

Financial Literacy and Investments in Higher Education

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Higher Education (HE)

- HE is a key investment opportunity.
- There is little known about the role of financial aspects of HE on student choices.
- Relevance:
 - In the U.S., investments in HE are highly complex.
 - Mounting evidence suggests suboptimal enrollment and financing decisions.

Some examples

- Academic undermatch of low income – high achieving students.
- Some students decline subsidized federal loans.
- Some students do not borrow federal loans but carry high levels of credit card debt.

Research Question 1

To what extent do low-income students understand and take into consideration the financial aspects of their higher education?

Data

- Survey conducted to first time recipients of grants and interest-free loans from the Scholarship Foundation of St. Louis (SF).
- Selection criteria: financial need, academic performance and character.
- Most students are incoming college freshmen.
- Survey data is from the period 2012-2013.

Academic Performance in High School

	Application Cycle			All
	Jan - Apr 2012	Aug - Nov 2012	Jan - Apr 2013	
ACT score	23	22	23	23
HS GPA	3.45	3.30	3.44	3.43
HS Math GPA	3.05	2.91	3.05	3.04
Academic recognition	0.67	0.63	0.77	0.71
N	153	41	132	326

Exposure to Financial Education and Financial Experiences

	Application Cycle			All
	Jan - Apr 2012	Aug - Nov 2012	Jan - Apr 2013	
Took Personal Finance in HS	0.85	0.88	0.85	0.85
Grade in Personal Finance	3.63	3.62	3.68	3.65
Grade = A in Personal Finance	0.72	0.71	0.71	0.71
Entrance Counseling for Federal Loans	0.40	0.84	0.37	0.43
Working Experience	0.55	0.78	0.56	0.58
First college attendant	0.32	0.37	0.37	0.35
N	153	41	132	326

Main Results

- 1 out of 3 has ever tried to determine their level of income after earning their degree.
- 1 out of 4 correctly ranks the cost of broad financing sources that are relevant to them.
- 1 out of 4 understands that foregone income is one of the cost of one extra year in college.

Financial Literacy and high school performance

	ACT		GPA	
	<23	>23	<3.4	>3.4
Future Income	0.28	0.39	0.38	0.27
Cost Comparison	0.19	0.29	0.27	0.21
Foregone income is a cost of enrollment	0.25	0.27	0.20	0.29

Financial literacy and exposure to financial education

	Entrance Counseling for Federal Loans		Passed Personal Finance Class with an "A"	
	No	Yes	No	Yes
Future Income	0.28	0.40	0.28	0.32
Cost Comparison	0.24	0.22	0.26	0.25
Foregone income is a cost of enrollment	0.29	0.20	0.17	0.25

Contents of personal finance class taken in high school

	%
(a) Credit Cards	0.77
(b) Savings and Credit Accounts	0.87
(c) Budgeting	0.85
(d) Financing of higher education	0.34
(e) Federal Loans	0.36
(f) Employment opportunities	0.53
(d) & (f)	0.26
(d) & (e) & (f)	0.20

FL and contents of personal finance class

	Financing of HE		Employment Perspectives		Federal Loans	
	No	Yes	No	Yes	No	Yes
Future Income	0.29	0.39	0.29	0.35	0.31	0.33
Cost Comparison	0.21	0.25	0.18	0.26	0.21	0.26
Foregone income is a cost of enrollment	0.23	0.28	0.22	0.26	0.28	0.18

Potential reasons for the low level of financial literacy

- Financial education (FE) programs do not incentive students to think about costs and benefits of college.
- Students have a limited ability to recall.
- Non-pecuniary considerations outweigh the financial aspects of higher education.

Research Question 2

Does FE on the financial aspects of HE affect academic performance and the ability to receive financial aid?

Hypotheses

1. FE increases academic effort (and GPA):
 - Helps to internalize the opportunity cost of enrollment.
 - Saliency of economic benefits of good academic performance (merit-based aid).
2. FE increases the probability that students receive aid from the SF for a second year.
 - Saliency of the cost of different sources of financing.

Experimental Design

- Randomized controlled trial (RCT).

Duration	Treatment	Control
1 hour	Orientation session about financial aid and other services provided by the SF.	
10 minutes	Break	
1 hour	Financial literacy workshop	

Randomization

	Control	Treatment	T - C
ACT score	22.47	23.20	0.73
HS GPA	3.45	3.46	0.01
HS Math GPA	3.01	3.07	0.06
Received any recognition	0.69	0.67	-0.02
Personal Finance in HS	0.90	0.81	-0.10
Grade in Personal Finance	3.66	3.64	-0.02
Grade = A in Personal Finance	0.73	0.74	0.01
Working Experience	0.55	0.56	0.01
First member of the family who a	0.35	0.29	-0.06
N	78	73	

Effect of Financial Literacy Workshop

	Treatment	Control	Difference (Treat - Control)	P-value
College GPA	3.21	3.00	0.21	15%
% Receive financial aid from the SF for a second year.	0.78	0.67	0.11	25%

- Notes:
 - Sample: students who were eligible to renew their award for a second year and participated in the study (treatment or control group).
 - P-value is the probability that the effect of the financial literacy workshop on the outcome of interest is zero.
 - These results accounts for non compliance with the initial assignment into orientation session.

Discussion

- Prior research shows small or no effects of FE on financial literacy and decision making.
- Intuition for positive effects:
 - FE on a timely decisions: use of time and financial aid.
 - Large stakes at play.
 - FE was useful regardless of student circumstances and preferences.

Conclusion

- Most students in the sample do not understand and take into consideration key financial aspects of higher education.
 - Future income.
 - Cost comparison of financing sources.
 - Opportunity cost of enrollment
- FE can affect academic performance in college and ability to receive financial aid.

Recommendations for Default Prevention

Help students to understand the pros and cons of alternative uses of their time

- Study
- Work
- Leisure
- Search for financial aid
- Note: students have limited attention.

Examples

- Grants and scholarships are free money.
- Cost difference between \$1,000 in federal loans vs. scholarships is more than \$1,000.
- \$1,000 scholarship = 125 hours of paid jobs (@ \$8 per hour).
- One year in college = one year without a job.

Debt – Work Trade-Off

- Paid jobs can reduce borrowing needs but at the cost of compromising academic progress.
- Less debt is not always good for students.
- One size does not fit all.

Financial Education Research

1. Identify financial mistakes.
 2. Conduct impact evaluations of financial education interventions.
- Without 1 and 2, there is not way to understand the needs for financial education and the effectiveness of different interventions.

THANK YOU