Increasing the effectiveness of financial education: Evidence from research

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Let’s start with a video:

https://youtu.be/I_ZbOPnL7_M?si=6dhbyZTC8XiKr0N8
Data tells a story
Measuring personal finance knowledge

• The TIAA Institute-GFLEC Personal Finance Index (P-Fin Index) is an annual measure of knowledge and understanding which enable sound financial decision-making and effective management of personal finances.

• The P-Fin Index relates to common financial situations that individuals encounter and can be viewed as a gauge of “working knowledge.”

• In addition to personal finance knowledge, it provides information on financial well-being indicators.

• Data has been collected since 2016 on a representative sample of Americans (age 18+).
What is unique: 8 functional areas of personal finance

The index is based on responses to 28 questions, with three or four questions for each of the eight functional areas (from the National Standards for Financial Literacy).

The *P-Fin Index*’s 28 questions cover eight functional areas:

1. Earning  
2. Saving  
3. Consuming  
4. Investing  
5. Borrowing  
6. Insuring  
7. Comprehending risk  
8. Go-to information sources
Anna saves $500 each year for 10 years and then stops saving additional money. At the same time, Charlie saves nothing for 10 years but then receives a $5,000 gift which he decides to save. If both Anna and Charlie earn a 5% return each year, who will have more money in savings after 20 years?

- Anna
- Charlie
- Anna and Charlie will have the same amount
- Don’t know
- Refuse to answer

Results:
Correct 47%
Incorrect 28%
Don’t Know 25%
No Answer 0%

Source: TIAA Institute-GFLEC Personal Finance Index (2023).
Financial literacy in America: A failing grade (2023 data)

Source: TIAA Institute-GFLEC Personal Finance Index (2023).
Financial (il)literacy is holding steady: 2017-2023

% of P-Fin Index questions answered correctly

<table>
<thead>
<tr>
<th>Year</th>
<th>49%</th>
<th>50%</th>
<th>51%</th>
<th>52%</th>
<th>50%</th>
<th>50%</th>
<th>48%</th>
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</thead>
<tbody>
<tr>
<td>2017</td>
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<td>2023</td>
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</tbody>
</table>

Distribution of correct answers to P-Fin questions

<table>
<thead>
<tr>
<th>Year</th>
<th>22–28 correct (76%–100%)</th>
<th>15–21 correct (51%–75%)</th>
<th>8–14 correct (26%–50%)</th>
<th>0–7 correct (&lt;26%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>16%</td>
<td>32%</td>
<td>32%</td>
<td>20%</td>
</tr>
<tr>
<td>2018</td>
<td>16%</td>
<td>35%</td>
<td>28%</td>
<td>21%</td>
</tr>
<tr>
<td>2019</td>
<td>18%</td>
<td>35%</td>
<td>27%</td>
<td>20%</td>
</tr>
<tr>
<td>2020</td>
<td>20%</td>
<td>33%</td>
<td>30%</td>
<td>17%</td>
</tr>
<tr>
<td>2021</td>
<td>18%</td>
<td>34%</td>
<td>28%</td>
<td>20%</td>
</tr>
<tr>
<td>2022</td>
<td>18%</td>
<td>33%</td>
<td>26%</td>
<td>23%</td>
</tr>
<tr>
<td>2023</td>
<td>16%</td>
<td>33%</td>
<td>26%</td>
<td>25%</td>
</tr>
</tbody>
</table>

What do people know the most and the least

% of P-Fin questions answered correctly

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borrowing</td>
<td>58%</td>
</tr>
<tr>
<td>Saving</td>
<td>55%</td>
</tr>
<tr>
<td>Consuming</td>
<td>50%</td>
</tr>
<tr>
<td>Go-to info sources</td>
<td>49%</td>
</tr>
<tr>
<td>Earning</td>
<td>47%</td>
</tr>
<tr>
<td>Investing</td>
<td>44%</td>
</tr>
<tr>
<td>Insuring</td>
<td>42%</td>
</tr>
<tr>
<td>Comprehending risk</td>
<td>35%</td>
</tr>
</tbody>
</table>

Source: TIAA Institute-GFLEC Personal Finance Index (2023).
Inflation knowledge

Akiko has $1,000 in savings that earns a 2% rate of return over the course of the year. The inflation rate during the year is 3%. Which statement is true?

