Improving Financial Literacy and Capability: What Works?

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Building Financial Literacy

For K-8 Pre-Service Teachers and Adult Learners

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Target population: 16-24 and/or in college

Goals for this project:

- Create rich curriculum materials for use with this age group that can be used easily in the classroom
- Identify opportunities for using them, especially with pre-service teachers
- Test them out (formatively) in various settings
- Promote their use (and therefore the teaching of financial concepts) in as many settings as possible
- Understand what research questions need to be answered for this demographic

Curriculum materials: content

Freestanding modules on the following topics:

- How much will I take home? Understanding your paystub.
- Paddle Your Canoe. Budgeting.
- Understanding Credit Card Offers
- Jetta or Jaguar? Buying your ideal car
- Buy, Rent, or Live in a Tent? Mortgages and house purchase.
- Investing in Savings and Bonds
- Investing in the Stock Market
- Investing in Mutual Funds
- Your Parents Will Move In With You! How much needed to retire.
- Saving For Retirement
- NEW! Forthcoming module on taxes.

Curriculum materials: format

Every module includes most of these:

- Slides for presentation, including embedded videos and links, delivered on the web and free to use.
- Pre and post tests on financial and numerical concepts in the module.
- Detailed instructor notes with ideas for quantitative assignments, writing assignments, and other educational activities
- Notes especially for future teachers and those who teach them
- Spreadsheets for doing realistic calculations and exploring the future impact of financial decisions
- Case studies of (fictional) individuals so that students can put themselves in the position of financial advisors

Curriculum materials: emphasis

Modules are designed to:

- **Emphasize quantitative aspects of financial decisions**
- **Use the language of the financial world, the language of mathematics, and the language of ordinary people**
- **Give instructors many options for how to use them**
- **Appeal to college age adults**
- **Address the needs of those doing something for the first time, such as getting a first credit card, first job, first car**
- **Treat the learner as an adult, in particular by imitating the business school case study approach and introducing the use of spreadsheets.**

Curriculum materials: other resources

In addition to these modules we also developed:

- **A complete textbook in developmental math (for college students) focussing on financial examples, available free online.**

- **A series of videos of mini-case studies for use in classrooms and faculty development workshops, available free online, with several more NEW videos to be added this summer.**

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Opportunities for financial education, using the Dartmouth modules

These are some of the best places to use these modules:

- As part of a quantitative reasoning or other math course
- As part of a financial literacy course
- As part of faculty development in financial education at high school and college levels
- In conjunction with financial education games, such as
- Ne$tEgg, for informal financial education
- At moments when life changes, such as for graduating seniors

Where have materials been tried?

- Mass Bay Community College (inserted into a math course)
- Bowdoin College (part of a quantitative reasoning course)
- Teacher workshops at Champlain College (for high school teachers)
- As indirect inspiration for three "senior survival" lectures at Dartmouth College
- NEW These will be incorporated into a quantitative reasoning course at Hollins University next academic year, in conjunction with Ne$tEgg

And how did it go? Very well, in general.

- Mass Bay Community College (inserted into a math course)
  - The instructor reported that the module she used was quite good.
- Bowdoin College (part of a quantitative reasoning course)
  - High correlation between performance on homework based on modules and later quiz results.
- Teacher workshops at Champlain College (for high school teachers)
  - Good engagement with the case studies.
- As indirect inspiration for three "senior survival" lectures at Dartmouth College
  - Good voluntary attendance, good evaluation reports, will be repeated next year (decision of alumni relations).

Major remaining task: how to get them into use?

Identify potential targets and work with existing structures:

- Quantitative reasoning programs, instructors, and requirements at colleges throughout the U.S.
  - Hope to complete survey of 3 small states by the end of summer.
- Teacher workshops funded and localized through identified programs/centers
- Other alumni organizations at other institutions
  - Building good relations with alumni through financial literacy
- Through collaboration with Ne$tEgg
  - Financial literacy in the workplace, at elementary schools, etc. They do outreach.

These activities require funding.

Research questions that have arisen:

- What is the state of quantitative reasoning programs in the U.S., how can we reach and interact with them, what are their needs?
  - Hope to complete survey of 3 small states by the end of summer. Should maintain a database of all QR centers/programs/requirements/courses in US, as these are mostly likely to be successful targets.
- What is the "natural" learning progression for FL?
  - Do people need to learn the math first, or is it better to learn the math in context. And if so, what context works best? We propose a randomized clinical trial of a large population of students, and would like to collaborate with colleagues at the University of Wyoming to answer this.
- How can we improve the impact and appeal of the content of our curriculum by integrating them with a financial game such as Ne$tEgg?
  - We felt there was great potential here but a lot of development is needed.

These activities require funding.

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