

Financial Education Field Studies: Promises and Pitfalls

J. Michael Collins

University of Wisconsin-Madison

April 4, 2014

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$%\$! IRB

Lesson #4
Consent

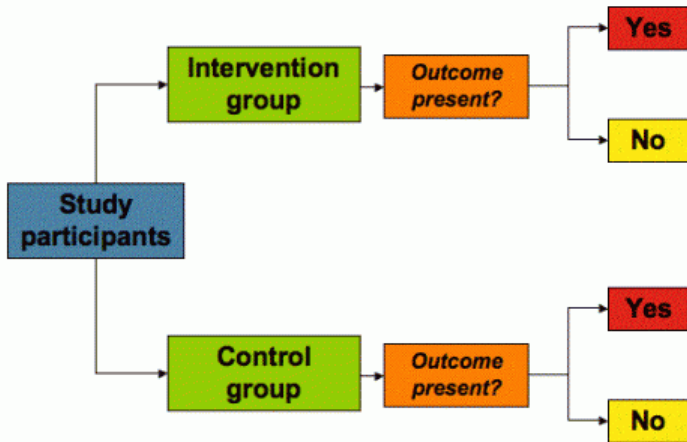
Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

Gold Standard of Causal Inference: RCT Study Design



Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$%\$! IRB

Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

But in the Real World: Many Complications, Especially With Vulnerable Populations

Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$%\$! IRB

Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

3 / 25

- Implementation problems
 - Fidelity to program model
 - Crossovers
- Not enough time for impacts to accrue
- Attrition
- Valid measures

Why Don't We Do This More Often? A Few Examples of Completed Studies

Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$\$%! IRB

Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

4 / 25

- 5-course Financial Course for 4-5th graders & Bank Access
- 5-course Financial Course for low-income women in public housing
- 10 hour online course for credit union employees
- 10 hour online course for public school employees
- Financial Counseling & Bank Access in job training program
- Online planning module and follow-ups for low-income homebuyers

...and starting new project...

Lesson #1 Have to Start with Great Programs

Financial
Education
Field Studies:
Promises and
Pitfalls

Operations Management

- Well-designed programs
- Well-run programs
- Demonstrated competence



Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$\$%! IRB

Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

Lesson #2: Say No to Most Evaluation Opportunities

Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$%\$! IRB

Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

6 / 25

- Generally should **not** evaluate, unless...
 - Sufficient size
 - Replication opportunity
 - Funding available
 - Will have policy implications
- Evaluations should be rare and purposeful
 - Underestimate costs: time, money and opportunity
- **Must be open to no effect/null result as an outcome**

Lesson #3 Don't Underestimate Human Subjects Approval - IRB, OMB

Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$%\$! IRB

Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

- Vulnerable populations; data related to finances
- Informed consent—in writing—is the main constraint
- Coercion to participate—anything not fully voluntary
- No information can be collected without cause or approval
- Require risks (always some) and benefits (usually none)
- Parents/guardians and child assent adds to complications

Yes—uphold highest standards...But it can change the nature of projects.

Lesson #4: Getting Consent

Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$\$%! IRB

Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

8 / 25

- 1 Welcome to this program: Do you want to enroll?
(yes...? Great!)
- 2 By the way, will you take part in this study?: Will you sign this 2 page small print form listing a number of risks and rights? (yes...? Great!)
- 3 Oh, and also fill out all these surveys today? (Ok...? Great!) ...and one more in a year. You are totally going to cooperate, right? (yes...? Great!)

Which participants will say: "yes-yes-yes"?

External validity problem.

Who seeks consent matters.

Lesson #5: Program Take Up Often Low

Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$\$! IRB

Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

- Intent to Treat (ITT) = best measure
 - Assignment to program (treatment) was random; uncorrelated with outcomes (exogenous)
- Treatment on Treated (TOT) = biased measure
 - Take up of program not random; correlated with outcomes (endogenous)
 - Can use assignment to predict take up as one estimate
- Average treatment effects are are dampened by nonparticipants
 - Teaspoon in a bathtub.

What if Nobody Comes? Study of School Employees

Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$%\$! IRB

Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

- 1,369 school employees (27 schools/facilities)
- Randomly offered to online financial education
 - 717 individuals offered treatment (online modules)
 - 121 individuals participated (16.9%)
 - 55 individuals completed all 5 modules
- Survey (no administrative data thanks to IRB) was 4-wave personalized mail survey, \$5 pre-incentive, iPad incentive
- 746 employees responded (52%)
 - 361 individuals from the treatment group
 - **88 who took at least part of online course**

Lesson #6: As Sample Size Declines, so do Detectable Effects

Effect Sizes Hampered by Low Power

- Small sample + Noisy measures + Small effects of the intervention (or rare events) + And if you care about sub-group effects = Problem
- Lose 30% due to consent, 30% to attrition, plus partial take up...sample dwindles fast.

Need larger sample than expected.

