



## **CHANGING HABITS TO IMPROVE LIVES**

LESSONS OF A BEHAVIORAL PROGRAM TO PROMOTE FINANCIAL INCLUSION AMONG YOUNG PEOPLE IN MEXICO



#### **CONTENTS**

	INTRODUCTION	5
2	CONCEPTUAL FRAMEWORK: BEHAVIORAL SCIENCES AND NEUROSCIENCE	5
3	INITIAL DIAGNOSIS	6
4	INTERVENTION DESIGN AND TESTING	9
	4.1 Intervention design	9
	4.2 Testing the Intervention	12
	4.2.1 Challenges and modifications	12
	4.2.2 Achievements	13
5	EVALUATION OF INTERVENTION RESULTS	14
	5.1 Evaluation of positive changes toward financial health	14
	5.1.1 Assessment of income and expenditure records and financial goals	14
	5.1.2 Assessment of financial inclusion: ownership of financial products	15
	5.1.3 Assessment of biases and confidence in the financial system	16
	5.1.4 Assessment of financial education	17
	5.2 Assessment by demographic characteristics	17
	5.3 Quantitative and qualitative assessment of intervention activities	18
	5.4 Assessment of videos and awards	20
6	SOCIAL NORMS RELATED TO GENDER AND FINANCIAL INCLUSION	22
7	RECOMMENDATIONS AND LESSONS LEARNED	23
8	CONCLUSIONS	26
RE	FERENCES	27
ΑN	INEXES	29

#### **ACKNOWLEDGMENTS**

This document was made possible thanks to the valuable support of the Confederación de Cooperativas de Ahorro y Préstamo de México (CONCAMEX), Federación Alianza, and Caja Popular Apaseo el Alto, who facilitated the implementation of the pilot project and actively participated in the various activities. Special thanks are also extended to the Instituto Tecnológico de Roque, Apaseo el Alto Campus, for its willingness to host this initiave and facilitate the participation of their students.

We would also like to thank Itzel Nayeli Vidal Contreras for her technical support throughout the various stages of the project; Dafne Ochoa Córdoba for her work related to field implementation; César Reséndiz Ruiz for his contributions to the diagnostic work and pilot design; and Alejandra Villegas Gutiérrez for her contribution to the evaluation analysis

The opinions and content of this document are the sole responsibility of the authors.

**AUTHORS** 

María José Roa García Blanca Rosa Aldasoro Maya Claudette Martínez Ortega

This case study was developed under the initiative and guidance from Mexico's National Banking and Securities Commission (CNBV) with the support from the Alliance for Financial Inclusion (AFI) In-Country Implementation Program.

Cover image: Atemporall Casa Productora.
Photos of sessions, focus groups, workshops and events:
Atemporall Casa Productora, Claudette Martínez, Dafne Ochoa

### **EXECUTIVE SUMMARY**

This document presents the results of the project "Using a behavioral approach to expand financial inclusion in Mexico."



The project had two main objectives. The first was to help identify barriers to financial inclusion for young people aged 18 to 29 in rural and suburban areas of Mexico. The sample included both users and non-users of the financial system who were higher education students. The research placed particular emphasis on behavioral barriers and gender-based social norms.

The second objective was to design, implement, and test a behavioral science-based pilot program to promote financial inclusion and financial health within the project's target population. This was conducted with a non-representative sample of students from the Instituto Tecnológico de Roque in Apaseo el Alto, Guanajuato, located in central Mexico.



Caja Popular Apaseo el Alto, Federación Alianza, and Confederación de Cooperativas de Ahorro y Préstamo de México (CONCAMEX) were partners from the financial system side. Mexico's National Banking and Securities Commission (CNBV) and the Alliance for Financial Inclusion (AFI) were the promoters and partners of the project.

To meet the first objective, a fieldwork assessment was conducted using questionnaires and focus groups. This work aimed at estimating financial inclusion, trust in the financial sector, financial biases and behaviors, and social gender norms. The assessment revealed low financial inclusion among participating students. On average, less than 50% held a formal financial product, which is below the national average of 71% for young people aged 18 to 29 (CNBV & INEGI, 2024). However, ownership of formal and informal digital financial products exceeded 70%. Participants reported these were easy to open without visiting a branch and were mainly used for online purchases (40%), transfers (32%), and prepaid cellphone credit (28%).

Key barriers explaining low financial product ownership included a lack of trust in the formal financial sector,

low financial literacy levels, social norms linked to gender roles (men as breadwinners, women as caretakers), and cognitive biases (such as lack of self-control, present bias, and authority bias). In addition, unhealthy financial behaviors were observed, such as not keeping track of income and expenses, or not setting goals or strategies to achieve them.

To address these barriers and behaviors, a holistic financial education and inclusion intervention, structured as a contest, was designed and co-created with various partner institutions. This intervention was based on behavioral economics and the latest neuroscience findings. The intervention included face-to-face workshops, mindfulness practices, practical application exercises, heuristics prompts and reinforcement messages via messaging app, visits from the Savings and Credit Cooperative (Caja Popular Apaseo el Alto), a video creation contest, and visual materials. The intervention aimed to encourage students to reflect on and apply their learning in an innovative, dynamic environment, thereby developing greater awareness of their financial life and health.



Students participating in a workshop.

The results of the intervention evaluation showed modest but significant changes at the end of the fourmonth pilot. The record keeping of income and fixed expenses, as well as setting financial goals, increased. Use of formal financial products—such as bank accounts and credit services—also rose, suggesting that the intervention encouraged participants to engage more actively with the financial sector. The project also helped reduce certain financial biases, such as impulse buying, and increased long-term financial planning. In addition, trust in financial institutions was strengthened, a crucial aspect for long-term engagement with financial services. In terms of financial literacy, the initiative succeeded in increasing understanding of financial concepts such as interest, risk, and diversification.

The workshops also addressed social norms and gender stereotypes in financial decisions, showing a modest but promising shift toward more equitable financial behaviors. The evaluation also found that the intervention's impact varied by sociodemographic characteristics. Younger students, males, entrepreneurs, and those involved in technology and communication-related fields who appear to have greater income stability showed more positive results in financial inclusion and healthy financial behaviors.

Participants assessed the program intervention and its components positively. For example, they rated the workshop topics—such as budgeting and goal setting—as useful for their daily lives. Participants, especially women, also appreciated the heuristic prompts sent via messaging app and the mindfulness practices.

Areas for improvement were also highlighted, such as: making workshops more interactive, practical, and shorter, to keep participants engaged and committed. In summary, the project showed that an integrated and holistic approach based on behavioral science, combining theory, interactive practice, and continuous reinforcement can lead to significant changes in behavior and financial inclusion. Future programs could benefit from this approach and the lessons learned.



Focus group.

### 1. INTRODUCTION

This document presents the analysis of results and lessons learned from the project "Using a behavioral approach to expand financial inclusion in Mexico."

The project's ultimate goal was to promote financial inclusion and financial health for young people aged 18 to 29 in rural and suburban areas of Mexico. This included both users and non-users of the financial system who were higher education students, and incorporated a gender perspective through a behavioral science-based financial inclusion and education intervention. The project was developed in two stages. The first stage aimed to identify barriers to financial inclusion within the target population using a non-representative sample, with a special emphasis on barriers related to cognitive biases and social gender norms. While the second involved a behavioral approach to financial education that was designed, implemented, and tested.

According to the 2024 National Financial Inclusion Survey (ENIF 2024 [CNBV & INEGI, 2024]), 71% of young people in Mexico aged 18 to 29 hold financial services; this represents the lowest ownership rate across all age groups. This highlights an opportunity to explore the various challenges and barriers, including behavioral ones, that limit young people's financial inclusion.



Students entering session.

# 2. CONCEPTUAL FRAMEWORK: BEHAVIORAL SCIENCES AND NEUROSCIENCE

The project's conceptual framework is rooted in academic literature on behavioral economics, neuroscience, and social gender norms.

These sources provide the theoretical and empirical foundations to contextualize the intervention, justify its approach, and inform its methodology.

Behavioral economics is based on the premise that people do not always act in an analytical and rational manner, but are instead influenced by cognitive biases derived from heuristics and automatic thinking. Cognitive biases are defined as inaccurate or incorrect judgments that occur when we process information automatically, selectively, and subjectively, especially in situations of risk and uncertainty (Kahneman & Tversky, 1979; Thaler, 2017). There are many biases, and they are interrelated. Among young people, the most common include lack of self-control, present bias (preference for the present), herd effect, authority bias, procrastination, lack of attention, status quo bias, anchoring, and sustainability bias (the latter leading to a preference for products linked to social issues like green finance or social support projects) (Borraz et al., 2021; Moya-Poncea & Madrazo-Lemaroy, 2023).

As the literature shows, these biases can become a significant barrier to financial inclusion (Di Giannatale & Roa, 2016). For this reason, 'nudges' are incorporated into a variety of financial education and inclusion programs to mitigate the negative effects of cognitive biases. In the case of young people, playful elements (fairs, games and plays), digital tool (video games), rules of thumb, and teachable moments have been some of the most widely used elements in interventions (Borraz et al., 2021, 2022).

<sup>1 79.9%</sup> of the population aged 30 to 49 has financial products, 73.2% of those aged 50 to 60 and 81.7% of those aged 61 to 70.

<sup>2 &</sup>quot;A nudge, as we will use the term, is any aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates. Putting fruit at eye level counts as a nudge. Banning junk food does not." (Thaler & Sunstein 2017, p. 6)

Neuroscience has made it possible to study the foundations and processes of human decision-making, including financial decisions. Notably, Damásio's somatic marker theory (1996; 2020) finds that people with greater somatic (body) and emotional awareness make better investment decisions by adapting and modifying their behavior. Awareness and attention to biases, as well as to the way the mind naturally operates, may be the most successful way to change habits and behaviors. Nudging from within—for example, through mindfulness of the body and emotions—can yield effective results (Damásio, 2020; Castellanos, 2022; Seth, 2023).

The project also draws on literature on social gender norms and financial inclusion. A gender norm is defined as an implicit informal rule that most people accept and follow regarding how women and men are expected to: i) participate in household financial decisions; ii) acquire and use financial products and services; and iii) access formal financial intermediaries. It should be noted that social norms underlie many cognitive biases (Roa et al., 2023).

Based on the literature review, the conceptual framework of the project is presented in Figure 1.

