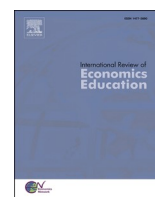


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Financial life-skills training and labor market outcomes in Indonesia

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ABSTRACT

This study examines the relationship between a United States Agency for International Development financial life skills training program for poor and vulnerable youth in Indonesia on labor market outcomes two years following the training. Longitudinal results indicate that self-efficacy and financial behaviors improved from pre-training to two years after the training, and a logistic regression analysis finds significant correlations between self-efficacy and financial behaviors with finding new or better employment. Because financial literacy education can be associated with improved financial behaviors, and soft skills acquisition can be associated with improved self-efficacy, we conclude that the training program led indirectly to new or better employment outcomes for participants. Reinforcing this result, between 92 % and 97 % of the trained youth attributed the training program to their observed improvements in work performance and/or to new or better employment opportunities.

1. Introduction

Around the world, financial literacy education efforts increased dramatically following the 2008 international financial crisis (OECD, 2009; Bosshardt, 2014). This occurred in part due to the recognition that misunderstandings about financial matters resulted in poor personal economic decisions that played a role in causing and exacerbating the crisis (see for example, Bucher-Koenen and Ziegelmeier, 2011, 2014). Assessments of financial literacy training programs in the post-crisis period often find positive outcomes (Lusardi and Mitchell, 2011); however, while most financial literacy evaluation studies focus on changes in financial knowledge, the long-run goals of financial literacy programs include behavioral changes that lead to improved economic outcomes for the individual, as well as for the economy. For example, from a labor-market perspective, improved financial literacy can have positive effects on employment, including lower absenteeism and increased productivity (Braunstein and Welch, 2002; Boston College Center for Work and Family, 2011; International Foundation of Employee Benefit Plans, 2016).

In this paper we trace the effects of a United States Agency for International Development (USAID) financial life-skills (FLS) training program for poor and vulnerable youth in Indonesia on labor market outcomes two years following the training. Our primary focus is to determine the effects of the training on participants' financial literacy, self-perception of soft skills, self-efficacy, and financial behaviors, and ultimately on obtaining new and better employment. After a brief survey of the relevant literature, we describe our

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methodology and data collection procedures with a focus on the longitudinal data collected two years after the training concluded. We report the training's impact with respect to changes in financial literacy knowledge, self-perceived acquisition of soft skills, financial self-efficacy, and financial behaviors. Next, we examine the program participants' labor market outcomes with a focus on those obtaining new or better employment after receiving the training. Finally, we estimate a logistic regression model to examine the determinants of new or better employment, and find significant longitudinal effects for those participants reporting positive financial self-efficacy and engaging in positive financial behaviors linked to the formal economy. By examining the relationship between personal financial literacy training, soft skills development, and long-term employment outcomes for a disadvantaged population in a developing nation, the study provides a unique contribution to the existing literature.²

Throughout this study, we use a definition of financial literacy based on that of the Organization for Economic Cooperation and Development (OECD) where financial literacy is a combination of the awareness, knowledge, skills, attitudes and behavior necessary to make good decisions about finances, and to ultimately achieve financial security (OECD, 2011). Our definition of soft skills is synthesized from the extant literature and includes the qualities and characteristics that help people interact with others and succeed in the workplace (see for example, Direitos et al., 2012; Kyllonen, 2013; Taylor, 2018; Deming, 2017; Davidson, 2017). We refer to the "self-perception" of soft skills because survey respondents assessed their own skill set before and after the training. Financial behaviors refer to those measurable personal economic actions such as budgeting, goal setting, saving, and borrowing which are frequently evaluated relative to personal financial knowledge (for example, Goyal et al., 2021; Henager and Cude, 2016; Allgood and Walstad, 2015). We define self-efficacy as the personal belief in one's own abilities to implement behaviors to succeed in specific situations (see, Bandura (1977, 1986, 1997) as applied to overall personal behaviors and Lown, (2011) for specific application to financial behavior).

2. Literature review

The academic literature suggests that personal financial skills (Walstad et al., 2010a) and interpersonal soft skills (Kyllonen, 2013) can be acquired by students through formal education and training. Furthermore, as previously noted, improvements in these skill sets have been linked to a number of positive economic outcomes with respect to job performance and productivity. In this study, we test the proposition that the USAID-sponsored program in FLS was associated with new or better employment situations for Indonesian participants two years after completing the training.

Although numerous empirical studies have been conducted over the past several decades examining the impact of financial literacy education on individuals and specific groups in different settings, the results are mixed with respect to improvements in knowledge (see, Hastings et al., 2013). For example, although Mandell (2008) found that a course in personal finance did not improve financial literacy for American high school students when compared to a control group, other researchers such as Walstad et al. (2010a) reported contrary results in similar circumstances. In a review of previous empirical research, Austin & Hill (2014) conclude that high quality personal finance education can effectively improve measured financial knowledge, but that the evidence linking improved literacy to long-term behavioral changes is weaker. The literature on behavioral changes resulting from financial education also shows mixed results. Several studies find positive effects between financial literacy and financial behaviors (for example, de Bassa Scheresberg, 2013; Grohmann, 2018; Allgood & Walstad, 2015), while others find no correlation (for example, Mandell and Klein, 2009). Still other studies find the effects of financial literacy and financial behaviors vary across different demographic populations, including age (Henager and Cude, 2016) and socioeconomic groups (Kaiser & Menkoff, 2017).

