

Understanding What Works: Case Studies in Financial Education*

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Abstract

This report provides a review of case studies of financial education programs, primarily throughout Europe and the United States, in order to examine what makes such programs effective. We focus on providing summaries of financial education programs that have been rigorously tested in the field. We look at programs in four key venues: schools, workplaces, communities, and the Internet. Using evidence from these case studies, we offer a research-backed set of recommendations for developing effective, scalable, practical, and cost-effective programs in each venue.

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Index

I.	Introduction.....	2
II.	Four Venues for Financial Education.....	3
III.	Financial Education in Schools.....	4
IV.	School-based Financial Education In-Focus.....	5
	A. Case Study 1: National Financial Education Plan: Spain	5
	B. Case Study 2: MIUR Financial Education Program: Italy	6
	C. Case Study 3: “My Finance Coach”: Germany.....	7
	D. Case Study 4: “I Can Manage My Money”: Turkey.....	8
	E. Case Study 5: State-Mandated Financial Education: United States.....	9
	F. Additional Evidence: Parent and Student Interventions: Brazil.....	10
	G. Lessons Learned.....	10
V.	Financial Education in Workplaces.....	12
VI.	Workplace Financial Education In-Focus.....	14
	A. Case Study 1: KPMG Peat Marwick Retirement Benefits Survey: United States.....	15
	B. Case Study 2: Various Employers: United States.....	15
	C. Case Study 3: University of Minnesota: United States.....	16
	D. Case Study 4: GlaxoSmithKline: United Kingdom.....	18
	E. Case Study 5: Staples Inc.: United States.....	18
	F. Additional Evidence: HERfinance: India.....	19
	G. Lessons Learned.....	20
VII.	Financial Education in Communities.....	22
VIII.	Community-based Financial Education Programs In-Focus.....	22
	A. Case Study 1: Museo del Risparmio: Italy.....	22
	B. Case Study 2: Museum of American Finance: United States.....	23
	C. Case Study 3: Save to Win™: United States.....	24
	D. Lessons Learned.....	25
IX.	Online Financial Education.....	26
X.	Online Financial Education In-Focus.....	27
	A. Case Study 1: Government Websites: New Zealand and United Kingdom.....	27
	B. Case Study 2: Supervisory Authority for Insurance and Pension Funds: Portugal.....	29
	C. Case Study 3: GFLEC Toolkit: United States.....	30
	D. Lessons Learned.....	30
XI.	Conclusion.....	32

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I. Introduction

Over the past few decades, financial education has become increasingly important, as individuals are becoming progressively more responsible for their own financial security. Governments, corporations, foundations, and other organizations around the world are investing more and more resources into developing new financial education programs to improve levels of financial literacy. One criticism that has been often put forward is that it is not clear “what works” in financial education; that is, not much evidence is available to help us know which methods are effective in improving financial literacy and, more important, in changing people’s behaviors. In some cases, this confusion has led to the conclusion that financial education “just doesn’t work” or is not worth investing in. However, as research increasingly shows, the effectiveness of financial education really depends on the context in which it is provided and on the methodological rigor of the teaching methods. For example, a recent study on high school financial education in the US shows that financial education courses are effective when there is a clear, rigorous mandate, and when resources are invested to support the training of the teachers. In states where these conditions are not met, financial education is not effective (Brown, Collins, Schmeiser, and Urban 2014).

Too many financial education programs are implemented ineffectively and have non-rigorous evaluation designs. In 2013, the OECD published a report titled “Evaluating Financial Education Programmes: Survey, Evidence, Policy Instruments, and Guidance” in which it describes surveys of 28 programs in 23 OECD countries, with analysis of their objectives and implementation methods. The analysis showed that most financial education programs have serious weaknesses, such as lack of clear objectives and use of outdated or ineffective materials, non-rigorous evaluation designs without control groups, not utilizing pre- and post-tests, relying

only on voluntary participation, and measuring success mainly as a function of participant satisfaction without actually measuring knowledge retention and changes in behavior.

In order to address the lack of understanding about what works in financial education, this report analyzes case studies from around the world detailing specific financial education programs in venues as different as the workplace, schools, community organizations, and the internet.¹ For each case study, we devote specific attention to identifying not only the effectiveness of the programs but also the strategies, methods, or practices that have proven to be effective. In order to provide a concise and relevant review, we have limited our case studies to those implemented in Europe and the United States; however, there are several noteworthy cases from other countries that are worth mentioning and have also been included.² When possible, we review only case studies that have undergone rigorous evaluation. As such, the evidence presented can be utilized by program designers to improve existing financial education programs and may serve as a guideline for the development of future programs.

II. Four Venues for Financial Education

The workplace, schools, community organizations, and the internet are four ideal channels for financial education programs. These venues ensure that programs are scalable, i.e., able to reach a large number of people, and target different audiences (nearly all citizens of developed countries will attend school, hold a job, belong to a community, and use the internet at some point in their lives). In particular, the workplace and schools are natural venues for financial education because of their connection to personal finances and general education. For the under- or

¹ Previous research (c.f. Fox, et. al 2000) and the OECD/INFE show that these four settings are the most important for financial education.