### 3. INITIAL DIAGNOSIS

The initial step involved reviewing the prior field diagnosis and building strategic partnerships with relevant stakeholders in the region where the target population is located: the Confederación de Cooperativas de Ahorro y Préstamo de México (CONCAMEX), the Federación Alianza, the Caja Popular Apaseo el Alto savings and loan cooperative, and the Instituto Tecnológico de Roque-Extensión Apaseo el Alto, whose students were the target population for the intervention.

These students come from suburban areas in the state of Guanajuato, located in the center of Mexico. The municipalities where the students live are classified as having a high level of poverty according to the National Council for the Evaluation of Social Development Policy (CONEVAL, the Mexican institution responsible for measuring poverty) (2020).<sup>4</sup>

- 3 In the first phase of this project, a preliminary diagnosis was carried out based on <u>ENIF 2021</u> and interviews and surveys with young customers and non-customers of Caja Huasteca.
- 4 Based on statistics by the Consejo Nacional de Evaluación de la Política de Desarrollo Social (National Council for the Evaluation of Social Development Policy) in Mexico. These are: Apaseo el Alto, Apaseo el Grande, Jerécuaro, Santa Cruz de Juventino Rosas, and Tarandacuao.

#### FIGURE 1. CONCEPTUAL FRAMEWORK OF THE PROJECT









Knowledge on mental processes and attention development Understanding gender biases and social norms affecting financial decisions Identifying one's heuristics, biases, and nudges

Building awareness and taking action to improve financial inclusion and health

FINANCIAL LEARNING AND DECISION-MAKING PROCESS

Source: Prepared by the authors based on the initial diagnosis.

It should also be noted that 47% of the population in Guanajuato perceive their place of residence as unsafe, compared to 40% at the national level (INEGI, 2023). All of these elements contribute to shaping the students' socioeconomic context and profile (Annexes I and II) — encompassing both personal and family aspects — which in turn influenced the various phases of the project, detailed below.

For the diagnosis, two field instruments were designed: a survey and a series of semi-structured interviews for focus groups. 5 The fieldwork findings indicate that financial inclusion is low among young people. In terms of savings products, 54% of students had at least one formal product (according to the ENIF 2024 [CNBV & INEGI, 2024] below the national average of 62% for young people with formal savings products), and 51% had at least one informal product. Forty-one percent of male students reported having at least one formal credit product, compared to 18% of female students. The use of digital financial products was high, with 73% reporting they used at least one such product. The most common were online shopping (40%), transfers (32%), and purchasing cell phone credit (28%).6 For all formal financial products, women reported lower ownership, with the largest gap found for credit and digital products.

When it comes to managing their finances, only 18% said they keep track of their income and expenses. Although more than half have a goal, most (65%) do not have a financial strategy or plan to achieve it. Only 30% said they trust financial institutions. Regarding knowledge of financial concepts, the percentage of correct answers for the definition of inflation was high (85% of women and 88% of men). However, when asked to perform a numerical calculation related to inflation, the percentage of correct answers dropped by approximately half (to 55% for women and 58% for men). Just over 50% answered questions about profitability, risk, and diversification of savings, correctly. In terms of biases, lack of selfcontrol, lack of identification and attention, control of others, status quo bias, authority bias, loss aversion, and preference for the present seem to negatively affect students' financial decisions and their financial inclusion.<sup>7</sup>

Finally, focus groups revealed that social gender norms affect young people's financial lives, creating an additional barrier to their financial inclusion and financial health



Students involved in the focus groups.

For male students, family pressure to drop out of school and work full-time or to emigrate in search of higher earnings was evident. In addition, financial demands from family members can be a barrier to saving and achieving goals. In the case of women, their role as caregivers and their limited interaction with men outside the family prevent them from accessing higher-paying jobs that would allow them to earn more income. In addition, because they do not have their own vehicles as a result of gender norms that restrict their mobility, their transportation costs are high, which also reduces their ability to save (Annex III).

In summary, four key barriers were identified as contributing to low financial inclusion among the target population, particularly for women: 1) lack of trust in the financial sector; 2) low levels of financial education; 3) cognitive biases; and 4) social gender norms reinforcing stereotypes of men as breadwinners and women as caretakers.

Figure 2 summarizes the main findings of the initial assessment, as well as preliminary recommendations for improving the students' financial health.

<sup>5</sup> A total of 159 surveys were conducted (91 women, 67 men, and 1 non-binary person), and 5 focus groups were held with 28 young people who had previously been surveyed (15 women and 13 men).

<sup>6</sup> The classification of digital products included: digital savings accounts, online credit, payment of services, purchase of airtime (online), digital investments, online shopping, transfers, electronic wallets, digital payment platforms, DiMo/CoDi, and digital insurance.

<sup>7</sup> See the profile of the students in relation to the assessment in Annex II.

For the purposes of this project, financial health is defined as a multidimensional concept that encompasses:<sup>8</sup>

Source: Prepared by the authors based on the initial diagnosis.

8 CONDUSEF & INEGI, 2023.

(i) control, the ability to manage personal finances adequately; (ii) freedom, the ability to achieve financial goals and take advantage of long-term opportunities; (iii) resilience, the ability to cope with changes in expenses due to unforeseen situations; and (iv) security, the ability to maintain economic stability.

#### FIGURE 2. CONCLUSIONS AND RECOMMENDATIONS BASED ON THE INITIAL DIAGNOSIS Incipient due to low or no Lack of trust Cognitive financial education biases norms Functioning of the > Lack of self-Lack of knowledge Male of basic concepts: financial system breadwinner control Preference for > Female Inflation > Deposit insurance the present caretakers Interest rates Applying for Tunnel vision > Limits on the credit Diversification types of jobs/ Control by others **VULNERABLE SOCIOECONOMIC** > Negative income available Optimism about Preference for influence of third to women Barriers to their cash parties whom financial knowledge; Limits on travel/ Risk and loss they recognize as inclusion costs for women more so among aversion authority figures men > Women respond > Negative "don't know" in perception of greater debt proportion > Lack of identification > Status quo > Authority Preliminary recommendations Understanding and Raise awareness Raise awareness Provide financial identification with of biases and of gender social knowledge the financial sector nudges norms health

## 4. INTERVENTION DESIGN AND TESTING

#### **4.1 INTERVENTION DESIGN**

The intervention concept was developed using a behavioral science lens and design thinking tools, and organized into four phases (Figure 3) guided by diagnostic findings and the theoretical framework.

Co-creation workshop

Systematization of inputs obtained

Discussion rounds for the design of the intervention

Proposed intervention

concept

Source: Prepared by the authors based on the theoretical framework.

To this end, a co-creation workshop with strategic partners<sup>10</sup> complemented the initial diagnostic findings and conceptual framework with specialist knowledge. This helped validate ideas and define criteria for impact and scaling. The aim was to arrive at a comprehensive concept for financial inclusion and education based on behavioral sciences.

9 Design thinking is a methodology for solving complex problems that focuses on innovation and creativity, placing the person at the center of the process and seeking useful and satisfactory solutions for them (Lewrick, 2018). The intervention was designed as a contest called "CRAC Financiero," which stands for Conoce (Know), Reflexiona (Reflect), Actúa (Act), and Comparte (Share). The goal was for students to reflect on and apply what they learned in an innovative and dynamic environment, thereby developing greater awareness of their financial life and health. The intervention consisted of four themes based on the barriers to financial inclusion identified in the diagnosis: I pay attention to my financial life; I set my financial goal and strategy; I trust the financial system; and I understand social gender norms.<sup>11</sup>



Co-creation workshop.

<sup>10</sup> Comisión Nacional Bancaria y de Valores (CNBV) (CNBV), Confederación de Cooperativas de Ahorro y Préstamo de México (CONCAMEX), Federación Alianza, Caja Popular Apaseo el Alto (Caja Popular Apaseo el Alto), and Instituto Tecnológico de Roque.

<sup>11</sup> The issue of social gender norms was analyzed in all workshops in a cross-cutting manner, particularly by presenting the main results of the initial diagnosis and the archetypes derived from the focus groups.

Based on the conceptual framework of the project and the methodology outlined above, the following activities were planned for each topic:

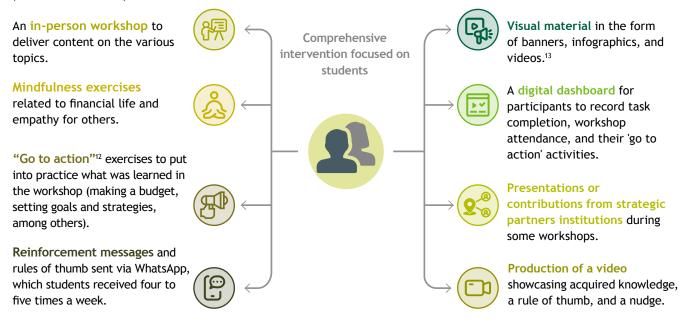
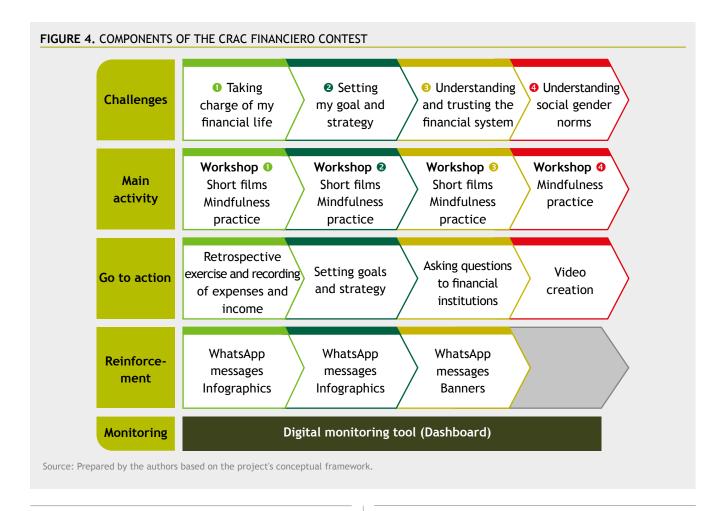


Figure 4 summarizes the CRAC Financiero contest structure in three main blocks: i) main activities, ii) 'go to action' exercises, and iii) reinforcement activities.



<sup>12</sup> This phrase is used to invite people to start an activity, and is used with a broader scope than the phrase "call to action," which is only used to generate an immediate response, with a single specific action.