However, a growing number of studies do find an association between improved personal financial literacy and measurable positive economic outcomes. This is particularly true with respect to labor market outcomes including improved worker productivity (Braunstein & Welsh, 2002), decreased absenteeism (McKenzie et al., 2014; Boston College Center for Work & Family, 2011) and entrepreneurial success (World Bank, 2018; Njoroge, 2013; Bruhn and Zia, 2011). Financially literate workers are in a better position to make favorable economic decisions which in turn leads to more stable life circumstances and better labor market opportunities.

The interest in financial literacy is global and has not been limited to the world's high-income nations. To the contrary, financial literacy is often cited as a potential pathway for sustainable development in the low-income economies of the world (Krechovska, 2015; OECD, 2018; Praveena and Rachel, 2018; Ye and Kulathunga, 2019). The USAID-sponsored program in Indonesia was specifically designed to address economic development issues through investments in the financial human capital of its young at-risk adult population. Uniquely, the program combined personal financial education with interpersonal soft skills training in areas such as communication, team work, time management, and organization.

Previous research reveals that soft skills are related to self-efficacy (Direitos et al., 2012) and are critical for on-the-job success, including earnings (Bowles et al., 2001). Studies also show that occupations requiring soft skills for worker success are growing in importance (Taylor, 2018; Deming, 2017; National Association of Colleges and Employers, 2017; Davidson, 2017). A Singapore study found that college students from several Asian nations, including Indonesia, perceive that soft skills are important for employment and career advancement (Majid, et al., 2012). Furthermore, after reviewing multiple empirical studies investigating the issue, Balcar (2014) found positive wage returns to soft skills and evidence that soft skills may help close gender wage gaps. Thus, the Indonesian program's curriculum was premised on the complementary nature of financial literacy education and soft skills training to improve the prospects for positive labor market outcomes. Lopus et al. (2019) document the impact of the combined financial literacy and soft skills

² In addition, this study adds to the growing empirical literature focused on long-run "real world outcomes" of economic and financial education programs and revealed financial literacy. See Rebeck & Walstad (2002), Allgood et al. (2010, 2011), and Grimes, et al. (2010, 2021) for examples of recent studies linking economic and financial education to long-run behaviors.

training on financial literacy knowledge by building an ordinary least squares regression model to examine the correlations between these variables.³

Based on a synthesis of these prior inter-related works, we hypothesize that the FLS training led to improved financial literacy, self-perceptions of soft skills, financial behaviors, and self-efficacy, and that these personal outcomes in turn are correlated with new and better employment.

3. Data collection and methodology

In 2018, as part of an Inclusive Workforce Development project sponsored by USAID-Indonesia, 601 poor and vulnerable youth (defined as those aged 18–34) from West Java participated in the pilot of a multi-day training program focusing on financial literacy and soft skills. The training program, entitled YouthWin through Economic Participation (YEP), consisted of 16 learning modules designed to improve the employability of poor and vulnerable Indonesian youth.⁴

Program participants reflected a cross-section of this Indonesian population. Participants experienced the YEP program as part of their studies at various types of educational institutions. These included public BLK (Balai Latihan Kerja), as well as private LPK (Lembaga Pelatihan Kerja) and LKP (Lembaga Kursus dan Pelatihan) vocational training centers. These are considered to be outside the formal educational sector and provide hands-on practical training to those who wish to improve their skills to increase employment opportunities. Additional program participants were students at polytechnic universities and other institutions of higher learning which require entrance exams for admission. (Further details about the YEP program, including curriculum development and content, as well as information about teacher training and student participants may be found in [Lopus et al. \(2019\)](#).)⁵

In 2020, two years after the training was completed, a cohort of YEP-trained youth were invited to respond to a follow-up longitudinal survey inquiring about their financial behavior, attitudes and self-efficacy as well as employment outcomes. Because we also have baseline participant data from the beginning and immediately following the financial life skills training, we are able to measure changes in these attributes over time.⁶

Our research focuses on the subset of the initial cohort of 601 students who completed the YEP training between January and May 2018 and who responded to our follow-up survey in 2020. Prior to the three-day training, students completed a 10-question financial literacy pretest and instruments asking about self-perceptions of soft skills (10 items), self-efficacy (15 items), and financial behavior (10 items), along with questionnaires concerning employment and demographic information. Immediately after the training they took the financial literacy posttest and self-perceptions of soft skills posttest using the same instruments. In 2020, two years after the training, students were invited to participate in the longitudinal follow-up study and responded to the same attitude, behavior and self-efficacy questions as those administered pre-training. The longitudinal survey also included a series of employment questions asking to what extent the YEP training influenced their current employment situation.⁷ The longitudinal attitude, behavior and self-efficacy items, which were the same as those on the pretest, can be used to detect changes in these variables over time. The employment questions allow us to ascertain which YEP participants obtained new employment subsequent to the training by determining who was employed in 2020 but not employed in 2018. We can also determine for whom employment improved by comparing the job situations of those working in both 2018 and 2020.