- She can afford to buy fewer things at the end of the year
- She can afford to buy more things at the end of the year
- It’s not clear whether she can afford to buy more things or fewer things at the end of year
- Don’t know
- Refuse to answer

Results:
- Correct 55%
- Incorrect 17%
- Don’t Know 27%
- No Answer 1%

Source: TIAA Institute-GFLEC Personal Finance Index (2023).
Demographic variation: Age

% of P-Fin Index questions answered correctly

- 18-29: 40%
- 30-44: 46%
- 45-59: 51%
- 60+: 53%

Distribution of correct answers to P-Fin questions

- 0-7 correct (<26%)
  - 18-29: 37%
  - 30-44: 29%
  - 45-59: 26%
  - 60+: 25%
- 8-14 correct (26% - 50%)
  - 18-29: 22%
  - 30-44: 26%
  - 45-59: 28%
  - 60+: 22%
- 15-21 correct (51% - 75%)
  - 18-29: 15%
  - 30-44: 31%
  - 45-59: 35%
  - 60+: 18%
- 22-28 correct (76% - 100%)
  - 18-29: 12%
  - 30-44: 18%
  - 45-59: 18%
  - 60+: 18%

Source: TIAA Institute-GFLEC Personal Finance Index (2023).
Demographic variation: Women and knowledge

% of P-Fin Index questions answered correctly

<table>
<thead>
<tr>
<th>Gender</th>
<th>Percent Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>53%</td>
</tr>
<tr>
<td>Women</td>
<td>43%</td>
</tr>
</tbody>
</table>

Distribution of correct answers to P-Fin questions

<table>
<thead>
<tr>
<th>Bracket</th>
<th>Percent Correct</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>22–28 correct</td>
<td>(76%–100%)</td>
<td>23%</td>
<td>10%</td>
</tr>
<tr>
<td>15–21 correct</td>
<td>(51%–75%)</td>
<td>34%</td>
<td>31%</td>
</tr>
<tr>
<td>8–14 correct</td>
<td>(26%–50%)</td>
<td>21%</td>
<td>31%</td>
</tr>
<tr>
<td>0–7 correct</td>
<td>(&lt;26%)</td>
<td>21%</td>
<td>28%</td>
</tr>
</tbody>
</table>

Source: TIAA Institute-GFLEC Personal Finance Index (2023).
Financial literacy gender gap in each topic...

% of P-Fin questions answered correctly

- **Borrowing**: Male 63%, Female 53%
- **Saving**: Male 61%, Female 49%
- **Consuming**: Male 52%, Female 49%
- **Go-to info sources**: Male 46%, Female 54%
- **Earning**: Male 52%, Female 42%
- **Investing**: Male 52%, Female 37%
- **Insuring**: Male 46%, Female 37%
- **Comprehending risk**: Male 38%, Female 31%

Source: TIAA Institute-GFLEC Personal Finance Index (2023)
...and in answering “Do not know”

% of P-Fin questions answered with "don't know"

<table>
<thead>
<tr>
<th>Category</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borrowing</td>
<td>27%</td>
<td>37%</td>
</tr>
<tr>
<td>Saving</td>
<td>28%</td>
<td>33%</td>
</tr>
<tr>
<td>Consuming</td>
<td>28%</td>
<td>41%</td>
</tr>
<tr>
<td>Go-to info sources</td>
<td>29%</td>
<td>38%</td>
</tr>
<tr>
<td>Earning</td>
<td>27%</td>
<td>34%</td>
</tr>
<tr>
<td>Investing</td>
<td>17%</td>
<td>20%</td>
</tr>
<tr>
<td>Insuring</td>
<td>21%</td>
<td>29%</td>
</tr>
<tr>
<td>Comprehending risk</td>
<td>19%</td>
<td>27%</td>
</tr>
</tbody>
</table>

Source: TIAA Institute-GFLEC Personal Finance Index (2023).
Where changes happened over time: Toward an unequal path

% point change in P-Fin questions answered correctly, 2017 to 2023

Financial literacy matters: It affects behavior
Measuring financial fragility (*Lusardi, Schneider and Tufano, BPEA, 2011*)

How confident are you that you could come up with $2000 if an unexpected need arose within the next month?