<sup>13</sup> Videos entitled "<u>Pesadillas Financieras</u>" (Financial Nightmares) from the Interactive Museum of Economics were used.

Mindfulness practices deserve special mention. In line with behavioral science and neuroscience, each workshop included specific activities to develop awareness of breath, body, emotions, and thoughts related to the financial decisions pertinent to each of the four themes.

These mindfulness exercises were considered extremely important, as students exhibited a significant attention deficit throughout the workshops. Similarly, the main results of the initial assessment were shared in

each session to help students relate to the findings, emphasizing: "this is not something abstract, it is about you."

The dashboard was developed to serve as a monitoring tool and to simplify activity recording for students, acknowledging their immersion in a digital environment of social media and online platforms.<sup>14</sup>

14 It is important to note that while these tools can be very useful for young people, their effectiveness may be limited by participants' socioeconomic vulnerability (both regionally and individually). Inadequate university infrastructure, such as limited internet connectivity, and the capabilities of students' mobile phones made dashboard access and use difficult, necessitating the alternative use of printed versions.

FIGURE 5. STUDENTS PARTICIPATING IN ONE OF THE WORKSHOPS

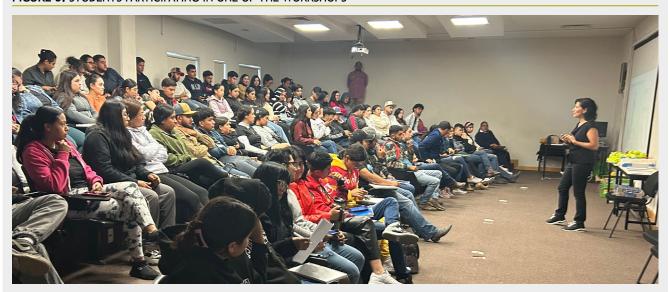


FIGURE 6. STUDENTS PARTICIPATING IN ONE OF THE MINDFULNESS ACTIVITIES



Finally, throughout all the activities, Dani — a character created for the intervention — appears and was intended to be perceived by as a peer by students, due to their youth and gender neutrality. The guiding principles behind this character were confidence, energy, fun, attractiveness, simplicity, innovation, and freshness. Throughout the interactions, communication remained lighthearted and relevant to the students' context (Figure 7).

#### **4.2 TESTING THE INTERVENTION**

All students enrolled at the Instituto Tecnológico de Roque-Extensión Apaseo el Alto, which has an average enrollment of 220 students per semester, were invited to participate in the CRAC Financiero program. 86% of students took part, on a voluntary basis, in at least one of the program's face-to-face activities. Of the participating students, 68% submitted at least one of the practical "go to action" exercises.

#### 4.2.1 CHALLENGES AND MODIFICATIONS

During the implementation phase, various challenges related to the young participants' socioeconomic context necessitated modifications to the pilot program's resources and strategies. Due to their vulnerable circumstances, students exhibited limited ability to focus for extended periods, a lack of self-control, and a preference for the present. These characteristics hindered their performance during the workshops and were identified as behavioral barriers (Figure 8).

In addition, challenges arose related to infrastructure (small auditorium with limited equipment, lack of internet connection, limited transportation schedules, power outages, among other issues), the highly unsafe environment, and overlap with other extracurricular activities without prior notice, among others.

#### FIGURE 7. "DANI", CHARACTER CREATED FOR THE INTERVENTION AND ITS APPLICATION



#### **4.2.2 ACHIEVEMENTS**

Students demonstrated their understanding by expressing concepts in their own words and applying them to everyday scenarios, both during workshop participation and in the 'go to action' exercises. The mindfulness

practices were actively followed by the students and are particularly noteworthy. Figure 9 shows the main achievements in the implementation of the workshops.

#### FIGURE 8. CHALLENGES RELATED TO VULNERABILITY AND BEHAVIORAL ISSUES

Challenges related to vulnerability



Transportation stress (limited resources), hunger, and exhaustion



Low cognitive skills



Self-exclusion: despite their interest, it was challenging to get students to complete the steps



Unsafe environment



High levels o distraction



Invisibility...
"Hunger for attention"



Poor infrastructure and poor connectivity



Overlapping extracurricular activities

Source: Prepared by the authors with information from field reports.

#### FIGURE 9. SUMMARY OF IMPLEMENTATION ACHIEVEMENTS

#### The students ...

## Workshop **①**: Paying attention to my financial life

- They learned about the five decisions for financial health.
- They reflected on their finances and biases.
- They recorded their income and expenses and discovered their financial situation.

## Workshop **②**: Setting my financial goal and strategies

- > They set financial goals and identified financial strategies to achieve them.
- > They identified biases that could affect the achievement of their goals and nudges to overcome them.
- They debunked common myths about financial products.

## Workshop **⑤:**Understanding and trusting the financial system

- They learned about the products and services offered by the Mexican financial system.
- They identified security elements of the financial system, including cybersecurity.
- They identified their main questions about financial products and resolved them with the support of Caja Popular Apaseo el Alto.

## Workshop **4:** How does gender influence our financial lives?

- They identified the existence of social gender norms.
- They reflected on those norms that exist in their environment.
- They proposed alternatives to combat these norms.

They actively participated in mindfulness activities related to their finances during the four workshops.

Source: Own elaboration based on a comprehensive analysis of workshop interactions, GoToAction evaluations, and other assessments.

## 5. EVALUATION OF INTERVENTION RESULTS

For the evaluation methodology, two questionnaires were developed and administered: one before the intervention and another one after it ended four months later (Appendix V). In total, 112 students completed both questionnaires, providing a valuable dataset for evaluating changes in their financial attitudes resulting from the intervention.

In addition, 93 students responded only to the initial questionnaire and 35 only to the final questionnaire. It is critical to analyze the responses of those who participated in both questionnaires, as this allows for an analysis of the evolution of attitudes and behaviors based on consistent responses over time that are directly comparable before and after the workshops.

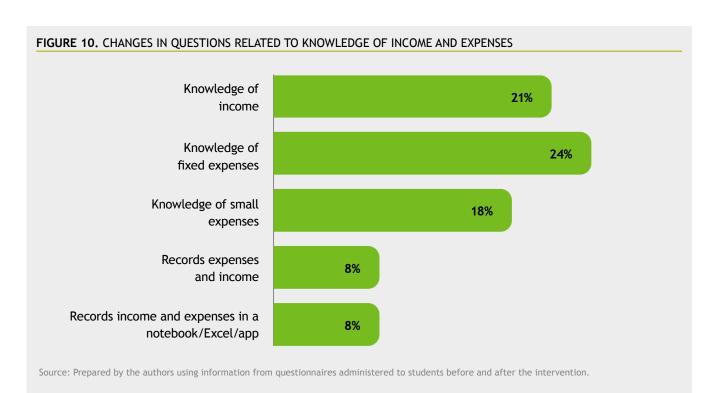
## 5.1 EVALUATION OF POSITIVE CHANGES TOWARDS FINANCIAL HEALTH

The primary methodology for assessing intervention-related changes involved quantifying shifts in responses between the initial and final questionnaires towards options more aligned with financial well-being.<sup>15</sup> This approach offered a means of measuring the share of participants who improved their financial biases and behaviors, shifting toward actions regarded as financially healthier.

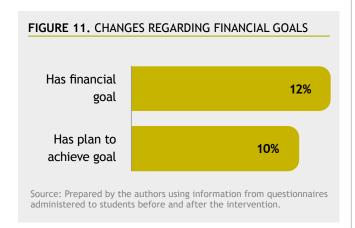
## 5.1.1 ASSESSMENT OF INCOME AND EXPENDITURE RECORDS AND FINANCIAL GOALS

In terms of knowledge of income and expenditure, notable improvements were observed, with changes of around 20%. However, systematic recording of income and expenditure, both mental and non-mental, showed a smaller increase, suggesting that although participants improved their theoretical understanding, the adoption of concrete recording practices may require more time and reinforcement, highlighted by Behavioral Economics (Figure 10).

15 Specifically, the following steps were followed: 1) Identifying responses associated with greater financial well-being, referred to as the "correct response"; 2) For each of the questionnaires, creating a dichotomous variable that takes the value 1 when the person selected the correct response and zero otherwise; 3) Creating a dichotomous variable, called the "change variable," which takes the value 1 when the variables explained in the previous step comply with the following rule: input variable = 0 and output variable = 1; and 4) Estimating the average of the change variables, per question.

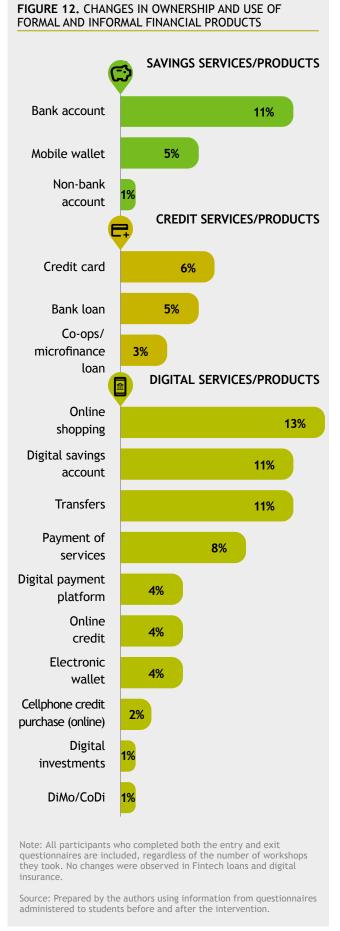


As for financial goals, the results show progress in long-term financial planning, although the percentage remains relatively low. This could indicate a need for greater emphasis on these areas in future interventions, reaffirming that such behavioral changes require time to become established (Figure 11).



## 5.1.2 ASSESSMENT OF FINANCIAL INCLUSION: OWNERSHIP OF FINANCIAL PRODUCTS

Bank account ownership rose by 11% after the intervention, while the use of non-bank accounts and digital wallets saw a much more modest increase. In terms of credit products, credit card and bank loan ownership increased by 6% and 5%, respectively, while loans from other non-bank institutions saw a smaller increase, and no improvement was observed for Fintech loans. The use of digital financial services improved primarily in online purchases, digital savings accounts, and transfers. Loans from other non-bank institutions also grew, albeit to a lesser extent. These results reflect significant progress in a short period, especially considering that adopting and contracting of financial products involves processes and decisions that take time. However, a considerable gap remains in the adoption and use of digital financial tools, underscoring the need to strengthen both digital financial education and inclusion (Figure 12).