The longitudinal survey was conducted with the assistance of a professional enumerator hired to help assess the YEP project. All 601 students from the initial 2018 cohort were invited to take the survey via email or social media. The response rate was initially low because many of the students had moved or changed phone numbers, emails and/or social media accounts. Using information supplied in the pre-training questionnaires, the enumerator was able to obtain survey responses from 193 of the original 601 YEP-trained youth, for a response rate of about 33 %. We consider this to be a good response rate for a longitudinal survey of a population of young adults.⁸ It should be noted, however, that the circumstances for completing the initial questionnaire and the longitudinal survey were different. Students completed the initial pre-training questionnaire by filling in paper forms in a classroom environment monitored by instructors. The enumerator conducted the longitudinal survey by phone.⁹

³ In contrast, our current study employs logistic regression instead of OLS because of the limited nature of our dependent variable measuring new or better employment.

⁴ Those earning less than \$2 per day and without significant assets were considered poor. The vulnerable included those in need of special care, the unemployed, school dropouts, and those at risk of not finding employment or who were in unstable employment.

⁵ Although this study and [Lopus, et al. \(2019\)](#) both analyze outcomes for the students who received instruction through the YEP program, [Lopus, et al.](#) focuses on the teacher outcomes of the YEP training of trainers workshop and the short-run student outcomes observed immediately after completion of the program (N = 601), while the current study focuses on the long-term student outcomes two-years following completion of the program (N = 193). The longitudinal data analyzed here were not yet collected at the time [Lopus, et al.](#) was written and published.

⁶ The nature of the longitudinal phone survey precluded the ability to administer the financial literacy test instrument two years after the initial training workshop. Therefore, measurements of changes in financial knowledge since the training are not available for analysis. We are interested if the knowledge measured at the end of the training is related to subsequent behaviors and market outcomes – thus, data collection focused on behaviors and employment outcomes.

⁷ The financial literacy pretests and posttests are based on the normed Basic Economics Test ([Walstad et al., 2010a](#)), which has been shown to be valid and reliable. Other survey instruments were developed by experts in the respective fields (see [Lopus, et al. \(2019\)](#) for details).

⁹ An inspection of the preliminary results collected without the enumerator and those collected by the enumerator reveals no obvious evidence that the difference in survey procedures materially affected the results.

⁸ See [Porter & Umbach \(2006\)](#) for a discussion of different student survey response rates based on student and institutional characteristics.

4. Personal outcomes

4.1. Descriptive statistics

Table 1 provides descriptive statistics for the 193 students in the longitudinal sample.¹⁰ Rounding the results in Table 1 to whole numbers, we find that the sample was slightly more female than male, with an average age of 23. Most students, 91%, had completed senior high school at the time of the survey,¹¹ and more than half, 56 %, completed the YEP financial life-skills (FLS) training at a polytechnic university. All of the students lived in three provinces of West Java; over half, 54 %, were from Indramayu, compared to Sukabumi at 27 % and Bandung at 19 %. Very few of the students had prior soft skills training (16 %) or financial literacy training (only three percent). The vast majority of the students were single (94 %) and living with their parents (84 %). Interestingly, however, almost a third (31 %) reported that they make most of the financial decisions for their household. Virtually all of the sample elements, 97 %, reported completing each of the 16 training modules.

4.2. Changes in Financial Literacy

The documented linkage between financial literacy and improved job performance motivated the decision to devote eight sessions to financial literacy within the YEP training program. The financial literacy curriculum topics are shown in Fig. 1 and reflect a standard introductory personal finance curriculum. They were adapted to the local Indonesian culture and environment where appropriate.

The 10-question financial literacy pretest, based on the concepts and ideas taught through these lessons, was administered before the training began and the posttest was administered immediately following the training program. The test questions are shown in Table 2, along with the percentage of correct responses for each administration of the questions. The table also reports the difference between the means for each question and if that difference is statistically significant according to a paired-sample t-test.

Table 2 reveals that students demonstrated more knowledge after the training on all except the first question, where 99 % of students already knew the correct answer on the pretest. Seven of the remaining nine questions showed statistically significant improvement from the pretest to the posttest. The largest gains concerned the importance of saving early (Question 5) and the effect of compound rates of return (Question 10). Examination of the participants' overall test scores reveals an improvement from a mean of 68 % correct on the pretest to a mean of 82 % correct on the posttest. As shown in Table 2, this is a statistically significant improvement in measured financial literacy knowledge, which supports our hypothesis that financial literacy improved as a result of the FLS training.

4.3. Changes in Soft Skills

To better prepare Indonesian youth for workforce participation and on-the-job success, the YEP FLS training included eight sessions teaching soft skills relating to personal behavior. The YEP soft skills topics are shown in Fig. 2. The curriculum topics were chosen to build skills that would help participants succeed in the workplace and that reflect those found to be important in the personal skills literature (e.g. communication, listening, critical thinking and caring for others).

Before completing the YEP financial life-skills training, students were asked how much they agreed with 10 statements involving personal soft skills that are linked to employability and job success as shown in Table 3. The questions related to the topics covered in the YEP curriculum and included showing respect, listening, communication styles, being responsible, confidence, teamwork, problem solving, having a social network, time management, and developing an action plan. At the conclusion of the YEP training program, the students responded again to the same statements.

Table 3 reports the average Likert-scale responses, ranging from 1 (strongly disagree) to 5 (strongly agree) for each administration of the questions. For each question, students showed significant increases in their self-perceptions of their soft skills after the training. The largest improvements were found for "ability to develop an action plan" (Item 10), "understanding what is needed to feel more confident" (Item 5), and "problem solving and decision making" (Item 7).