- I am certain I could come up with the full $2,000.
- I could probably come up with $2,000.
- **I could probably not come up with $2,000.**
- I am certain I could not come up with $2,000.
- Don’t know.
- Prefer not to say.

Respondents are classified as financially fragile.
Financial fragility before the pandemic: 1/3 cannot face a shock

Financial literacy and being able to cope

Those with greater financial literacy are less likely to be financially fragile.

% who could certainly come up with $2,000 if an unexpected need arose within the next month

% of P-Fin questions answered correctly

Source: TIAA Institute-GFLEC Personal Finance Index (2023).
Financial literacy matters

Who is financially literate:

- is more likely to cope with financial shocks
- is more likely to plan for retirement
- is more likely to save
- is less likely to be debt-constrained

The findings in the P-Fin Index confirm the results in other studies using other measures of financial literacy.
What we learn from data and research

• Very low levels of financial literacy
  - Cannot take financial literacy for granted

• Financial illiteracy is widespread
  - Need interventions that can be scaled up to see changes at the aggregate level
  - Changing behavior requires more than small interventions

• Large heterogeneity across demographic subpopulations
  - One size does not fit all

• Cost of financial illiteracy can be high
  - It affects behavior at micro and macro level
Making financial education effective

We need large and scalable programs

1. Financial education in school and college (for the young)
2. Financial education in the workplace (for the adults)
3. Financial education where people go to learn (libraries, museums, theaters, and online)
Research says that financial education works.
Financial education in school
Financial education in high school

As of 2022, 23 states require high school students to take a course in personal finance, an increase of 2 states since 2020, but more is underway.

Many states are increasingly mandating financial education in high school.

2022 SURVEY OF THE STATES—BY THE NUMBERS

- 25 states require students to take a course in economics to graduate
- 0 change in the number of states that require students to take a course in economics to graduate
- 23 30 states require students to take a course in personal finance to graduate
- +2 +9 more states require students to take a course in personal finance to graduate since 2020

Progress as of August 2023
The effects of financial education in high school

- A study investigates the effects of mandatory financial education in high school in two states: Georgia and Texas.

- Using data from the Federal Reserve Bank of New York/ Equifax Consumer Credit Panel (CCP) they track young people (age 18-21).

- Financial education exposure is associated with
  - fewer defaults
  - higher credit scores

How to make it more effective

• Have a one-semester course
• Rigorous curriculum
• Train the teachers
• Standardized evaluation

Fast track to financial education in the workplace
A simple measure of the cost of financial illiteracy

People spend an average of 8h per week thinking about and dealing with financial issues and problems. An average of 4h per week occur at work.

Source: TIAA Institute-GFLEC Personal Finance Index (2023).
What we have learned from our projects

- Online program - SSA
- FINRA Investor Education Foundation
- European Investment Bank Institute
- Dartmouth College
- Federal Reserve Office of Employee Benefits
- New York Stock Exchange
Five steps to planning success

Program:

● Covered 5 basic concepts for financial planning
● Targeted to young workers
● It is a story (narrative or video)

● We put together a team of researchers from different fields: Economics, psychology, and linguistics
● We evaluated its effectiveness

Five steps to financial success: topics

The five topics

- **Compound interest**
  - How to grow your wealth

- **Inflation**
  - The erosion of purchasing power over time

- **Risk diversification**
  - Do not put all your eggs in one basket

- **Tax treatment of retirement savings vehicles**
  - Taxes advantages; 401(K) and IRAs

- **Employer matches in defined contribution saving plans**
  - Don’t leave money on the table
Five steps to financial success: effectiveness

- After being exposed to videos, financial literacy improved among participants
- While young were targeted, the videos affected all age groups
- 25-33% of the knowledge gain is still observable after 8 months
- People even learned difficult topics, such as risk diversification

Even short interventions can affect knowledge
Financial education in the workplace: main components

- A financial check-up
- Evaluation and review to improve
- Relevant topics
- Engagement
- Timing
1. A financial check-up

As going to the doctor for a regular check-up, a financial check-up can help assess financial health

• It should look at several indicators (not just one variable, such as retirement savings)

• It provides a way to then segment and better target employees’ needs

• It allows tracking progress over time if measured on a regular basis
2. Relevant topics

The building blocks of financial security

- Covers beyond retirement savings (below are some topics)
- Most effective if tailored to the specific needs and financial circumstances of the participants.