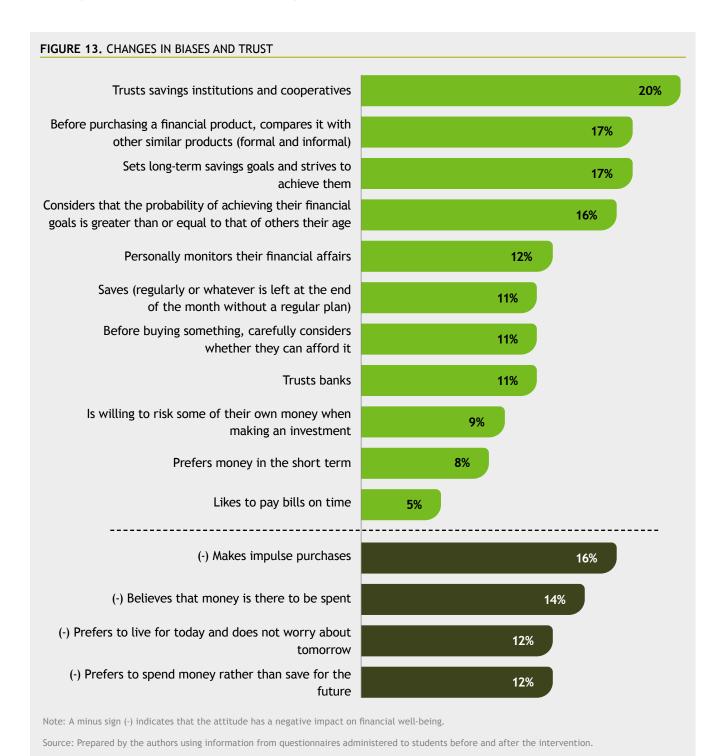


## **5.1.3 ASSESSMENT OF BIASES AND CONFIDENCE IN THE FINANCIAL SYSTEM**

Regarding biases, there was a reported reduction in compulsive purchases, as well as an increase in the proportion of those who consider themselves equally or more likely to meet their financial goals, compared to their responses prior to the intervention. Risk aversion, short-term preference, and the preference for paying bills on time showed the smallest changes, consistent with the persistence of character traits that require

more time for significant shifts to be observed. The greatest improvements were observed in the comparison of financial products prior to acquisition and in the establishment of long-term goals.

As for trust in the financial system, there was an increase in confidence in banks and savings and loan cooperatives. (Figure 13).



#### 5.1.4 ASSESSMENT OF FINANCIAL EDUCATION

There was a general improvement in knowledge of financial concepts. Regarding interest, understanding of simple interest increased by 17% and of compound interest by 12%, with a modest 13% improvement in the overall understanding of inflation. Understanding the relationship between risk and return, and the benefits of diversifying savings, showed considerable improvements (17% and 20%, respectively).

- > Overall, this initial assessment, based on the shift in responses toward healthier financial behaviors, concludes that although the percentage changes are modest, the results are significant considering the short timeframe between questionnaires and the complexity of altering deeply-rooted financial behaviors.
- > Based on the reviewed behavioral economics literature (see Section 2), behaviors take time to change or become ingrained, especially in adults. Knowledge, on the other hand, is maintained and reinforced when used in everyday decisions, which is why the intervention promoted knowledge that students use on a daily basis. As indicated in the roadmap and recommendations, it would be ideal to repeat the evaluation questionnaire to observe changes in knowledge and behaviors in the medium term and, based on the observations, adjust future interventions.

### 5.2. ASSESSMENT BY DEMOGRAPHIC CHARACTERISTICS

To measure the aggregate impact of the intervention by topic and overall, a positive variation index was constructed. This index quantifies the positive change between the initial and final surveys, normalized from a scale from 0 to 1, where 0 indicates no positive change and 1 represents the maximum possible improvement a participant could have achieved (Annex IV).

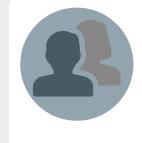
In terms of gender, participants who identified as male showed greater overall progress, except in attitudes and biases, where those who identified as female stood out. Students aged 20 and 21 scored highest in almost all topics, particularly in knowledge of income and expenditure, as well as in financial education. By degree program, students in Information and Communications

Technology (ICT) Engineering showed the most progress in goal-setting and on gender-related aspects. By semester, fifth-semester students excelled in most topics. However, seventh-semester students performed better regarding attitudes, biases, and gender-related aspects, potentially suggesting a direct relationship between academic progression and the development of critical awareness in these areas.

Full-time students lead in financial goals, attitudes, biases, and financial education, possibly having more time available to participate in the intervention. Those who study and are entrepreneurs stand out for their willingness to question norms, while those who also work lead only in formal financial product ownership. In addition, participants with irregular or no income showed less progress.

To complement this analysis, the maximum index value for each sociodemographic category was identified in order to determine the profile of participants who achieved the most positive changes (Figure 14). The ideal profile combines advanced academic training with practical application of knowledge, which could confirm that the effect of the intervention varies according to the sociodemographic context.

FIGURE 14. PROFILE OF PARTICIPANT WITH THE MOST POSITIVE CHANGES



21 years old

ICT Engineer

5th semester

Student and entrepreneur

Income from work

Fixed income

Source: Prepared by the authors using information from questionnaires administered to students before and after the intervention.

<sup>16</sup> This index quantifies positive change in attitudes by adding up the number of favorable changes observed in each participant throughout the intervention. As in the previous section, positive change refers to the shift in participants' responses from less appropriate options to those aligned with healthy financial practices and attitudes.

### 5.3 QUANTITATIVE AND QUALITATIVE ASSESSMENT OF INTERVENTION ACTIVITIES

## Assessment and participation in workshops and go to action exercises

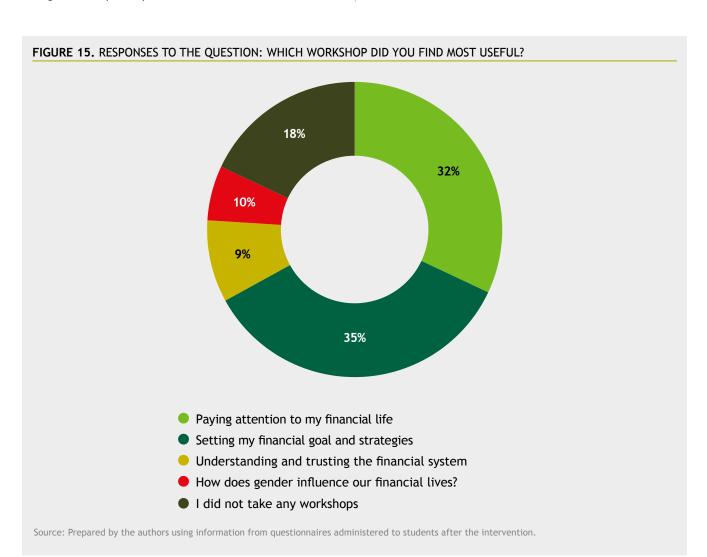
Attendance at the workshops varied significantly, with higher participation in the earlier sessions, particularly in Workshop 1. Workshop 3, which included participation from Caja Popular Apaseo el Alto, also had high attendance, suggesting interest from the students in learning about it. Young students predominated, particularly those enrolled full-time in Business Management Engineering. Female students showed slightly higher participation in the sessions that addressed gender-related topics. Lower attendance was associated with challenges such as family and work responsibilities, lack of income, and reduced academic support. 18% of the students who completed the exit survey did not attend any workshop, indicating challenges in the program's reach and inclusion.

Figure 15 shows the assessment of the workshops, which is aligned with participation in them.

An analysis of the "go to action" exercises, shows good content comprehension by the students; both male and female students identified income, expenses, and prepared budgets. Differences appeared in the types of expenses, which reflected social gender stereotypes. Both men and women identified fixed expenses such as transportation, food, and school-related costs. Regarding variable expenses, men prioritized outings with friends, while women prioritized spending on clothing, personal care products, and lastly, outings with friends.

In terms of goals, men showed a greater tendency to set them, although for both groups the primary goal was to buy a car. The strategies most frequently mentioned for achieving their goals were: working, saving, and reducing small, unnecessary expenses ("micro-expenses"); while the main obstacles included a lack of self-control and a preference for immediate gratification.

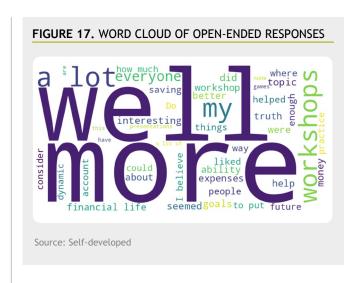
Regarding financial institutions, the main doubts were related to benefits, availability of products for young people, and access requirements.

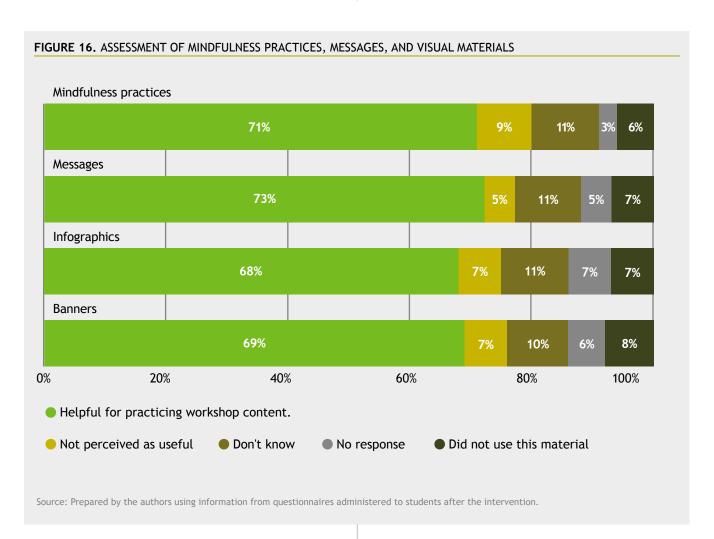


## Assessment of complementary and reinforcement activities

The final questionnaire revealed that students highly valued the complementary activities, particularly highlighting the messages and mindfulness practices (Figure 16).

