82 (0.39)	.66 (0.48)	.86 (0.35)	.83 (0.38)
Adequate Savings	0-5	1.03 (1.50)	2.62 (1.88)	0.92 (1.50)	2.85 (1.87)	1.11 (1.49)	2.46 (1.87)
Credit Access	0-5	1.18 (1.71)	2.15 (1.99)	1.17 (1.70)	2.16 (1.96)	1.20 (1.71)	2.14 (2.01)

Note. Standard deviations in parentheses.

**This item does not have an upper range limit.*

Appendix J: Mean differences in Workforce Readiness and Socioeconomic Outcomes between pretest and posttest

	Time		F	p
	Pretest	Posttest		
	M (SE)	M (SE)		
Financial Literacy	2.49 (0.04)	3.42 (0.37)	311.43	<.001
Tangible Assets	2.09 (0.07)	3.22 (0.07)	155.87	<.001
Support for Work Development	2.78 (0.05)	3.01 (0.05)	10.14	.002
LITERACY				
Letters Known	12.49 (0.39)	14.86 (0.32)	56.43	<.001
Fluency	31.07 (1.23)	40.28 (1.22)	71.86	<.001
Accuracy	.63 (0.02)	.72 (0.02)	29.02	<.001
Comprehension Total	2.83 (0.10)	3.34 (0.09)	35.92	<.001
Numeracy	.45 (0.01)	.48 (.01)	43.49	<.001
DAP	44.00 (0.31)	45.90 (0.30)	31.01	<.001
Self-Employment Skills	2.46 (0.02)	2.73 (0.02)	114.30	<.001
Workplace Teamwork & Drive	2.66 (0.01)	2.73 (0.01)	13.38	<.001
Adequate Savings	1.03 (0.06)	2.62 (0.08)	284.09	<.001
Credit Access	1.18 (0.07)	2.15 (0.08)	84.92	<.001

Appendix K: Fitted estimates from equity analysis predicting change in Work Readiness Outcomes between pretest and posttest

	Financial Literacy	Tangible Assets	Support for Work Developmen t	Literacy: Letters Known	Literacy: # (Fluency)	Literacy: % (Accuracy)	Literacy: Total Comprehensio n	Numeracy	DAP	Self- Employment Skills	Workplace Teamwork & Drive
Male	-0.19 (0.12)	-0.12 (0.09)	-0.30* (0.15)	-0.20 (0.69)	-2.99 (2.35)	-0.04 (0.04)	-0.15 (0.18)	0.03** (0.01)	-0.90 (0.80)	-0.03 (0.05)	0.03 (0.05)
Age	-0.06 (0.05)	0.03 (0.04)	-0.04 (0.08)	0.22 (0.29)	2.51* (1.00)	0.02 (0.02)	0.06 (0.08)	0.01 (0.01)	-0.06 (0.34)	-0.03 (0.02)	0.01 (0.02)
Educational Attainment	0.19 (0.16)	-0.00 (0.12)	0.13 (0.17)	-0.55 (0.92)	-3.11 (3.13)	-0.05 (0.05)	-0.23 (0.24)	0.00 (0.02)	-0.32 (1.06)	0.03 (0.07)	0.06 (0.07)
Household wealth	0.01 (0.03)	0.00 (0.02)	-0.00 (0.03)	-0.14 (0.16)	-0.92 (0.55)	-0.01 (0.01)	-0.06 (0.04)	-0.00 (0.00)	-0.04 (0.18)	-0.01 (0.01)	0.01 (0.01)
Has child	0.12 (0.19)	-0.19 (0.13)	-0.32 (0.26)	-0.54 (1.03)	0.49 (3.50)	-0.06 (0.06)	-0.14 (0.27)	0.01 (0.02)	1.66 (1.20)	0.00 (0.08)	0.08 (0.07)
Constant	1.55 (0.89)	-0.11 (0.64)	0.82 (1.30)	0.98 (5.00)	-18.77 (17.04)	-0.08 (0.27)	0.40 (1.33)	-0.07 (0.09)	4.23 (5.76)	0.75 (0.39)	-0.31 (0.35)
Adjusted R ²	.004	-.004	.007	-.007	.013	.001	-.003	.009	.001	-.002	-.004
Effect Size (η^2)	.013	.006	.059	.003	.023	.011	.007	.019	.010	.008	.006

Note. * $p \leq .05$. ** $p < .01$. *** $p < .001$. SE in parentheses.

Appendix L: Fitted estimates from equity analysis predicting change in Socioeconomic Outcomes between pretest and posttest

	Adequate Savings	Credit Access	Job Status at Posttest (Odd Ratios)
Gender (ref: female)	-0.19* (0.09)	0.09 (0.09)	0.04 (0.05)
Age	0.07 (0.04)	0.04 (0.04)	0.03 (0.02)
Educational Attainment	0.06 (0.12)	0.12 (0.12)	0.09 (0.06)
Household Wealth	-0.01 (0.02)	0.02 (0.02)	-0.01 (0.01)
Has Child	-0.10 (0.14)	0.14 (0.14)	-0.09 (0.07)
Job status at pretest			0.08 (0.04)
Constant	-0.57 (0.65)	0.32 (0.68)	-0.38 (0.34)
Adjusted R ²	.005	.003	.015
Effect Size (η^2)	.015	.013	.027

Note. * $p \leq .05$. ** $p < .01$. *** $p < .001$. SE in parentheses.