In addition to looking at the individual soft skills questions, we created an index of responses for each student by aggregating the Likert-scale responses across items. This results in an index score, which could range from 10–50, reflecting the overall change in self-perceptions of the acquisition of soft skills before and after the training. As shown in Table 3, the average total score increased significantly from pre training to post training. This provides empirical evidence for our hypothesis that the FLS improved self-perceptions of soft skills.

¹⁰ A comparison of the 193 subjects in the longitudinal subsample to the 601 in the full sample reveals that the longitudinal subsample includes a slightly higher percentage of females and polytechnic students. However, no systematic differences between the key variables of interest were uncovered. The longitudinal data were not found to exhibit a sample selection issue which could bias the results.

¹¹ Indonesia has a higher-education Diploma system, providing professional education through the university system. In the table, Diploma 1 generally refers to a one-year program, and Diploma 3 to a three-year program.

Table 1
Characteristics of the Longitudinal Sample of YEP-Trained Youth.

Characteristic	Percentage or Mean
Sex:	
Female	50.78%
Male	49.22%
Age in 2020	23.34 (2.63)
Education	
Junior High or lower	1.03%
Senior High	91.28 %
Diploma 1	2.56%
Diploma 3	2.05%
University	3.08%
School Type	
Polytechnic	55.96%
BLK	30.05%
LPK or LKP	9.85%
University	4.14%
Province	
Bandung	18.65%
Indramayu	53.89%
Sukabumi	27.46%
Prior Financial Literacy Training	3.11%
Prior Soft Skills / Life Skills Training	16.06%
Ever held job (at start of training)	48.70%
Marital Status	
Single	94.30%
Married	4.66%
Divorced or Widowed	1.04%
Have children	2.60%
Current Living Arrangement	
Live with parents/siblings	84.46%
Live alone	8.29%
Live with spouse	1.55%
Live with roommate or other	5.70%
Make most financial decisions for household	30.57%
Attended all training modules	96.89%
Number of Observations	193

() – Standard Deviation

Lessons
<ul style="list-style-type: none"> • Ten Big Ideas of Financial Literacy • Decision Making for Personal Finance • Planning and Setting Personal Financial Goals • Earning Income and Investing in Yourself • Managing Your Money (budgeting, banking) • Saving • Credit and Borrowing • Dealing with Risk

Fig. 1. YouthWin through Economic Participation Financial Literacy Curriculum.

4.4. Changes in self-efficacy

The longitudinal data allow examination of the students' self-reported changes in self-efficacy and financial behaviors.¹² We developed and administered a 15-question self-efficacy assessment pertaining to employment situations and related to soft skills and financial literacy behaviors. These questions are shown in Table 4. Ten questions directly relate to soft skills and five to financial literacy, although there is overlap in the areas of goal-setting, decision-making, and solving problems.

¹² We also collected pre- and post-training information about student attitudes toward the importance of understanding five financial literacy concepts. These responses were almost all four or five on a Likert scale (important or very important) both pre- training and longitudinally, and were not found to relate to new or better employment. Therefore, we do not report these results here.

Table 2
Change in Financial Literacy Test Scores: Percentage Correct: Pre-Training vs. Immediate Post-Training (Multiple choice response options not shown.).

Topic/Question Stem	Pre-Training Test	Post-Training Test	Difference
<u>Prioritization</u>			
1. What must people do when they want many goods and services but do not have the income to buy them all?	99%	98%	-1%
<u>Goal Setting</u>			
2. Ariana set a goal to save IDR 200.000, each month from her paycheck to buy a new bike. The new bike is...	58%	66%	8%**
<u>Training</u>			
3. Sam works at a low-wage job. He would like a job that pays more. What would be the best action for Sam to take to increase his standard of living over his lifetime?	67%	86%	19%***
<u>Budgeting</u>			
4. To live within her means, Bella creates a budget. What are the two main things she keeps track of in her budget?	74%	79%	5%
<u>Compounding</u>			
5. Roland and Ratna both deposited IDR 500,000 into their savings over their lifetimes for retirement. Roland began saving 10 years before Ratna, and retired with more savings than Ratna. Which of the following is the best explanation for why Roland retired with more savings?	41%	73%	32%***
<u>Credit Ratings</u>			
6. A lender will charge more interest on a loan to someone who has ...	54%	71%	17%***
<u>Loan Sharks</u>			
7. In general, which of the following financial businesses will charge the highest interest rate for a short-term loan?	75%	80%	5%
<u>Risk</u>			
8. When Sinta keeps all her money in a bamboo box at home instead of putting it in a bank account she is ...	75%	87%	12%***
<u>Credit</u>			
9. An advantage of using credit is so a person can...	72%	87%	15%***
<u>Interest</u>			
10. Suppose you had IDR 1.000.000,- in a savings account and the interest rate was 2 % per year. After five years, how much do you think you would have in the account if you left the money to grow?	67%	91%	24%***
Total Test	68% (1.73)	82% (1.36)	14%***

0)-Standard Deviation
Paired t-test: ***p < 0.001; **p < 0.05

- Lessons**

 - Self confidence
 - Becoming a responsible person
 - Critical thinking and problem solving
 - SWOT analysis (strengths, weaknesses, opportunities, threats)
 - Overcoming procrastination
 - Teamwork
 - Positive communication
 - Developing an action plan

Fig. 2. YouthWin through Economic Participation Soft Skills Curriculum.