As part of the assesment, a qualitative exercise was conducted, which involved feedback from participants on the materials and workshops through the open-ended question: "Do you have any comments or suggestions regarding the duration, dynamics, topics covered, or materials used in the sessions?" Based on the responses, a word cloud was generated, which filtered and processed the textual feedback to highlight the most relevant and frequently mentioned terms by the students. The resulting image clearly highlighted terms such as "dynamic," "interesting," and "good," reflecting the positive impressions of the participants.





#### 5.4. ASSESSMENT OF VIDEOS AND AWARDS

As part of the closing activities, students were invited to create a video as a creative and innovative way to demonstrate their learning. These videos were intended for sharing to promote peer learning, particularly as the herd effect was one of the most significant biases identified. The activity made it possible to assess the students' understanding of behavioral science concepts, particularly cognitive biases and nudges<sup>17</sup> to counter them. The students' participation demonstrated their commitment and progress in overcoming self-exclusion bias, recognizing themselves as agents capable of creating opportunities through their own efforts.

#### FIGURE 18. TESTIMONIALS FROM WINNING STUDENTS



The lesson I liked the most was the one about neuroscience, which I think has the biggest impact on our spending—how our brain unconsciously works against us, how to manage my spending and income, and learning about financial institutions so I can make better financial decisions for the future. Personally, it has helped me a lot because I have learned to manage my money better, think more about my financial goals, and not have the compulsive spending habits I used to have."

Student receiving special mention.



The main lessons I learned were about recognizing biases in how I use my money, such as herd mentality and not worrying about my future, and I began to recognize that these little things had an impact on me and my money. This knowledge has helped me in my daily life, so that I have recognized the biases that were affecting my money and I have had to start saving and investing to have a fund for my future (...) I think it should be taught a little more at an early age so that children from a young age have knowledge about saving and investing and have better money management skills."

Winning student.

### FIGURE 19. PHOTOGRAPHS OF CONTEST WINNERS AT THE AWARDS CEREMONY







17 The evaluation criteria were: clarity of message and technical quality; integration of behavioral science by including a heuristic and a nudge; demonstration of learning and appropriate application; and creativity in presentation. Active participation in the workshops and other activities was also considered in selecting the winners.

#### FIGURE 19. PHOTOGRAPHS OF CONTEST WINNERS AT THE AWARDS CEREMONY (CONTINUATION)











 $\label{prop:competition} \mbox{Awarding of winning students in the CRAC Financiero competition by partner institutions.}$ 

## 6. SOCIAL NORMS RELATED TO GENDER AND FINANCIAL INCLUSION

The analysis of social norms related to gender was a cross-cutting theme throughout all stages and activities of the project. The diagnostic analysis revealed that female students reported paying less attention to their income and expenses than male students; however when they do, they tend to be more meticulous. This aligns with the findings of the 2024 ENIF, in which 36% of women reported keeping a budget or tracking their income and expenses, compared to 38% of men.

On the other hand, female students showed a greater willingness to set financial goals, but less confidence in their knowledge and in financial institutions, as well as greater risk aversion and less identification with the financial sector. These differences are reflected in a clear gender gap in financial product ownership, as well as in their financial vulnerability.

Focus groups allowed for further exploration of this information. For male students, economic demands from family members evidently limited their ability to save, achieve goals, and continue their education. For female students, their caregiving roles and restrictions on interacting with men outside the family limited their access to better job opportunities and, consequently, to higher incomes (Annex III).

In Workshop 4, a roundtable discussion was held to reflect on the impact of social gender norms on financial decisions. The discussion confirmed the initial diagnostic findings, revealing a persistent expectation for men to make financial decisions—placing them under considerable pressure—while women face structural and cultural constraints in exercising economic autonomy (Figure 20).

Students believe that, in order to break social gender norms, they could become ambassadors and take the following actions:

 Education on stereotypes and social norms as a means to end gender roles, starting from an early age.

- 2. Emphasis on changing roles should be placed on older people (parents, uncles, aunts, grandparents, etc.).
- **3.** Act as ambassadors of change, particularly among their peers, such as siblings and friends.

The assessment results indicate that female students showed greater interest in and appreciation for visual tools, mindfulness practices, and the workshop on social gender norms. This response could be related to learning styles that are more oriented toward introspection and emotional connection, which are more socially acceptable for women. Similarly, when talking about personal goals, women associated achievement with feelings of happiness and satisfaction. Finally, evaluation results showed that 12% of participants were more willing to share resources with the non-binary fictional character "Dani," suggesting the workshop on gender norms raised participants' awareness of gender diversity.

### FIGURA 20. SOCIAL GENDER NORMS REPORTED IN THE ROUND TABLE

"Women think things through more, men are more impulsive." "Men trust quickly and anyone, women think more before trusting."

"Men are expected to make decisions, even if they don't want to, don't know what decision to make, or what the right decision is."

"Work on social norms from an early age, but also with parents, relatives, and acquaintances."

"Women trust cooperatives more because they offer greater security and simplicity."



Source: Prepared by the authors with information from the roundtable on the impact of gender norms on financial decisions.

## 7. RECOMMENDATIONS AND LESSONS LEARNED

This section presents lessons learned from the project's various phases, reviewing critical factors, challenges, and opportunities encountered during its design and implementation.

## 1. Understanding and recognizing the potential of young people as users of the financial system

The financial inclusion of young people requires that financial institutions first and foremost understand their unique characteristics and then address the associated challenges. Some of these characteristics include seasonal or unverifiable sources of income, lack of credit history, and lack of collateral, among others. Despite these barriers, the project provides evidence of young people's financial lives and highlights their strong potential as clients for financial institutions.



Students in session.

Regardless of their economic status, young people earn income from various sources such as jobs (mainly informal), entrepreneurship, scholarships, and/or family support, and they use this income to cover school, personal, and transportation expenses. Most of their transactions are made in cash, primarily because they are compelled to save for unexpected expenses—often relying on informal saving mechanisms. In cases of emergencies or when needing to purchase an asset such as a computer, they typically turn to family members for loans or obtain credit through a third party who has access to the formal financial system.

Thus, financial services can help young people manage their money more efficiently. To this end, it is imperative that these services be designed with a focus on the needs of young people and that their use be encouraged through an approach based on behavioral economics.

## 2. Raising awareness of and sensitivity to the cognitive biases underlying young people's financial decisions helps remove barriers to their financial inclusion.

Educating young people about their mental processes in financial decision-making and their cognitive biases can foster greater critical thinking and attention to their financial lives. This, in turn, can lead to increased adoption and use of financial services aligned with their goals and strategies, ultimately improving their financial health.

To mitigate the negative effects of biases, it is recommended to incorporate nudges into financial education and inclusion programs. In the case of the program, we used messaging campaigns with rule-of-thumb guidelines, promoted the habit of recording income and expenses, used formats that help young people organize their ideas in writing, and offered prizes (financial incentives), among other strategies. However, the most significant strategy was teaching young people to apply their own 'internal nudges' simply and integrated into their daily lives. Examples included using a piggy bank for spare change, not saving bank details in apps to prevent compulsive purchases, and displaying their rules of thumb visibly.

## 3. Building young people's trust in the financial system and in their financial decisions

Promoting the financial inclusion of young people requires that they trust the financial system and feel willing to conduct their financial transactions within it. The program findings revealed that most students had

medium to low trust in financial institutions, influenced by cognitive biases identified during the process.

To overcome the biases underlying this lack of trust, it is first necessary to promote financial education with a behavioral economics focus, using the aforementioned activities. This will enable young people to better understand how the financial system works and the benefits it offers. Secondly, the content must be intentionally designed to foster this trust. For example, in this case, the content chosen focused on explaining the benefits of reduced transaction costs and the financial security of the formal financial system. The aim was to link these benefits to their daily financial lives, thereby increasing their ability to relate to and engage with the financial system. Likewise, the importance of financial services being transparent in costs, intuitive to use, and secure (especially for digital transactions) was emphasized to highlight how such services safeguard their resources.

## 4. Considering the emotional component in the design of financial inclusion and education programs

Social and emotional development levels are closely related to learning outcomes and the overall effectiveness of financial inclusion and education programs. This is particularly relevant for young people because, due to the stages of brain development, emotions weigh much more heavily than rationality in their decisions. Therefore, financial inclusion and education programs for young people should incorporate an understanding of emotional factors into their teaching methods to enhance participants' capabilities. This includes: i) encouraging entrepreneurial thinking, knowledge application, and recognizing successes; ii) creating calm and safe learning environments; iii) instilling a sense of capability and self-efficacy; iv) evaluating the learning process alongside results; and v) emphasizing attitudes as much as knowledge.

Likewise, drawing on the theoretical and conceptual foundations of behavioral science and neuroscience, it is recommended to incorporate mindfulness practices. These practices help develop awareness of breath, the body, emotions, and thoughts related to various financial decisions. This helps individuals use body awareness to improve their relationship with finances and to anticipate emotions that influence behavior, enabling them to adapt or regulate that behavior as needed. These practices reduce impulsive and reactive behaviors in their financial life, giving them more space to reflect before acting.

## 5. The environment in which the financial system is presented to young people significantly influences their decision to adopt and use financial services and their financial health habits

Beyond the information provided, the environment is a fundamental factor influencing people's behavior and decision-making. It can generate biases affecting option evaluation, trigger various emotions, or alter information interpretation. Thus, the environment in which the financial system is presented to young people, as well as the content provided, is critically important. It is therefore recommended that the environment be carefully managed to encourage and facilitate the adoption and use of financial services and motivate habits for good financial health among young people.



Student making a purchase with contactless payment.

In particular, it is recommended to promote information that is appealing, making the benefits more tangible, and addressing the most relevant behavioral biases in order to modify existing mental models or create new ones. In this regard, the project employed resources such as: i) actively involving young people because information is better received when it comes from peers; ii) implementing active games as playful elements; iii) promoting meaningful learning, focusing on topics that will have practical application in their daily lives; iv) incorporating a localized approach, based on an understanding of the specific context and the most relevant characteristics, interests, and needs of young people.

## 6. Mainstream gender perspectives in financial inclusion and education programs

Given that persistent gender gaps in financial inclusion are determined by social gender norms, it is necessary to raise awareness of the constraints and inequalities faced by women in both social and economic spheres, and the cognitive stemming from result from these norms.

