

Evaluating Experiential Financial Capability Education: A Field Study of My Classroom Economy

*Cherry Blossom Financial Education Institute
April 2017*

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Motivation

- Existing research suggests that experiential learning is a promising means of building positive financial attitudes, skills, and habits (“financial socialization”).
- Elementary-school-based programs have several potential advantages:
 - Reach *all* children
 - Counteract misinformation received elsewhere
 - Establish positive norms before bad habits can take hold (Schug & Walstad, 1991)

My Classroom Economy

- A K-12 classroom management tool involving a simulated economy (our focus: upper elementary)
- Materials are free (underwritten by Vanguard and available at myclassroomeconomy.org).
- An experiential approach that contrasts with more formal, curriculum-based programs
 - Greater focus on behaviors
 - Requires less teacher training
 - Highly customizable

My Classroom Economy (cont'd)

- Students learn through repeated practice:
 - Earning classroom currency for performing jobs
 - Managing expenses, including paying rent for (or purchasing) their desks
 - Earning bonuses or incurring fines
 - Making spending decisions at classroom auctions and/or stores

Evaluation Implementation

- Partnership with the School District of Palm Beach County, Florida
- Roughly 2000 students, primarily in grades 4 and 5 (ages 8 to 11)
- 115 classrooms (24 schools)
- Schools randomly assigned to treatment or control
 - Treatment group began My Classroom Economy (MCE) at the beginning of the 2015-16 school year.
 - Control group began MCE in the second trimester.

Evaluation Implementation (cont'd)

- 3-hour training sessions for teachers
- Provided materials and funding for classroom stores
- Student surveys
 - Administered at the beginning and end of the first trimester (August and November)
 - Examine changes in a set of outcomes related to financial capability
- Teacher and parent surveys administered in November

Outcome Measures

- Six categories based on prior work (pre-tested)
 - Financial knowledge [13-item quiz]
 - Budgeting behavior [5-item scale]
 - Planning behavior [4-item scale]
 - Self-control [5-item scale]
 - Financial socialization [2-item scale]
 - Economic experiences [5-item scale]
- Administrative data on student grades and standards

Sample Demographics

	All	MCE	Control	Sig
Age	9.28	8.98	9.49	***
% White (non-Latino)	41%	37%	47%	***
Female	50%	51%	48%	
ESL Parent	32%	36%	26%	**
Number of Students	1,972	1,187	785	

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Model

$$Y_{i,t} - Y_{i,t-1} = \alpha + \beta MCE_{i,t} + \delta Y_{i,t-1} + \gamma X_{i,t-1} + \varepsilon_{i,t}$$

- $Y_{i,t}$ is the outcome of interest for student i at time t .
 - Item response theory (IRT) is used to compute $Y_{i,t}$ for financial knowledge.
 - For all other outcomes, $Y_{i,t}$ is a normalized scale of responses (0 to 1 for econ exp and 1 to 5 o/w).
- $X_{i,t-1}$ includes student i 's race, gender, age, and score on prior year's standardized math test (numeracy).
- β is the coefficient of interest.

Financial Knowledge

Sample questions (all multiple choice or T/F)

- A plan for spending money is called a _____.
- Jill had \$50 in her checking account. She made a withdrawal of \$10 and a deposit of \$20. What is Jill's balance in her checking account?

Outcome	Coeff	95% CI	Mean	% Chg	Sigma Units
Knowledge	2.51	[1.01,4.01]	50.00	5.0%	0.13

Results are notable because MCE does not “teach” financial topics, but simply provides experiences.

Budgeting, Socialization, & Experiences

Sample questions (5-point scales or Y/N)

- How good are you at keeping track of what you spend your money on? (budgeting)
- How often do you talk to your family about financial issues? (financial socialization)
- Do you currently have a bank account in your own name? (economic experiences)

Outcome	Coeff	95% CI	Mean	% Chg	Sigma Units
Budget	0.09	[0.02,0.15]	3.56	2.4%	0.11
Fin Soc	0.20	[0.10,0.30]	2.50	8.0%	0.19
Econ Exp	0.05	[0.03,0.08]	0.52	10.4%	0.21

Self-Control and Planning

Sample questions (5-point scales)

- How often do you set goals for yourself? (propensity to plan)
- How hard is it for you to avoid spending any money you have right away? (self-control)

Outcome	Coeff	95% CI	Mean	% Chg	Sigma Units
Planning	0.00	[-0.08,0.07]	3.42	-0.1%	0.00
Control	-0.02	[-0.09,0.04]	3.52	-0.7%	-0.03

Broader measures (less financially focused) and may require longer exposure

Variation by Sub-Groups

- Also add interaction terms to examine MCE's incremental effects based on
 - Student's gender
 - Student's numeracy (math score from 2014 standardized test)
 - School SES (fraction free or reduced lunch)
 - Parent/guardian ESL
- No statistically significant variation except for socialization: Girl (+) and SES (-)

Student Grades and Standards Met

- Students were assessed on up to 16 social studies (SS) standards, including 2 economics standards, and on up to 12 math standards.
- We also have third-trimester grades in SS and math and scores on a standardized math test.
- Early analysis indicates that students in the MCE group satisfy more SS and econ standards than students in two different control groups. Also some evidence of improved performance in math.

Teachers' and Parents' Feedback

- Teachers feel comfortable using the program even if they aren't comfortable teaching personal finance.
- 95% of teachers reported that they planned to continue the program. "GREAT program, my class loved it, eye-opener for students about their future."
- Treatment-group parents were aware that students were learning about money at school. => Potential to increase family engagement

Summary

- Statistically significant gains in financial knowledge, budgeting, financial socialization, and experiences after only 10 weeks of an experiential program
- Knowledge gains similar to more traditional financial education programs
- Early analysis suggestive of other academic gains
- High marks from teachers; relatively low barriers to implementation; aids classroom management
- Promising component of a comprehensive effort?