Looking first at the financial literacy related questions in Table 4 (items 1 through 5), the results for YEP-trained youth reveal significant longitudinal improvements in the areas of personal control over financial decision-making and the ability to overcome financial difficulties. Three areas showed no significant changes from pre-training to two years later, including having solutions for financial problems, expressing control over financial situations, and having self-confidence in making financial decisions.

Examination of the soft skills related questions in Table 4 (items 6 through 15) reveals statistically significant improvements in seven areas. Two years after the training, the YEP-trained youth report improvements with respect to job-finding skills and in behaviors that are valuable in the workplace including self-expression, completing tasks, critical thinking, goal-setting, dealing with unexpected events, and showing interest in others.

Two of the 10 areas of self-efficacy relating to soft skills showed significant decreases, and one showed no significant change. The decreases were with respect to respondents knowing what type of job they would like to have later in life and always trying to solve the problems that concern them. These negative changes could be due to the realities of being in the labor market and having new knowledge about types of employment, along with a realization that some problems may be beyond their control. There was no significant change in being able to "...work with those who have different opinions from me." As hypothesized, Table 4 also shows that the overall index of self-efficacy, computed by adding and averaging Likert-scale responses, increased significantly from before the training to two years later.

Table 3
Change in Self Perception of Soft skills: Pre-Training vs. Immediate Post-Training.

How much do you agree with the following statements? Range 1 (strongly disagree) to 5 (strongly agree)	Pre- Training	Post- Training	Difference
1. I realize how respecting one another contributes to positive relationships.	4.76	4.93	0.17 ***
2. I realize that listening behaviors have a positive impact on relationships.	4.63	4.85	0.22 ***
3. I understand the impact that passive, aggressive and assertive communication styles and related behaviors can have on me and on others.	4.19	4.51	0.32 ***
4. I understand the possible consequences of acting irresponsibly.	4.33	4.61	0.28 ***
5. I understand what is needed to feel more confident.	4.10	4.57	0.47 ***
6. I understand the importance of working together as a team.	4.67	4.85	0.18 ***
7. I can use the steps for solving problems and making decisions.	4.23	4.61	0.38 ***
8. I realize how my social networks can be used to my benefit.	4.30	4.47	0.17 **
9. I understand and apply the process of time prioritization.	4.27	4.62	0.35 ***
10. I am able to develop my own Action Plan for the next six months to one year.	3.81	4.40	0.59 ***
Total Index (range 10–50)	43.27 (3.73)	46.43 (3.09)	3.16 ***

()- Standard Deviation

Paired t test:, ***p < 0.001; **p < 0.01

Table 4
Changes in Self Perceptions of Self-Efficacy: Pre-Training vs. Longitudinal.

How much do you agree with the following statements? Range: 1 (strongly disagree) to 5 (strongly agree)	Pre-Training	2-Years After Training	Difference
1. I have solutions for the financial problems I face. [FL]	3.98	4.02	0.04
2. I have control over my financial decision making. [FL]	3.88	4.20	0.32 ****
3. I believe my financial situation is mostly determined by me. [FL]	4.34	4.40	0.06
4. I am confident in myself when making financial decisions. [FL]	4.19	4.13	-0.06
5. I can overcome financial difficulties. [FL]	3.85	3.98	0.13 *
6. I know how to introduce myself when looking for a job. [SS]	4.01	4.35	0.34 ****
7. It is easy for me to express my opinions and discuss important issues. [SS]	3.84	4.12	0.28 ****
8. I already have a good idea of the type of job I would like to have later. [SS]	3.97	3.70	-0.27 ****
9. I can easily complete important tasks or activities. [SS]	3.89	4.15	0.26 ****
10. I always try to solve the problems that concern me. [SS]	4.35	4.18	-0.17 ***
11. I can work with people who have different opinions from me. [SS]	3.93	4.03	0.10
12. Before making a decision, I gather all the facts and consider different options. [SS]	4.27	4.40	0.13 **
13. I can set goals for myself. [SS]	4.25	4.41	0.16 ***
14. I can deal with unexpected events. [SS]	3.86	3.99	0.13 **
15. I show interest for others. [SS]	3.95	4.44	0.49 ****
Total Index (range 15–75)	60.51 (5.58)	62.50 (6.25)	1.93 ****

[FL] = Financial Literacy; [SS] = Soft Skills

()-Standard Deviation

Paired t-test: ****p < 0.001; ***p < 0.01; **p < 0.05; *p < 0.10

4.5. Financial behavior

Financial literacy knowledge is most valuable when it leads to financial behaviors that result in personal financial security and improvements to the economy. Participants in the FLS training responded to yes-no questions asking about their financial behaviors prior to the training and two years after. These questions are shown in Table 5, along with pre- and post-training responses (percent answering yes) and the significance levels of the differences.¹³

As shown in Table 5, YEP participants showed statistically significant improvement for six of the nine financial behaviors. These include having and following a budget, saving money for future spending, having a bank account, loans, and investments and paying bills on time. Although these changes in behaviors may have naturally occurred in part because the youth were two years older and finished school, they are also likely correlated with the training because of links between increased financial literacy and improved financial behaviors.¹⁴

¹³ There were originally ten questions addressing financial behavior. One question about insurance was changed between the pre-training and longitudinal surveys due to confusions in translation concerning the difference between private and government-provided insurance in Indonesia. Therefore, Table 5 reports only the nine questions that appeared in both surveys.