The participation of young people in the program revealed that they are clearly aware of traditional gender roles, and even though they no longer consider them decisive in light of women's growing participation in the economy, subtle but significant gaps were identified between young men and women. It is essential to socialize and share this information with young people throughout the various workshops and roundtable discussions in a respectful, interactive, and non-polarizing manner. Therefore, social gender norms must be incorporated into the development, design, and implementation of financial inclusion and education interventions for young people. Mainstreaming a gender perspective helps define appropriate financial inclusion strategies with differentiated actions and objectives for young men and women, ensuring both benefit equally and preventing the perpetuation of inequality. Under this approach, these strategies will generate value for young people and profitability for financial institutions.



Student sharing her opinion on gender social norms.



Students participating in one of the workshops.



Presentation on gender norms and financial life.

### 8. CONCLUSIONS

This study identified behavioral barriers, lack of confidence, low financial literacy, and social gender norms as some of the barriers limiting the financial inclusion of young students at the Instituto Tecnológico de Roque. All these barriers are reinforced by the socioeconomic and cultural vulnerability of the students and their families. These barriers together result in less than 50% of students having formal products, with the exception of formal and informal digital financial products, which are used by approximately 70%. The assessment also showed that these barriers lead to unhealthy financial behaviors, such as a failure to pay attention to their financial lives and not having goals or strategies to achieve them, as well as not seeking information or comparing options when making financial decisions.

To address these barriers, a holistic financial inclusion and education intervention was designed, incorporating a range of activities. The core elements included faceto face workshops, round tables, mindfulness practices, exercises to put what was learned into practice, heuristics prompts and reinforcement messages, visits from the Caja Popular Apaseo el Alto, videos, a video contest, along with banners and infographics. The fundamentals of behavioral science and neuroscience were integrated into the design and implementation of the intervention's activities and materials, with the synergy between these disciplines proving crucial.

The assessment of the intervention results shows that, although the percentage changes are modest, the results are significant considering the short time between the questionnaires and the complexity of changing ingrained financial behaviors. Comparing responses from the initial and final questionnaires, positive changes included a 20% increase in recording income and expenses, and a 12% increase in setting goals. The change in responses regarding ownership of financial products for savings and digital products was around 10%, and in the case of credit, 6%. Similarly, students had a better response in terms of financial knowledge (14% on average), biases (14% on average), and trust in financial institutions (11%). Additionally, the evaluation revealed that the student profile benefiting the most from the intervention was a 21-year-old male student and entrepreneur with a fixed income, in the fifth semester of an ICT engineering degree. This heterogeneous impact of the intervention is something that should be taken into account in the design of all future financial inclusion and education programs.

The responses and feedback provided in the exit questionnaires reveal a positive reception of the workshops and different activities, although they also highlight areas for improvement, such as making the workshops more interactive and practical, and adjusting their duration to maintain student attention and engagement.

In conclusion, the intervention suggests positive changes in participants' financial behaviors, knowledge, and biases, promoting healthier financial habits and better decision-making, but with notable differences across population groups. Therefore, an integrated and holistic approach, combining theory, interactive practice, and continuous reinforcement, can lead to substantial transformations in participants' financial behavior. Future programs could benefit from this approach and the highlevel recommendations outlined. This will help ensure financial education is not merely informative but deeply transformative. Furthermore, it highlights the importance of considering diverse characteristics to develop programs tailored to specific population segments, such as women or students with lower incomes.



Student with honorable mention.

### REFERENCES<sup>18</sup>

Banca de las Oportunidades & Banco de Desarrollo de América Latina y el Caribe (CAF). (2024, 08 de marzo). Estudio experimental de género.

https://scioteca.caf.com/handle/123456789/2212

Borraz, F., Caro, A., Caño-Guiral, M. & Roa, M. J. (2021). Financial education for youth. A randomized evaluation in Uruguay (881). GLO Discussion Paper.

Borraz, F., Caro, A., Caño-Guiral, M. & Roa, M. J. (2022). Financial education for youth: A randomized evaluation in Uruguay. *International Review of Education*, 68, 885-896.

Bustelo, M. & Vezza, E. (2019). Brechas de género en las habilidades para el siglo XXI. En M. Díaz & G. Rucci (Eds.), El futuro ya está aquí: Habilidades transversales en América Latina y el Caribe en el Siglo XXI, 82-106.

Cárdenas, S., Cuadros, P., Estrada, C. & Mejía, D. (2020). Determinantes del bienestar financiero: evidencia para América Latina. Serie de políticas públicas y transformación productiva, 36. CAF.

Castellanos, N. (2022). Neurociencia del cuerpo. Cómo el organismo esculpe el cerebro. Editorial Kairós.

Comisión Nacional para la Protección y Defensa de los Usuarios de Servicios (CONDUSEF) y Instituto Nacional de Estadística y Geografía (INEGI). (2023). Encuesta Nacional sobre Salud Financiera (ENSAFI) 2023. https://www.condusef.gob.mx/?p=contenido&idc=2448&idcat=1#:~:text=En%20 2023%2C%2052.0%20%25%20de%20la,montos%20 superiores%20a%20tres%20meses.

Consejo Nacional de Evaluación de la Política de Desarrollo Social (CONEVAL). (2020). Medición de la pobreza. https://www.coneval.org.mx/Medicion/MP/Paginas/Pobreza\_2020.aspx

Consejo Nacional de Evaluación de la Política de Desarrollo Social (CONEVAL). (2022). Medición de la pobreza. https://www.coneval.org.mx/Medicion/Paginas/Pobrezalnicio.aspx

#### Consultative Group to Assist the Poor (CGAP). (2020).

Personas of women entrepreneurs. https://www.findevgateway.org/slide-deck/2020/11/personas-women-entrepreneurs

Comisión Nacional Bancaria y de Valores (CNBV) & Instituto Nacional de Estadística y Geografía (INEGI). (2024). Encuesta Nacional de Inclusión Financiera (ENIF). https://www.inegi.org.mx/programas/enif/2024/

Damasio, A. (1996). El error de Descartes. Andrés Bello.

Damasio, A. (2020). Sentir y saber. Círculo de Lectores.

Di Giannatale, S. & Roa, M. J. (2016). Formal Saving in Developing Economies: Barriers, Interventions, and Effects. IDB.

Fu, J. (2020). Ability or opportunity to act: What shapes financial well-being? *World Development*, 128, 104843.

Harper, C., Marcus, R., George, R., D'Angelo, S. M. & Samman, E. (2020). *Gender, Power and Progress: How Norms Change*. Advancing Learning and Innovation on Gender Norms (ALIGN) / Overseas Development Institute (ODI). https://www.alignplatform.org/gender-power-progress

Instituto Nacional de Estadística y Geografía (INEGI). (2020). Censo de población y vivienda 2020. https://www.inegi.org.mx/programas/ccpv/2020/

Instituto Nacional de Estadística y Geografía (INEGI). (2022). Indicadores laborales para los municipios de México. https://www.inegi.org.mx/programas/ilmm/#tabulados

Instituto Nacional de Estadística y Geografía (INEGI). (2023). Encuesta Nacional de Ocupación y Empleo (ENOE), población de 15 años y más de edad. https://www.inegi.org.mx/programas/enoe/15ymas/#tabulados

Instituto Nacional de Estadística y Geografía (INEGI). (2023). Encuesta Nacional de Victimización y Percepción sobre Seguridad Pública (ENVIPE) 2023. https://www.inegi.org.mx/programas/envipe/2023/

Kahneman, D. & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *The Econometric Society*, 47(2), 363-391.

Lewrick, M. (2018). The Design Thinking Playbook:

<sup>18</sup> This list includes all references used throughout the project, not only those directly cited in this document.

Mindful Digital Transformation of Teams, Products, Services, Businesses and Ecosystems. Wiley.

Moya-Ponce, C. & Madrazo-Lemaroy, P. (2023). Beliefs that provide a foundation for heuristics and biases in financial decision-making. *Cuadernos de Gestión*. 23(2), 69-80.

ONU Mujeres. (2021). Finanzas para todas: experiencias e iniciativas innovadoras para la inclusión financiera de las mujeres y la recuperación con lentes de género en América Latina. Entidad de las Naciones Unidas para la Igualdad de Género y el Empoderamiento de las Mujeres.

Roa, M. J. (2021). Normas sociales: la barrera invisible de la inclusión financiera de la mujer. Cepal. https://www.cepal.org/es/publicaciones/47539-normas-sociales-la-barrera-invisible-la-inclusion-financiera-la-mujer

Roa, M. J., Di Giannatale, S., Villegas, A. & Barboza, J. (2023). Are women more financially vulnerable than men? A tale of missed economic opportunities from Latin America. *Development Policy Review*, 41(6).

#### Secretaría de Educación Pública (SEP). (2023).

Principales cifras del sistema educativo nacional 2022-2023. https://www.planeacion.sep.gob.mx/Doc/estadistica\_e\_indicadores/principales\_cifras/principales\_cifras\_2022\_2023\_bolsillo.pdf

Seth, A. K. (2023). La creación del yo: una nueva ciencia de la conciencia. Editorial Sexto Piso.

Thaler, R. H. (2017). Behavioral economics. *Journal of Political Economy*, 125(6), 1799-1805.

Yakoboski, P., Lusardi, A. & Hasler, A. (2020). Financial literacy and wellness among U.S. women. Insights on Underrepresented Minoribarrty Women. Global Financial Literacy Excellence Center (GFLEC) and TIAA Institute.

### **ANNEXES**

#### ANNEX I. STATISTICAL INFORMATION ON THE TARGET POPULATION

TABLE 1. AREA OF INFLUENCE OF THE TARGET POPULATION

State/Municipality	Population in 2020
Guanajuato	6,166,934
Apaseo el Alto	63,392
Apaseo el Grande	117,883
Jerécuaro	49,517
Santa Cruz de Juventino Rosas	82,340
Tarandacuao	11,304
Source: Prepared by the authors using data from the Population and Housing Census (INEGI, 202	

TABLE 2. POVERTY INDICATORS IN THE AREA OF INFLUENCE

Municipality	Poverty <sup>19</sup> (%)	Extreme Poverty <sup>20</sup> (%)	Access to food	Educational backward-ness	Housing quality and space	Access to basic services in the home
National	43.9	8.5	22.5	19.2	9.3	17.9
Apaseo el Alto	50.7	4.73	16.6	20.0	5.0	10.4
Apaseo El Grande	41.16	4.86	22.1	17.7	6.6	10.4
Jerécuaro	58.67	5.79	14.4	29.0	3.4	19.9
Santa Cruz de Juventino Rosas	60.19	8.43	12.5	24.3	8.2	18.9
Tarandacuao	50.80	3.98	19.5	22.9	4.4	6.7

Note: The most recent poverty figures available at the municipal level are presented.