- Planning for the future (retirement planning and more)
- Debt management
- Precautionary savings
- Basic financial literacy
3. Timing is important

- Make it timely

- Programs can use critical moments when financial decisions are made: orientation, end of the year, tax time, birth of children, etc.

- Crises are a “teachable moment”
4. Boost engagement

• Simplify financial decisions (step-by-step action plan)

• Make it easy to understand and participate

• Provide incentives to participate

• Personalize as much as possible and make it relevant
5. Evaluation

Evaluate to show impact and adjust to increase effectiveness

- Repeat on a regular basis
- Continually evaluate and assess impact
- Adjust programs to increase effectiveness
An example: the Dartmouth Project

Dartmouth project:

- We designed a program that targeted individuals who wanted to save but were limited by a lack of knowledge.
- Development of a comprehensive, cost-effective plan to improve participation in and contribution to Supplementary Retirement Accounts (SRAs).
- Step-by-step planning aid. Reducing enrollment process into small manageable steps.
Research-based workplace financial education programs

Our workplace financial wellness webpage describes the financial wellness programs we have designed based on our research.
National strategies for financial literacy

We need policies for financial literacy to have a wide reach and an impact.
Learning from a national strategy for financial literacy in Italy

I chaired the Italian Committee for Financial Education in charge of designing a national strategy for financial literacy.

We built a website to provide financial education to the Italian population.

Supported a law to mandate financial education in school.

We are evaluating a national campaign.
How about us?
Personal finance course at Harvard
Personal finance course I started teaching

- Personal Finance courses for undergraduate and graduate students
- Extensive coverage of risk and risk management
- Paying attention to gender and other differences in financial literacy
- A lot of applications
It’s time to teach personal finance in every college/university
It’s time to teach personal finance in every college/university

- We organized the first conference on teaching personal finance
- We want to promote personal finance in other universities and colleges
- We want to extend the course to create programs for alumni and have students become ambassadors for financial literacy
The first journal for the financial literacy field offers further insights and findings

- Two issues already released in 2023 show:

  There is a spillover effect of financial education in school (from students to parents)

  Financial literacy can help citizens understand reforms
The Importance of Financial Literacy: Opening a New Field

Annamaria Lusardi and Olivia S. Mitchell
Journal of Economic Perspectives
Fall 2023

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People face complex financial decisions with potentially long-lasting consequences at all stages of life. As young people grow into adulthood, they make decisions about loans for college tuition, cars, and homes, along with how to manage credit cards, health and other kinds of insurance, and living within a budget. The shift from defined benefit to defined contribution retirement plans implies that ordinary people must now shoulder decisions about saving, investing, and more. Older people face decisions about how to manage risks and costs of aging, as well as drawing down their retirement assets. These decisions have only become more complex with the advent of new financial products (which, with the help of technology, one can access with a click), novel ways to make payments (“buy now, pay later”), risky instruments such as crypto assets, and most recently the rise of inflation. According to Google Trends, searches for how to budget or save for retirement have increased fourfold since 2004.

For these reasons and others, financial literacy, by which we mean people’s knowledge of and ability to use fundamental financial concepts in their economic decision-making, matters and is more important than ever. The fact that so many people lack financial knowledge not only limits their ability to utilize their resources to the fullest, but also contributes to macroeconomic problems. Recent economic crises related to the subprime mortgage debacle and the COVID-19 pandemic...
From one of the Founding Fathers

“An investment in knowledge pays the best interest”

- Benjamin Franklin
Thank you.

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If you have any questions, please send them to alusardi@stanford.edu.