¹⁴ Funding constraints did not allow for a control group of similar youth who did not receive the training. The limitations on our empirical analysis due to this fact are acknowledged and the normal caveats apply.

Table 5
Changes in Financial Behavior: Pre-Training vs. Longitudinal.

Behavior (Yes or No: % of Yes Responses)	Pre-Training	Longitudinal	Difference
1. I have and follow a budget.	68%	77%	9%***
2. Before I buy something I shop around to find the best option.	99%	100%	1%
3. I set financial goals and strive to achieve them.	96%	96%	0%
4. I save money for future spending.	77%	89%	12%****
5. I have a bank account.	69%	85%	16%****
6. I have a credit card.	15%	15%	0%
7. I always pay my bills on time.	75%	91%	16%****
8. I have a loan.	10%	20%	10%****
9. I have investments.	22%	47%	25%****
Average of all statements	59%	69%	10%****
	(1.37)	(1.37)	

() – standard deviation

Paired t-test: ****p < 0.001; ***p < 0.01

4.6. Reflections about FLS training

Two years after the FLS training, participants were asked to reflect and state how much they agreed or disagreed with four statements: whether they think they learned a lot about financial literacy and soft skills during the YEP program, and whether they think what they learned about financial literacy and soft skills will improve their lives. These questions and the responses are shown in Table 6. The vast majority, from 92 % to 98 %, of participants either agreed or strongly agreed with all four statements. These findings indicate that the training was memorable and that its effects are long-lasting. Furthermore, the results support the hypothesis that the training positively impacted the longitudinal changes in self-efficacy and financial behaviors.

5. Labor market outcomes

The longitudinal results regarding employment provide the opportunity to assess the cumulative impact of the YEP training program on long-term personal outcomes. The labor market experiences are summarized in Table 7 for the 193 students in the longitudinal study. In 2018, during the training, 27% of the 601 students were employed, whereas by 2020, two years after the training, 66% of the 193 students were employed. Importantly, 97% of those employed in 2020 said that the FLS training had improved their work performance either “somewhat” or “a lot.” Although not shown in the table, those employed in 2020 are more likely to be male and to have attended a school type other than a polytechnic during the training. They were also likely to exhibit stronger financial behaviors and self-efficacy, which will be discussed below.

5.1. New employment

New employment was defined as occurring if the student was not employed in 2018 during the FLS training but was subsequently employed in 2020. As shown in Table 7, 68 % of those employed in 2020 were newly employed. The vast majority, 93 %, of the newly employed credited the FLS training for helping them to achieve this new employment either “somewhat” or “a lot.” Of the newly employed, 80 % found full-time employment, 16 % had new self-employment, and 7 % found part-time employment. (Note that some respondents fell into more than one category.)

5.2. Better Employment

Better employment occurred if the student was employed in both 2018 and 2020 and reported that their employment was better in 2020 than it had been in 2018. Of the 41 participants who were employed in both 2018 and 2020, 29 of those, 71 %, reported that their employment had improved. While job experience often leads to better employment regardless of other factors, 88 % of those with better employment say that the FLS training helped them to achieve this better employment “somewhat” or “a lot.” Table 8 summarizes how employment improved for the respondents. The major factors that made employment better are better income, more networking opportunities, moving from part-time to full-time employment, and more interesting work.

6. Logit regression model and results

To further investigate the effects of the FLS training on labor market outcomes, we estimated a logistic regression model to explore determinants of new or better employment. The model takes the following form:

$$\text{NBE} = \alpha + \beta_1\text{D} + \beta_2\text{L} + \beta_3\text{TS} + \beta_4\text{KB} + \varepsilon$$

where NBE is a binary dichotomous variable that takes the value of one if a student respondent reported securing new or better employment within two years of completing the YEP training, **D** represents a vector of the students' personal demographic

Table 6
Students' Longitudinal Self-Reflections on Financial Life Skills Training.

How much do you agree with the following statements?	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
1. I learned a lot about financial literacy in the YEP training.	0%	0.5%	2%	50%	48%
2. I learned a lot about life skills in the YEP program.	0%	0%	4%	48%	48%
3. I think that what I learned about financial literacy in the YEP program will improve my life.	0%	0%	4%	49%	47%
4. I think that what I learned about life skills in the YEP program will improve my life.	0%	0%	7%	53%	39%

Table 7
Longitudinal Employment Status and Effects of Financial Life Skills Training.

Student reported:	Employed in		
	2018 (Pre-Training)	2020 (Longitudinal)	2018 and 2020 (Both Periods)
Held job with pay	52 of 601 27%	127 of 193 66%	41 of 193 21%
FLS helped work performance (Somewhat or a lot)		123 of 127 97%	
New employment in 2020		86 of 127 68% (Full-time: 80% &/or Self-employed: 16% &/or Part-time: 7%)	
FLS helped get new employment (Somewhat or a lot)		80 of 86 93%	
Better employment in 2020			29 of 41 71%
FLS helped get better employment (Somewhat or a lot)			36 of 41 88%

characteristics, **L** is a vector of categorical location variables representing the three Indonesian provinces in West Java where the training occurred, **TS** is a vector of categorical variables representing the training setting where the YEP workshops were delivered, and **KB** is a vector of personal knowledge and behavior variables captured immediately post-training and longitudinally two years later.

