Innovation in Financial Education:

Financial Entertainment

November 18, 2010

First Annual Conference of the Financial Literacy Research Consortium
New Insights and Advances in Financial Literacy: Translation, Dissemination, Change

Washington DC
“How confident are you that you could come up with $2,000 USD if an unexpected need arose within the next month?”

- I don’t know
- I’m certain I could not raise full of it
- I could probably not come up with it
- I could probably come up with it
- I’m certain I could come up with it

Source: forthcoming paper from Tufano, Lusardi & Schneider
## Financial Education Poses Challenges

<table>
<thead>
<tr>
<th>Supply</th>
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<tr>
<td>Limited availability</td>
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## Financial Education Poses Challenges

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<tr>
<th>Supply</th>
<th>Demand</th>
<th>Impact</th>
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<tr>
<td>• Limited availability</td>
<td>• Doesn’t “taste good” (not fun)</td>
<td>• Does it work? (change behavior?)</td>
</tr>
<tr>
<td>• Expensive to deliver</td>
<td>• Consumers may not know they need it</td>
<td>• Does impact last?</td>
</tr>
<tr>
<td></td>
<td>• Facing finances produces anxiety</td>
<td></td>
</tr>
</tbody>
</table>

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A Different Approach

D2D’s vision is *Financial Entertainment*

Taking cues from business and entertainment, we need to work with and for consumers in the development of engaging, interactive new media that teach them how to better manage their money.

Financial Entertainment characteristics:

- engaging vs. earnest
- targeted vs. comprehensive
- interactive vs. static
- accessible vs. restricted

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Why Games?

- Games teach as adults learn:
  - Learn-by-doing (trial & error)
  - Instant feedback / reward
  - Repetition
  - Pride of accomplishment (puzzle solved!)
  - Social dimension (share scores, strategies)
Why Casual Video Games?

- **Popular**
  - 72% of Americans play video games
  - *FarmVille* has over 69 million active users

- **Accessible**
  - Casual games can be learned quickly, played for minutes or hours
  - Inexpensive form of entertainment
  - Play on mobile devices growing fast

- **Non-traditional player**
  - Average social gamer is 43-year-old female
  - 74% of casual game buyers are women

Sources: NPD Group, August, 2008; ESA, 2009; Tech-Crunch
A Library of Financial Literacy Video Games

An example of financial entertainment: a library of casual video games, each teaching simple financial lessons:

+ Wise use of credit & debit cards
+ Basics of budgeting
+ Importance of saving
+ How to manage loans
+ Tips to avoid expensive pitfalls
Our Games

Library of games

- 2 titles on financialentertainment.org
  - Celebrity Calamity: Manage Credit & Debt
  - Groove Nation: Dance Budget Game
- 2 to be released in November
  - Bite Club: Vampire Retirement Savings
  - Farm Blitz: Manage Resources to Build Savings
- 5th title in early 2011
Innovative Game Development Process

- At each development milestone, we probe for:
  - Fun
  - Learning
  - Engagement

Play-Test, Austin, TX (2008)
Case Study: Farm Blitz

- Players take on farmer role
  - Line up crops to earn income
  - Borrow through “Rabbit loans”
  - Buy trees (savings) to prepare for future storms

- After each round players pay down debt and/or save money

- Game goal
  - Accrue cash
  - Plant trees (long-term savings)
  - Don’t let rabbits (debt) run amok

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Farm Blitz Three Core Learning Objectives

• High-Interest, Short-Term Debt
  – Like many short-term debt products, “rabbit” interest rate is high
  – More rabbits living on farm, more quickly more rabbits will accrue
  – Just as high interest debt destroys financial reserves, rabbits destroy earnings by eating crops before harvest

• Low-Interest, Long-Term Savings
  – Like savings accounts, trees grow through compound interest with a relatively low rate
  – Like US Savings Bond, trees bought in dollar denominations and redeemed at their value plus interest earned

• Compounding Interest, Negative and Positive
Reaching Consumers via Channels & Partners

- Channels & Partners
  + **Financial institutions** (banks, credit unions, investment firms)
  + **Private Employers** (retailers, hotels, fast food)
  + **Schools / Universities** (community colleges)
  + **Government**: (e.g. Massachusetts state-wide tournament)
  + **NGOs** (e.g. youth, job training, asset building programs)
  + **Military** (e.g. Fort Hood tournament for troops & their families)
Distribution Pilots

- Objectives
  - Test channels, partners, approaches to reach players

- How
  - Financial Entertainment “portal”
  - Tailored to partner
  - Various social marketing strategies

- Results
  - In six+ months, ~60-70K players, ~7k registrants
  - Average time on game page: over 20 minutes

- Example
  - Office of Financial Education at MA Treasurer’s Office
  - Targeted outreach to State Employees, Colleges & Community Colleges
  - Tournament, prizes for top players, public awards ceremony
Does it Work? Evaluation

- Evaluation is essential
  - D2D builds assessment into its product development process
  - Each game has learning objectives & behavior change goals

- Following development, games are tested with small samples of low-income women across the US:
  - Financial **skills self-confidence**
  - **Knowledge** of key teaching concepts
  - Qualitative: **engagement, enthusiasm, empowerment**