Appendix M: Fitted estimates from multiple regression predicting posttest Socioeconomic Outcomes for all youth

	Income				Hours Worked				Productive Employment				Hazardous Employment				Adequate Savings				Credit Access			
	Coefficient	Std. Err.	P	η^2	Coefficient	Std. Err.	P	η^2	Coefficient	Std. Err.	P	η^2	Coefficient	Std. Err.	P	η^2	Coefficient	Std. Err.	P	η^2	Coefficient	Std. Err.	P	η^2
Job at Pretest	-0.32	0.18	0.08	0.02	0.03	0.14	0.83	0.00	-0.09	0.08	0.26	0.00	-0.09	0.07	0.19	0.01	-0.02	0.17	0.89	0.00	0.30	0.18	0.10	0.01
Male	-0.39	0.19	0.04	0.02	0.07	0.14	0.65	0.00	-0.11	0.08	0.17	0.02	0.22	0.07	0.00	0.08	-0.38	0.17	0.02	0.01	0.12	0.18	0.52	0.00
Age	0.20	0.09	0.03	0.02	0.04	0.07	0.55	0.00	-0.01	0.04	0.75	0.01	0.03	0.03	0.31	0.00	-0.02	0.07	0.83	0.00	-0.10	0.08	0.22	0.00
Household Wealth	0.03	0.05	0.52	0.00	0.03	0.04	0.50	0.00	-0.01	0.02	0.71	0.00	0.00	0.02	0.80	0.00	-0.04	0.04	0.27	0.00	-0.03	0.04	0.53	0.00
Financial Literacy	-0.14	0.07	0.05	0.01	0.02	0.06	0.77	0.00	-0.04	0.03	0.20	0.00	0.02	0.03	0.51	0.00	0.13	0.07	0.04	0.01	0.15	0.07	0.03	0.01
Tangible Assets	-0.03	0.11	0.78	0.00	-0.16	0.08	0.05	0.01	0.05	0.05	0.27	0.02	0.03	0.04	0.39	0.00	0.67	0.09	0.00	0.10	0.63	0.10	0.00	0.05
Literacy (Fluency)	0.00	0.00	0.83	0.00	0.00	0.00	0.13	0.01	0.00	0.00	0.97	0.01	0.00	0.00	0.23	0.00	0.00	0.00	0.74	0.00	0.00	0.00	0.81	0.00
Numeracy	-0.28	0.73	0.70	0.00	-0.03	0.56	0.96	0.00	0.41	0.32	0.20	0.01	-0.46	0.27	0.09	0.01	0.99	0.62	0.11	0.00	-0.27	0.67	0.69	0.00
DAP	-0.01	0.01	0.48	0.00	0.01	0.01	0.53	0.00	0.00	0.01	0.41	0.02	0.01	0.00	0.12	0.02	0.01	0.01	0.54	0.00	0.01	0.01	0.24	0.00
Self-Employment	-0.10	0.18	0.59	0.01	-0.15	0.14	0.28	0.01	0.12	0.08	0.14	0.00	-0.05	0.07	0.49	0.02	-0.07	0.15	0.66	0.00	0.11	0.16	0.48	0.00
Teamwork & Drive	0.08	0.21	0.69	0.00	0.12	0.16	0.46	0.00	0.01	0.09	0.91	0.01	-0.14	0.08	0.07	0.00	-0.05	0.17	0.78	0.00	0.05	0.18	0.80	0.00
Intercept	-0.26	1.51	0.86		2.06	1.16	0.08		0.92	0.65	0.16		0.12	0.55	0.83		3.04	1.26	0.02		3.41	1.35	0.01	
n	179				178				179				179				480				478			
R2	0.08				0.04				0.09				0.14				0.15				0.11			

Youth in Action POS Endline Report Addendum: Malawi

What is this memo about?

After completing the analysis of POS data for all five countries, the research team revisited the analysis for each country to make sure it was technically robust. This brief summary presents results of this reanalysis of the YiA POS Endline Report data.

Why did we reanalyze the data?

Standard practice with any quantitative analysis is that you improve your models and estimators as you work with more data. Given our experience analyzing data across the five YiA countries, we wanted to ensure that the techniques we used on the last report were reflected on all previous reports.

What do we mean by “reanalysis”?

From the statistical perspective, nothing has changed. The statistical significance of all the findings remains the same. Our reanalysis only dealt with the practical significance of the findings. Practical significance is often expressed through an effect size (ES) estimate. An ES estimate provides us with a way of judging the magnitude or size of what we found rather than simply relying on whether or not it was statistically significant.

Because we did not have a comparison group in the POS studies, we could not use traditional ES estimates. Instead, we used eta-squared (η^2) as a proxy for ES. In working with the data across the five YiA countries, we realized that omega-squared (ω^2) was a technically better ES estimate. Therefore, we revisited all our analyses to see if the practical significance of the findings would change if we used this new ES estimate.

What changed in the POS findings?

Across the five countries, there were very few major substantive changes. However, in the Malawi report there were some minor changes in interpretation; we note these changes below.

In the **Malawi** report, our ES reanalysis shows that...

- There was a *practically* meaningful gain in all four literacy skills—letter identification, fluency, accuracy, and comprehension—though the ES was small (we had reported that only fluency had a non-negligible ES)
- There were no *practically* meaningful equity differences in change in literacy (we had reported that males and older youth had gained more than females and younger youth, but the reanalysis showed that those ES were negligible)
- There were no *practically* meaningful equity differences in change in adequate savings between pretest and posttest (we had reported females gained slightly more than males, but again, the ES reanalysis showed that the effect was negligible)

What does this mean for the conclusions that we can draw from the POS?

- All four indicators of literacy improved meaningfully from baseline to endline
- There were no equity differences in changes in literacy or savings

What do we need to do with this reanalysis?

Because the substantive changes are small, we decided not to republish the POS endline report. Rather, we will add this memo as an addendum to the original report. If you share the POS report, please include the version with this addendum.