The specific variables included in each vector are defined in Table 9 and the empirical results are shown in Table 10. Our primary interest in the logistic regression model lies with the **KB** variables. The direct effects of the training are captured by the financial literacy score and soft skills index score, and the indirect effects of the training are captured by the self-efficacy and financial behavior index scores. Independent variables in the other vectors control for the students' sex, age, being single, being the household decision-maker, having attained education beyond high school, which type of institution provided the YEP training, and the location where the training took place.

With respect to the control variables, it is interesting to note that none of the demographic variables entered the model with statistical significance. Thus, the training program's longitudinal effects on new or better employment did not vary substantially across any of the measured individual personal characteristics. However, holding everything else constant, participants from Bandung Province were significantly more likely to experience new or better employment relative to those living in Indramayu Province (the reference category) while no difference was found between Sukabumi Province and Indramayu Province. As one of the largest cities in Indonesia, Bandung, the provincial capital, may have provided greater opportunities for enhancement of employment prospects due to

Table 8
Reasons for Better Employment in 2020 for Students Employed in 2018.

Reason	Percent Choosing Each Reason
Better income	24%
Received promotion	5%
Moved from part-time to full-time	12%
Better or more flexible work hours	7%
Greater opportunities for advancement	5%
More recognition and appreciation from supervisors	5%
More interesting work	10%
Increased insurance	5%
Growth in networking opportunities	17%
Other	2%

Respondents may report multiple reasons.

N = 41

the size and vibrancy of the local labor market. Differences in the industrial composition, relative wealth, and investment in public services between the provinces may also be factors in this result.

Table 10 also reveals that the students who participated in the program through local vocational training centers, the BLKs and LPKs, were more likely to experience new or better employment relative to those from polytechnic institutes (the reference category). Given that most of the BLK and LPK students are those who have just completed secondary education and who are receiving specific vocational training, this longitudinal result is likely due to initial conditions. Participating BLK and LPK students were initially more likely to be unemployed or on very low rungs of the job ladder. Thus, there are greater opportunities, and a larger probability, to make an advancement in employment conditions over time when the initial position is near the bottom of the job hierarchy.

With respect to the post-training and longitudinal variables, both the longitudinal Self Efficacy Index Score and the longitudinal Financial Behavior Index Score obtained coefficients that were positive and statistically significant. Thus, the results in Table 10 indicate that having new or better employment is positively and significantly related to the indirect effects of the FLS training with respect to both self-efficacy and financial behaviors, *ceteris paribus*. However, while it is reasonable to assume that those with higher self-efficacy may be more successful in job finding and in improving their job situation, the causality may run the other way. Those with jobs may be more likely to exhibit strong self-efficacy because they are earning an income, and may be more likely to participate in the formal financial system, exhibiting more positive financial behaviors, including those in the formal economy such as having a bank account and investments. The positive financial behaviors may also lead to less on-the-job anxiety and improved productivity, as reflected in the literature. Additional research is needed to sort out these relationships.

As was shown in Tables 2 and 3, the FLS training led to improvements in financial literacy knowledge and self-assessments of soft skills immediately after the training. While these scores are not significant in determining new or better employment in our regression

Table 9
Logit Regression: Specification and Descriptive Statistics of Variables.

Variable	Definition	Mean (Standard Deviation)
<u>Dependent Variable</u>		
New or Better Employment	1 = Student secured new or better employment within 2 years after YEP training; 0 = otherwise	0.596 (0.492)
<u>Demographics</u>		
Sex	1 = Student self-identifies as female; 0 = male	0.510 (0.501)
Age	Student's chronological age in year	23.466 (2.737)
Single	1 = Student's is not married; 0 = otherwise	0.943 (0.232)
Higher Education	1 = Student attended institution of higher education prior to training; 0 = otherwise	0.078 (0.268)
Household Financial Decision-Maker	1 = Student is primary financial decision-maker for household; 0 = otherwise	0.310 (0.462)
<u>Training Location</u>		
Bandung Province	1 = Student lives in Bandung; 0 = otherwise	0.187 (0.391)
Sukabumi Province	1 = Student lives in Sukabumi; 0 = otherwise	0.275 (0.447)
<u>Training Delivery Setting</u>		
BLK	1 = Training held at a BLK; 0 = otherwise	0.301 (0.460)
LPK	1 = Training held at an LPK or LKP; 0 = otherwise	0.010 (0.299)
University	1 = Training occurred through a university, college, or academy; 0 = otherwise	0.042 (0.200)
<u>Post-Training and Longitudinal Knowledge and Behavior</u>		
Financial Literacy Test Score	Student's post-training score on YEP Financial Literacy Test (Max = 10)	8.180 (1.358)
Soft Skills Index Score	Student's post-training total score on Soft Skills Index (Max = 50)	46.427 (3.089)
Self-Efficacy Index Score	Student's longitudinal Self-Efficacy Index Score (Max = 75)	62.500 (5.630)
Financial Behavior Index Score	Student's longitudinal total score on Financial Behavior Index (Max = 9)	6.197 (1.374)
Number of Observations		193

Table 10
Logit Regression Results: Determinants of New or Better Employment.