Source: Prepared by the authors using data from CONEVAL, 2020.

<sup>19</sup> Situation in which a person finds themselves when they are not guaranteed the exercise of at least one of their rights for social development, and if their income is insufficient to acquire the goods and services necessary to meet their basic needs. (CONEVAL, 2022).

<sup>20</sup> A person is considered to be in extreme poverty when they have three or more of the six possible deprivations within the Social Deprivation Index and are also below the extreme poverty line based on income. (CONEVAL, 2022).

Municipality	Access to health services	Access to social security	Access to food	Educational backward- ness	Housing quality and space	Access to basic services in the home
Nacional	28.2	52.0	22.5	19.2	9.3	17.9
Apaseo el Alto	26.5	69.9	16.6	20.0	5.0	10.4
Apaseo el Grande	26.09	47.5	22.1	17.7	6.6	10.4
Jerécuaro	13.64	81.7	14.4	29.0	3.4	19.9
Santa Cruz Juventino Rosas	29.43	73.4	12.5	24.3	8.2	18.9
Tarandacuao	24.70	79.8	19.5	22.9	4.4	6.7

Note: The most recent figures on the lack of social rights available at the municipal level are presented.

Source: Prepared by the authors using data from CONEVAL, 2020.

TABLE 4. EDUCATION COVERAGE<sup>21</sup>

Education level	National		Guanajuato	
	Women	Men	Women	Men
Primary education	101.3	100.9	100.6	99.5
Secondary education	94.8	92.3	93.2	89.5
Upper secondary education	85.6	76.2	78.5	68.1
Higher education	47.0	40.1	41.0	34.9

<sup>21</sup> Total number of students enrolled at an educational level at the beginning of the school year, per 100 individuals in the population group of the official age to attend that level. Total coverage refers to the inclusion of both formal (school-based) and non-formal enrollment.

Source: Prepared by the authors using data from the SEP, 2023.

#### **TABLE 5. LABOR INDICATORS**

Federal entity/Municipality	Economically Active Population (EAP) <sup>22</sup>	Employment rate <sup>23</sup>	Employment rate in the informal sector <sup>24</sup>
National	58.7	96.5	55.2
Guanajuato total	58.8	96.0	53.0
Apaseo el Alto	56.2	98.2	82.6
Apaseo el Grande	61.1	96.5	53.3
Jerécuaro	54.6	98.0	79.5
Juventino Rosas	56.5	97.6	47.7
Tarandacuao	54.5	97.9	73.31

Note: The most recent figures available at the municipal level are updated to the first quarter of 2022.

Source: Prepared by the authors based on labor indicators for municipalities (INEGI, 2022).

TABLE 6. EMPLOYED POPULATION BY TYPE OF ECONOMIC UNIT (FIGURES FROM THE STATE OF GUANAJUATO BY SEX)

Type of economic unit	Men	Women
Companies and businesses	64.5	51.2
Public and private institutions	8.2	12.5

<sup>22</sup> Share of the population aged 15 years and older.

<sup>23</sup> Percentage relative to the Economically Active Population (EAP).

<sup>24</sup> Percentage relative to the Employed Population.

Informal sector	25.0	24.9
Paid domestic work	1.1	10.8
Subsistence agriculture	0.9	0.3
Special situations	0.3	0.3
Source: Prepared by the authors using data from ENOE (INEGI, 2023).		

#### ANNEX II. PROFILE OF THE TARGET POPULATION ACCORDING TO THE ENTRANCE SURVEY

#### Profile of the students



- > University students between the ages of 18 and 29: 159 people surveyed
- > 57% female, 42% male, and 1% non-binary.
- > They study engineering in the following fields: Business Management, Information and Communication Technologies, Agronomy, Food Industries, and Hydrology.
- > 50% are full-time students, 39% study and work, 8% study and are entrepreneurs, and 1% study, work, and are entrepreneurs.
- > 93% identified as single, 6% as married, and 1% as in a common-law relationship.
- > They live in 5 municipalities in Guanajuato identified as having high poverty levels: Apaseo el Alto, Apaseo el Grande, Jerécuaro, Santa Cruz de Juventino Rosas, and Tarandacuao.
- > Students live in areas that are unsafe and experience high levels of violence.
- > These areas also have limited public transportation and lack adequate road infrastructure, making access to the university more difficult.
- > Approximately 50% are exclusively dedicated to their studies; about 40% combine study and work (in the informal sector), and the remaining 10% are students who also engage in entrepreneurship or other activities.



Product ownership and financial behavior

- > The main financial products they use are digital products (73%), followed by savings products (55%) and credit products (28%).
- > In an emergency, only 15% could cover their expenses for 1 to 3 months.
- > Only about 50% know what their monthly income and expenses are.
- > Only 18% keep monthly records.
- > The use of informal mechanisms with community lenders is almost non-existent.
- > Only 30% of the young people surveyed said they trusted all financial institutions.



- > Around 56% of students know how to calculate simple interest.
- > Around 27% know how to calculate compound interest.
- > Approximately 53% understand the concept of applied inflation.



- > 60% of students said they had a financial goal.
- > The most common goals were: purchasing a means of transportation (car or motorcycle), buying computer equipment, and investing in education.
- > 65% do not have a financial strategy or plan to achieve their goals.



Gender differences and social norms

- > Female students receive more financial support from their families than male students.
- Male students report, in greater proportion than female students, having at least one financial product (such as savings, credit, and/or digital services).
- > Female students perform more caregiving tasks within their families.
- > Male students have to work to help financially at home, which puts a lot of pressure on them.
- > It is frowned upon for female students to work in predominantly male spaces.



Identified cognitive biases

- Lack of self-control
- > Present bias
- > Tunnel vision
- Control bias
- > Lack of attention and planning in finances
- Risk and loss aversion
- > Self-exclusion
- > Lack of knowledge
- > Authority bias
- Herd effect
- > Status quo

#### **ANNEX III. ARCHETYPES**

Based on this analysis, four "Personas" were identified in the target population. A Persona is a profile, constructed from a variety of sources, that brings together common characteristics of similar people, through which a group can be better understood (CGAP, 2020). These "Personas" are described in this section to achieve a better understanding of diverse identities and their different financial needs and behaviors, as well as to identify the main social norms that influence young people to interact with financial services.

Name	Valeria
Characteristics	<ul> <li>Age: 22</li> <li>Semester: 8th Semester</li> <li>Major: Food Industries</li> <li>Marital Status: Single</li> </ul>
History	<ul> <li>She is the second of four siblings. Her older brother and younger sister are already married.</li> <li>She decided to study because she realized that this would be essential for getting a good job in the future.</li> <li>Her parents have a taco stand, which is open at night.</li> </ul>
Social norms	<ul> <li>When she expressed her desire to continue studying, her grandmother told her, "If your brother couldn't do it, you certainly can't." This made her doubt her abilities. But her parents supported her, and she decided to enroll in college.</li> <li>She has to take care of her nephews when she returns from university, so she has learned to look after them while doing her homework.</li> <li>Her older brother works in the family business with her parents. But she is not allowed to participate because the customers are mainly men.</li> <li>She has had to look for work elsewhere because she needs to earn an income.</li> </ul>
Key aspects of her financial life	<ul> <li>To generate income, she works at a fast food restaurant, but she can only do so on weekends because she has to take care of her nephews during the week.</li> <li>Her job is informal and she is paid in cash, but it is not very demanding.</li> <li>She also received a government scholarship.</li> <li>She uses her income to cover her school expenses.</li> <li>She is not required to contribute to her family's income.</li> <li>Her biggest expense is paying for private transportation to the university because there is no public transportation from her community. Several students organize to pay for a van to take them there.</li> </ul>
Use of financial services	<ul> <li>She tries to save as much as she can to cover all her expenses.</li> <li>Even though she has a debit card to receive her scholarship, she does not use it, but instead withdraws all the money and pays for everything in cash.</li> <li>She does not trust financial institutions and keeps her savings at home.</li> <li>She dislikes loans and has never applied for one.</li> <li>When she has unexpected expenses that she cannot cover, she asks her brother for money because she believes that men always have better jobs and higher incomes.</li> </ul>

Name	Eduardo
Characteristics	<ul> <li>Age: 23</li> <li>Semester: 8th Semester</li> <li>Degree: Business Management Engineering</li> <li>Marital Status: Single</li> </ul>
History	<ul> <li>He belongs to a family of five siblings.</li> <li>He went to work in the United States for a year, having migrated illegally. He realized that life is very hard for those who are unprepared, so he returned to Mexico to study at university.</li> </ul>
Social norms	<ul> <li>His parents work and contribute to the household income.</li> <li>He and all his siblings share the household chores.</li> <li>His parents helped him buy a car to drive to university, but they did not support his sisters in the same way, who must take private transportation to university. To compensate his sisters, his parents built them a "room" in the house.</li> <li>He feels significant pressure to earn money to contribute to the household.</li> </ul>
Key aspects of his financial life	<ul> <li>To pay for his school expenses, he works on independently. He rents a minibus from a public transportation route and drives it himself.</li> <li>After school, he works as much as he can to earn more money.</li> <li>He is not required to contribute regularly to household expenses, but his mother often asks him for help to cover expenses.</li> </ul>
Use of financial services	<ul> <li>He finds it very complicated to visit a financial institution branch and doesn't know how to act or what to ask.</li> <li>He has preferred to "try out" digital financial products to learn how to use financial services.</li> <li>He asses the interest rate offered by the financial institution and feel motivated by seeing how money earns interest through the app.</li> <li>In addition, he assess the interest rate being offered by the financial institution and feel motivated by seeing how their money earns interest through the app.</li> <li>He also uses credit for online purchases and considers the interest rate paid to be low, though in reality it is above the market average.</li> </ul>