- Pre-Post design—2 responses per subject (t1 & t2)
- Post only has advantages but cannot observe dropouts
- Longitudinal design (3+ periods) magnifies problem

Small Sample; Big Troubles

Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$%\$! IRB

Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

- RCT: Financial education for low-income women in subsidized housing
- Incentives = \$100 + transport, meals & child care
 - 181 people in program
 - 144 consented to participate: 73 treatment / 71 control
 - Waitlist / cohort design: assigned to 2006 vs. 2007
- Observed assignment, completion, and compliance
 - Attrition & Compliance was not random
 - Correlated with single status, rent \$, tenant \$ portion, child support

Lesson #6: Good Measures are Hard to Find

Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$%\$! IRB

Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

13 / 25

- What outcomes matter for low-income/underemployed?
 - Often not technical but basic economic concepts
- Self reports—subjective vs. objective
- Administrative Data - accessibility
- Survey Data - valid & reliable questions
- Matched Data - more noise

With large error terms expect more null findings (unstable estimates)

Be Careful About What is the 'Right' Outcome.

Financial Education Field Studies: Promises and Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$\$! IRB

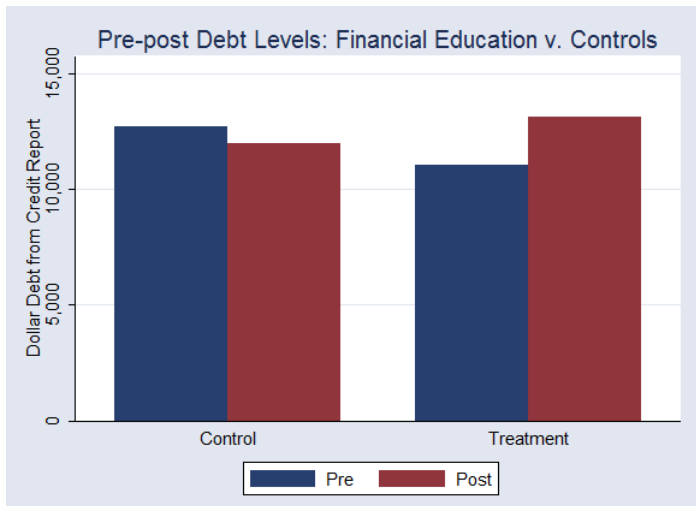
Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions



Collins (2013). The impacts of mandatory financial education: Evidence from a randomized field study (JEB0)

Credit Union Employees: Change in Self Reported Behaviors?

Financial Education Field Studies: Promises and Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$\$! IRB

Lesson #4
Consent

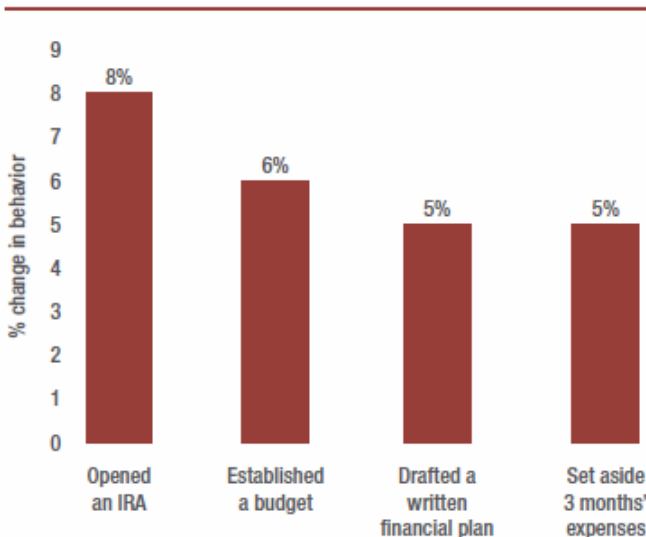
Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

15 / 25



High Variance—Estimated Effects: Deposits

Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$\$%! IRB

Lesson #4
Consent

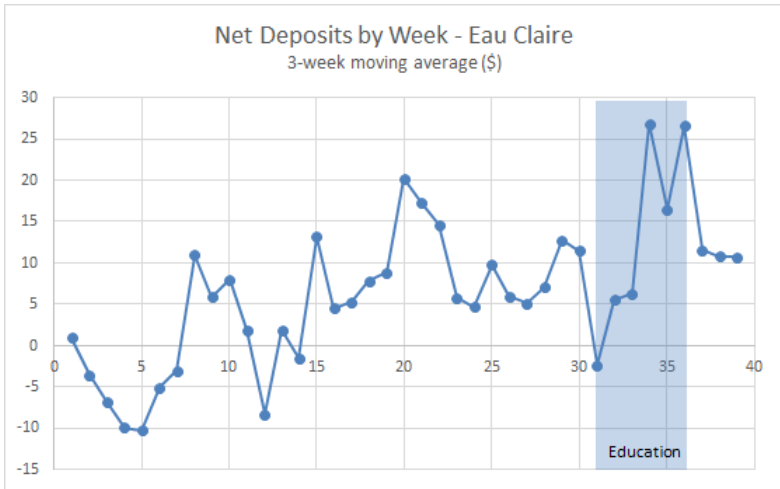
Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