- Long-term objective: measure impact of games on behavior and the building of financial capabilities
# Farm Blitz Impact on Player Confidence

## Preliminary Results in Financial Skills Self-Confidence in Areas Game Teaches

<table>
<thead>
<tr>
<th>Rate your degree of <strong>confidence</strong> in doing the following (1 to 5):</th>
<th>PRE</th>
<th>POST</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not take on more debt than I can handle.</td>
<td>3.37</td>
<td>3.85</td>
<td>14%</td>
</tr>
<tr>
<td>Start saving money.</td>
<td>3.73</td>
<td>4.12</td>
<td>10%</td>
</tr>
<tr>
<td>Follow the directions of my boss or supervisor.</td>
<td>4.68</td>
<td>4.68</td>
<td>0%</td>
</tr>
<tr>
<td>Avoid finance charges.</td>
<td>3.56</td>
<td>3.76</td>
<td>5%</td>
</tr>
<tr>
<td>Pay my debt on a regular basis.</td>
<td>3.59</td>
<td>4.07</td>
<td>14%</td>
</tr>
<tr>
<td>Save money regularly.</td>
<td>3.24</td>
<td>3.93</td>
<td>21%</td>
</tr>
<tr>
<td>Manage my finances.</td>
<td>3.76</td>
<td>3.93</td>
<td>5%</td>
</tr>
<tr>
<td>Perform job-related tasks.</td>
<td>4.56</td>
<td>4.44</td>
<td>-3%</td>
</tr>
<tr>
<td>Use savings to pay off debt.</td>
<td>3.49</td>
<td>3.95</td>
<td>13%</td>
</tr>
<tr>
<td>Allow savings to grow by not taking it out.</td>
<td>2.93</td>
<td>4.05</td>
<td>38%</td>
</tr>
<tr>
<td>Avoid high interest debt.</td>
<td>3.61</td>
<td>4.02</td>
<td>11%</td>
</tr>
<tr>
<td>Save for financial emergencies.</td>
<td>3.20</td>
<td>4.05</td>
<td>27%</td>
</tr>
</tbody>
</table>

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### Farm Blitz Impact on Player Knowledge

<table>
<thead>
<tr>
<th>Knowledge (True/False Questions)</th>
<th>% Correct PRE</th>
<th>% Correct POST</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>The interest rate (sometimes called APR) determines how fast money will grow. (T)</td>
<td>41%</td>
<td>66%</td>
<td>59%</td>
</tr>
<tr>
<td>Over long periods of time, the amount of money earned by compound interest can exceed the amount of money originally invested. (T)</td>
<td>68%</td>
<td>90%</td>
<td>32%</td>
</tr>
<tr>
<td>Some banks have penalties for taking money from a savings account. (T)</td>
<td>51%</td>
<td>63%</td>
<td>24%</td>
</tr>
<tr>
<td>A loan (debt) with a 3% interest rate is a better deal than a loan with a 20% interest rate. (T)</td>
<td>71%</td>
<td>90%</td>
<td>28%</td>
</tr>
<tr>
<td>The length of time your savings is left to grow is one of the most important factors in determining how much your savings will to be worth in the future. (T)</td>
<td>78%</td>
<td>90%</td>
<td>16%</td>
</tr>
<tr>
<td>Finance charges on debt typically grow faster than interest earned on savings. (T)</td>
<td>59%</td>
<td>85%</td>
<td>46%</td>
</tr>
<tr>
<td>Money in your savings account should not be used if you have a financial emergency. (F)</td>
<td>71%</td>
<td>83%</td>
<td>17%</td>
</tr>
<tr>
<td>Finance charges are fees charged to the borrower to use someone else's money. (T)</td>
<td>44%</td>
<td>73%</td>
<td>67%</td>
</tr>
<tr>
<td>Compound interest is when your interest earns interest. (T)</td>
<td>54%</td>
<td>83%</td>
<td>55%</td>
</tr>
</tbody>
</table>

Source: Questions adapted from the NEFE Evaluation Toolkit.
Summary and Conclusions

• Americans face basic financial challenges, like establishing emergency savings
  – Financial education has not yet proven an effective solution and currently faces impediments to scale
• D2D is working on financial entertainment as a remedy to this situation
  – Video games have positive impacts on learning
• As part of the FLC, D2D has created two games: *Farm Blitz* and *Bite Club*
  – Both have positive measured impact in preliminary testing
• Further evaluation is necessary
Next Steps

• As part of the FLC, D2D will be pursuing two projects this year
  
  – Reaching non-English-speaking adults
  
  – Creating a tax-time savings game and deploying it as part of a broader social media strategy

• Also, D2D continues to pilot distribution testing in a variety of channels while exploring scale strategies
Doorways to Dreams (D2D) Fund

- Founded in 2000 by Harvard Business School Professor Peter Tufano
- Non-profit 501(c)3 headquartered in Roxbury, Massachusetts
- Mission: increase access to financial services, especially asset-building tools, for working-poor Americans
- Focus on innovation, scale, and real-world testing
For More Information

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