Name	Héctor
Characteristics	<ul> <li>Age: 19</li> <li>Semester: 4th Semester</li> <li>Major: Agricultural Engineering</li> <li>Marital Status: Single</li> </ul>
History	<ul> <li>His parents and siblings moved to the United States to work.</li> <li>He preferred to stay in Mexico to pursue a university education.</li> <li>He lives on a piece of land where his house and his grandparents' house are next to each other, so they help him out, but he has had to become self-sufficient.</li> </ul>
Social norms	<ul> <li>He uses a motorcycle to get to university and work.</li> <li>He has to work to cover his expenses and take care of household chores such as washing clothes and cleaning the house, but his grandmother cooks for him.</li> </ul>
Key aspects of his financial life	<ul> <li>To generate income, he has a formal job as a security guard at a high school.</li> <li>He works the afternoon shift after school.</li> <li>A formal job has more demands than an informal one because you have to stick to a schedule, have responsibilities, and cannot do tasks ahead of time during your shift or ask for time off.</li> <li>The advantage of a formal job is that the income is more stable and comes with legal benefits, such as access to social security.</li> <li>He must ensure that he can cover all his expenses, so he is very careful with his money.</li> <li>At first, he had a hard time learning to keep track of his income and expenses, and he experienced financial stress.</li> </ul>
Use of financial services	<ul> <li>He receives remittances from his parents, but the money goes into his grandmother's account. He uses that money to pay for household expenses such as water, electricity, and telephone.</li> <li>He receives his paycheck in a debit account.</li> <li>He uses his debit account to make transfers, payments, and online purchases.</li> </ul>

Name	Cecilia
Characteristics	<ul> <li>Age: 23</li> <li>Semester: 8th semester</li> <li>Degree program: Information Technology Engineering</li> <li>Marital status: Single</li> </ul>
History	<ul> <li>Her mother works as a government employee and her father left for the United States to work illegally.</li> <li>She has worked since she was a child and had to help her mother with household chores and taking care of her younger siblings.</li> <li>She wanted to study another degree at another university, but it was more expensive.</li> <li>She is a self-sufficient, empowered woman with aspirations.</li> </ul>
Social norms	<ul> <li>When she said she wanted to go to university, her neighbors told her mother, "Why is she going to study if she's just going to get pregnant?"</li> <li>Having her own business and male clients has not been socially well accepted in her community.</li> <li>She doesn't care what people in her community say because she is more concerned about earning enough money to get ahead.</li> </ul>
Key aspects of his financial life	<ul> <li>She has been working since she was 15 to generate income.</li> <li>When she entered university, she applied for a government scholarship, but she didn't get it for one semester and it was very difficult to cover her school expenses.</li> <li>Seeing that this is her last semester at university, she was worried about low wages and the time it would take to find a job, and that she would no longer have a scholarship, so she decided to start a business.</li> <li>She wanted a profitable business, so she opened a beer stand.</li> <li>The business is just getting started, but it has good prospects.</li> </ul>
Use of financial services	<ul> <li>She receives her scholarship in a debit account at Banco Bienestar and has been told that if she does not withdraw the money, the government will take it away, so she withdraws everything.</li> <li>She runs her business in cash: she does not accept digital payments or pay suppliers by transfer.</li> <li>She prefers to handle everything in cash because she feels she has better control that way.</li> </ul>

#### ANNEX IV. RESULTS ASSESSMENT

**TABLA 7.** PATICIPATION IN WORKSHOPS AND COMPLETION OF "GO TO ACTION" ACTIVITIES, BY SOCIODEMOGRAPHIC CHARACTERISTICS

	Workshops					Go to action					
	1	2	3 S1	3 S2	4	1	2	3 S1	3 S2	4	
Attendees (number)	190	77	79	102	76	111	102	88	70	78	
SEX											
Woman	48%	50%	48%	49%	54%	53%	47%	47%	53%	56%	
Man	52%	50%	52%	51%	46%	47%	53%	53%	47%	44%	
MARITAL STATUS											
Married	1%				1%					1%	
Common-law marriage	1%		1%			1%	1%	1%			
Single	98%	100%	99%	100%	99%	99%	99%	99%	100%	99%	
HAS CHILDREN									,		
Yes	1%	1%	1%				1%	1%			
No	99%	99%	99%	100%	100%	100%	99%	99%	100%	100%	
AGE		ı			ı				,	'	
18	26%	42%	43%	36%	28%	32%	33%	39%	41%	26%	
19	22%	31%	20%	33%	29%	26%	28%	25%	27%	28%	
20	23%	9%	15%	13%	24%	15%	12%	14%	9%	23%	
21	11%	12%	11%	10%	7%	13%	14%	11%	13%	8%	
22 and more	17%	6%	10%	8%	13%	14%	13%	11%	10%	15%	
MAJOR									'		
Business Management Engineering	43%	53%	51%	64%	66%	54%	55%	57%	66%	67%	
Information and Communication Technologies Engineering	16%	17%	23%	23%	3%	23%	16%	24%	25%	4%	
Agricultural Engineering	36%	24%	21%	5%	28%	15%	24%	10%		27%	
Food Industry Engineering	5%	7%	5%	8%	3%	8%	5%	8%	9%	3%	
OCCUPATION											
Full-time student	51%	57%	47%	55%	49%	57%	54%	52%	54%	49%	
Student and employee	35%	33%	41%	35%	32%	28%	34%	34%	34%	33%	
Student and entrepreneur	11%	7%	8%	6%	14%	10%	7%	9%	7%	12%	
Other	3%	4%	4%	4%	5%	5%	5%	5%	4%	5%	

Note: Workshop 3 was delivered in two separate sessions — a theoretical one (S1 - Session 1) and a practical one (S2 - Session 2).

		Workshops				Go to action					
	1	2	3 S1	3 S2	4	1	2	3 S1	3 S2	4	
SEMESTER											
1	42%	58%	59%	53%	39%	45%	51%	60%	63%	37%	
2	1%	1%									
3	25%	29%	17%	34%	32%	24%	24%	22%	22%	32%	
5	24%	1%	15%	4%	20%	21%	18%	8%	3%	20%	
7	8%	11%	9%	9%	8%	9%	8%	9%	12%	11%	
9	1%					1%					
INCOME									'		
Yes, from paid work	34%	31%	34%	32%	41%	33%	34%	34%	29%	40%	
Yes, from allowance	42%	54%	48%	42%	37%	44%	52%	47%	49%	38%	
Yes, from scholarship or support	14%	10%	12%	15%	14%	14%	8%	13%	16%	14%	
Other	2%	2%	2%	3%		3%	2%	2%	2%	8%	
Does not receive income	8%	2%	4%	8%	8%	6%	3%	4%	4%		
Rather not answer	1%	2%					2%				
INCOME STABILITY									'		
Fixed income	23%	22%	24%	22%	18%	24%	22%	20%	21%	17%	
Variable income	58%	57%	55%	55%	62%	57%	61%	59%	62%	63%	
Does not know	12%	11%	12%	13%	12%	14%	11%	14%	12%	12%	
Rather not answer	8%	11%	9%	10%	8%	6%	6%	7%	6%	8%	

Note: Includes students who responded to the initial and final questionnaires. The vertical sum of the percentages by demographic characteristic equals 100%. Source: Prepared by the authors with responses to the initial and final questionnaires..

#### **INDEX OF FIGURES**

FIGURE 1. CONCEPTUAL FRAMEWORK OF THE PROJECT	6
FIGURE 2. CONCLUSIONS AND RECOMMENDATIONS BASED ON THE INITIAL DIAGNOSIS	8
FIGURE 3. WORK METHODOLOGY	9
FIGURE 4. COMPONENTS OF THE CRAC FINANCIERO CONTEST	10
FIGURE 5. STUDENTS PARTICIPATING IN ONE OF THE WORKSHOPS	11
FIGURE 6. STUDENTS PARTICIPATING IN ONE OF THE MINDFULNESS ACTIVITIES	11
FIGURE 7. "DANI": CHARACTER CREATED FOR THE INTERVENTION AND ITS APPLICATION	12
FIGURE 8. CHALLENGES RELATED TO VULNERABILITY AND BEHAVIORAL ISSUES	13
FIGURE 9. SUMMARY OF IMPLEMENTATION ACHIEVEMENTS	13
FIGURE 10. CHANGES IN QUESTIONS RELATED TO KNOWLEDGE OF INCOME AND EXPENSES.	14
FIGURE 11. CHANGES REGARDING FINANCIAL GOALS.	15
FIGURE 12. CHANGES IN OWNERSHIP AND USE OF FORMAL AND INFORMAL FINANCIAL PRODUCTS.	15
FIGURE 13. CHANGES IN BIASES AND TRUST	16
FIGURE 14. PROFILE OF PARTICIPANT WITH THE MOST POSITIVE CHANGES	17
FIGURE 15. RESPONSES TO THE QUESTION: WHICH WORKSHOP DID YOU FIND MOST USEFUL?	18
FIGURE 16. ASSESSMENT OF MINDFULNESS PRACTICES, MESSAGES, AND VISUAL MATERIALS.	19
FIGURE 17. WORD CLOUD OF OPEN-ENDED RESPONSES	19
FIGURE 18. TESTIMONIALS FROM WINNING STUDENTS	20
FIGURE 19. PHOTOGRAPHS OF CONTEST WINNERS AT THE AWARDS CEREMONY.	20
FIGURE 20. SOCIAL GENDER NORMS REPORTED IN THE ROUND TABLE	22

#### **INDEX OF TABLES**

TABLE 1. AREA OF INFLUENCE OF THE TARGET POPULATION	29
TABLE 2. POVERTY INDICATORS IN THE AREA OF INFLUENCE	29
TABLE 3. LACK OF SOCIAL RIGHTS	29
TABLE 4. EDUCATION COVERAGE	30
TABLE 5. LABOR INDICATORS	30
TABLE 6. EMPLOYED POPULATION BY TYPE OF ECONOMIC UNIT (FIGURES FROM THE STATE OF GUANAJUATO BY SEX)	30
<b>TABLE 7.</b> PARTICIPATION IN WORKSHOPS AND COMPLETION OF "GO TO ACTION" ACTIVITIES, BY SOCIODEMOGRAPHIC CHARACTERISTICS	37

#### Alliance for Financial Inclusion

AFI, Sasana Kijang, 2, Jalan Dato' Onn, 50480 Kuala Lumpur, Malaysia t +60 3 2776 9000 e info@afi-global.org www.afi-global.org