16 / 25



Estimated Effects of Counseling Integrated into Job Training

Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$\$! IRB

Lesson #4
Consent

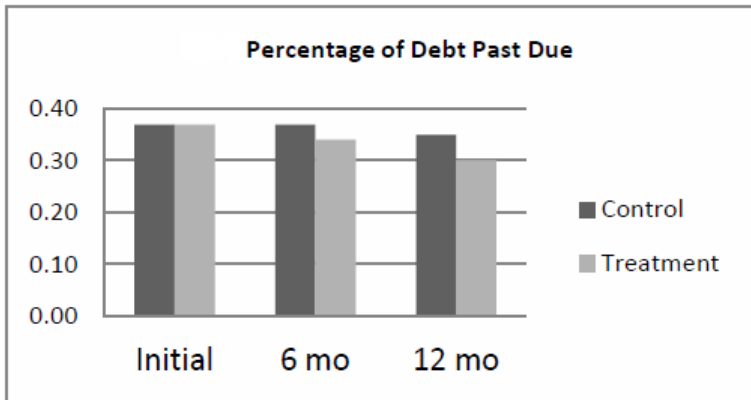
Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

17/25



Collins (2014). NYC POP Evaluation.

Ideal Financial Education Study?

Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$%\$! IRB

Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

- 1 Randomize offer of education with strong incentives to participate
 - Need strong take up and low attrition
- 2 Longitudinal - short run intentions, longer run behaviors
- 3 Self report *and* administrative data
- 4 Self-assessed knowledge and objective knowledge
 - include 'don't know'
- 5 Validated measures of well-being, stress, confidence
- 6 Consistent Implementation (perhaps variations in pedagogy or mode)

Randomized Designs vs. Others

Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$%\$! IRB

Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

RCTs are costly & may not represent generalizable results

- Creative solutions are needed: waitlists, cohorts, variations in treatment, etc. to estimate effects based on what can be observed
- But counterfactual likely biased in unobserved ways
- Often requires larger samples
- Triangulate effect size estimates (and directions)

All approaches have shortcomings. Need a range of high-quality studies.

- Take time for slow and incremental work—from design to measures to analysis
- Visit sites. Talk to clients and staff. Focus groups / interviews.
- Establish relevance with champions
- Focus on fidelity of treatment and document all variations in implementation
- Develop a battery of standardized measures
- Plan ahead on attrition & consent bias

“Questions Before Beginning Field Studies”

Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$%\$! IRB

Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

21 / 25

- 1 * Is there a clearly defined, measurable main outcome?
- 2 * Do you have a strong relationship with sites(s)?
- 3 * Can the site produce prototype (or current) data?
- 4 * Are you immersed into operations? (no? need process study)

Planning:

- Timeline: IRB, RSP and data collection
- Sample size: Estimate MDE assuming worst case on consent, take-up and drop outs
- Money: (and PI/grad student time/attention)

'Field' Has Many New & Exciting Innovations

Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$%\$! IRB

Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

- Use of technology—convenience, costs, accessibility
- Planning/advice/counseling...from budget to retirement
- Knowledge + focus on behavior and accountability
- Addressing limited attention and self-control issues
- Connected to products: prepaid debit cards, insurance, electronic payments, smartphone wallet, etc

But, Interventions Have Limits: Realistic Expectations

Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$%\$! IRB

Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions



Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$\$%! IRB

Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions

24 / 25

J. Michael Collins
jmcollins @ wisc.edu
608.616.0369

cfs.wisc.edu

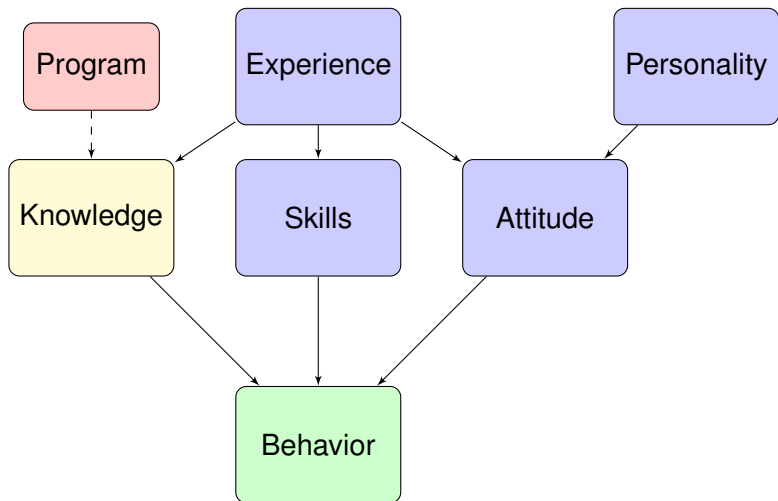
ssc.wisc.edu/~jmcollin/

Twitter: @jmcollinswisc



THE UNIVERSITY
of
WISCONSIN
MADISON

Education Programs in Context



Financial
Education
Field Studies:
Promises and
Pitfalls

Lesson #1
Program

Lesson #2
Say No

Lesson #3
\$%! IRB

Lesson #4
Consent

Lesson #5
Take Up

Lesson #6
n=?

Lesson #6
Data

Conclusions