Variable	Logit Coefficient	Exp (B)
Constant	-6.629 (4.292)	0.001
<u>Demographics</u>		
Sex	-0.357 (0.397)	0.700
Age	-0.079 (0.100)	0.924
Single	0.950 (1.060)	2.586
Higher Education	-0.800 (0.988)	0.449
Household Financial Decision-Maker	-0.251 (0.439)	0.778
<u>Training Location</u>		
Bandung Province	1.713*** (0.685)	5.546
Sukabumi Province	0.162 (0.452)	1.176
<u>Training Delivery Setting</u>		
BLK	1.593*** (0.509)	4.919
LPK	1.863** (0.788)	6.446
University	0.379 (1.284)	1.460
<u>Post-Training and Longitudinal Knowledge, Self Efficacy and Behavior</u>		
Post Financial Literacy Test Score	-0.042 (0.136)	0.959
Post Soft Skills Index Score	-0.011 (0.068)	0.989
Longitudinal Self Efficacy Index Score	0.079** (0.038)	1.082
Longitudinal Financial Behavior Index Score	0.539*** (0.148)	1.715
Number of Observations	193	
Pseudo R ²	0.766	

Exp(B) – Odds Ratio

() – Standard Error

***p < 0.01, **p < 0.05, *p < 0.10

model, they likely led to the improved self-efficacy and financial behaviors. Although we are unable to attribute improvements in self-efficacy and financial behaviors directly to the FLS training, because from 88 % to 97 % of respondents report that the FLS training helped them with work performance and to achieve new or better employment, we can safely assume that the training indirectly affected these outcomes. While our hypotheses did not distinguish between direct and indirect effects of the training, this result supports our hypothesis that the training had a positive effect on finding new or better employment.

7. Conclusions

In this paper we report findings from a 2018 financial life skills training program for poor and vulnerable youth in Indonesia. Immediately after training, students showed significant increases in financial literacy knowledge from a pretest to a posttest and significant increases in perceptions of their soft skills. This is consistent with the findings in the literature that financial literacy concepts (Walstad et al., 2010a) and soft skills (Kyllonen, 2013) can be taught in formal education settings.

Self-efficacy improved significantly from before the FLS training to two years after the training overall, and in seven out of ten areas relating to soft skills, and in two out of five areas relating to financial literacy, which comports with prior findings about the positive relationship between soft skills and self-efficacy (Diretoa et al., 2012).

Also, two years after the training, those completing the FLS training reported significant increases in responsible financial behaviors in six out of nine areas including budgeting, saving, and paying bills on time. Because the literature shows some inconsistencies between measured financial literacy and financial behaviors, our results are consistent with prior positive findings. The vast majority of FLS participants, from 92 % to 98 %, agreed or strongly agreed that they learned a lot about soft skills and financial literacy and that

they think this information will improve their lives.

Sixty-six percent of the students who completed the FLS training were employed two years after the training, compared to 27 % at the onset of the training. Because intervening life experiences since the training and other personal factors undoubtedly also influenced the respondents' reported financial situation (see, [Xiao et al., 2020](#)), we cannot measure the degree to which the training contributed to the improved labor market outcomes. However, ninety-seven percent of those employed said that the FLS training had improved their work performance. Of those employed two years after the FLS training, 68 % were newly employed. Ninety-three percent of the newly employed reported that the FLS training helped them to achieve this new employment.

Of those who were employed both during the training and two years after, 71 % reported that their employment had improved compared to prior to the training, and 88 % of those with better employment reported that the FLS training helped them to achieve this better employment. The major factors that make their employment better were better income, more networking opportunities, moving from part-time to full-time employment, and having more interesting work.

Results from a logistic regression model investigating determinants of achieving new or better employment indicate that those with stronger self-efficacy and who exhibited stronger financial behaviors were more likely to have new or better employment. While we know of no prior studies tracing effects of financial life-skills training on new and better employment, because self-efficacy and financial behaviors improved longitudinally after the training and are linked to improvements in financial literacy and acquisition of soft skills, and because participants said the training had helped them to achieve the new or better employment, we attribute the training as assisting in new or better employment outcomes.

The funding constraints for this project prevented the utilization of a comparison control group and large-scale sample sizes; however, our results, taken together and presented here, point to the overall success of the YEP FLS training in improving financial literacy, soft skills, self-efficacy, and financial behaviors, and leading to new or better employment. Although we cannot definitively state the direction of causality between employment and self-efficacy and financial behaviors, because the self-efficacy and financial behavior survey questions were related to the FLS curriculum, this points to the likelihood that the training led to increased personal self-efficacy and improved financial behaviors, and thus, to new or better employment. And because participants overwhelmingly credit their FLS training for their new or better employment, this strongly points to the overall success of the training and the relationship of financial literacy and soft skills training contributing to new or better employment. Our findings are consistent with the growing empirical literature of the impact of financial education programs on personal behavior and outcomes ([Kaiser et al., 2022](#)). The practical implications of this study are that financial literacy and soft skills training programs are valuable not just in terms of knowledge and skills gained, but for potential contributions to positive labor market outcomes. These outcomes relating to new and better employment benefit not just the students trained but ultimately the overall economy.

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Ethics statement

This study was conducted according to the research guidelines of the United States Agency for International Development which follows the Common Federal Policy for Protection of Human Subjects. Details available at researchpolicy@usaid.gov.

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