² To keep this review relevant and concise we have focused on case studies from Europe and the United States, but we have also included several case studies from other countries that have shown promising results. As such, this review should not be taken as an overview of all financial education programs throughout the world.

unemployed and poorly educated, community organizations may provide financial education that would otherwise be missed. Finally, given the ubiquity of the internet, online resources can do much to level the playing field and reach a large number of people at a low cost. While there are numerous other possible settings for financial education programs, including faith-based organizations and the military, these venues are not as scalable as schools, the workplace, community organizations, and the internet. As such, this report will focus on case studies and lessons learned from financial education programs implemented in these four venues.

III. Financial Education in Schools

Integration of financial education programs into school systems has been “recent and uneven” (OECD/INFE 2014, 7). Nevertheless, school-based financial education programs are more widespread and have been more extensively evaluated on an international scale compared to workplace financial education programs. High-quality studies in both Europe and the United States have provided valuable information about best practices in school-based financial education programs. Additionally, the incorporation of financial literacy into the Program for International Student Assessment (PISA)³ has boosted understanding of students’ financial capabilities around the world. Though PISA’s first round of financial literacy data was as recent as 2012, its reliability and comprehensiveness are transformative in assessing the financial capacities of youth on a global scale.

In the United States, uneven requirements and different implementations at the state level historically rendered evaluation of financial education programs in schools less reliable, usually with downwardly biased results. More recent studies have corrected for this by disaggregating

³ For more information on the PISA data (including the 2012 results) see: <http://www.oecd.org/pisa/aboutpisa/>

programs by intensity. For instance, Brown and others find that, in American states with stringent mandates, students have better financial attitudes and behaviors as compared to those in states without mandates or with lesser mandates. Consistent with international results, they find that rigorous financial education programs in schools have significantly positive outcomes on students' financial attitudes and behaviors (Brown, Collins, Schmeiser, and Urban 2014).

IV. School-Based Financial Education In-Focus

The following section analyzes case studies of five specific programs from Europe and the United States that were proven to work, as well as one additional case study from Brazil that showed promising results, and outlines the lessons that can be drawn from them.

A. CASE STUDY 1: National Financial Education Plan: Spain

Between February and May of 2013, students from 275 different secondary schools in Spain received financial education classes under the National Financial Education Plan. The program was based on a set of materials and resources meant to be taught over 10 hours that covered topics including but not limited to saving, budgeting, payment methods, banking relationships, and card and data protection. Hospido, Villanuevo, and Zamarro (2015) studied the impact of the course. To do so, they compared scores between pre- and post-tests for treatment and control groups. They found that financial literacy improved among participants by one-third of a standard deviation, a substantial increase given the program's duration (Hospido, Villanuevo, and Zamarro 2015, 2). The evaluation disaggregated various aspects of financial knowledge, which showed that students improved more on non-arithmetic financial questions, meaning the gains were not confined to or driven by development of quantitative skills (Hospido, Villanuevo, and Zamarro, 9–10). To conclude, improvement in student financial capabilities were not driven by

the development of quantitative capacities, but they were driven mostly by enhanced comprehension of banking relationships and budgeting (Hospido, Villanuevo, and Zamarro, 20). As such, practitioners should value financial education beyond its quantitative impact and should use curriculum that focuses on qualitative concepts in order to generate the largest impact.

B. CASE STUDY 2: MIUR Financial Education Program: Italy

The Bank of Italy and the Ministry of Education, University and Research, also known as MIUR, implemented financial education curricula in secondary schools in 2007.⁴ The year-long program was implemented in two consecutive years and focused on material deemed the most important for students: money and transactions, planning and managing finances, risk and rewards, and the financial landscape (Romagnoli and Trifilidis 2013, 14 & OECD 2012, 18). Romagnoli and Trifilidis examined the effect of the Bank of Italy's secondary school financial education program in their paper "Does Financial Education at School Work? Evidence from Italy." Under a pre-experimental framework, they evaluate the program's impacts using pre- and post-tests in voluntarily participating schools throughout Italy. The test results demonstrate financial knowledge of pupils improved over the course of the program (Romagnoli and Trifilidis 2013, 13). Additional follow-up tests showed that this financial knowledge was retained in subsequent years, so financial education is an investment with potentially high long-run impacts (Romagnoli and Trifilidis 2013, 18). Finally, the study observed gender differences in financial attitudes and knowledge, which is consistent with other international case studies (c.f., Lührmann, Serra-Garcia,

⁴ For an overview of the experimental program implemented by the MIUR, download: https://www.finlitedu.org/team-downloads/overall-tf/nairobi_2-2-4-trifilidis.pdf

and Winter 2012).⁵ Specifically, the MIUR program showed boys had better initial attitudes toward and knowledge about financial matters, but that financial education reversed the gender discrepancy in financial knowledge (Romagnoli and Trifilidis 2013, 17). According to these results, school-based financial education programs have significant, long-term impacts but they must correct for entrenched gender disparities in financial matters; to do so, they should be implemented early and address topics that are crucial and relevant to the audience.

C. CASE STUDY 3: “My Finance Coach”: Germany

In 2010 German schools launched the “My Finance Coach” program, a personal finance education curriculum for students aged 10 to 16, which has since spread to 12 other countries, including Argentina, Brazil, England, Indonesia, Ireland, Malaysia, Poland, Singapore, Sri Lanka, and Thailand, and has impacted approximately 750,000 students.⁶ Administered by volunteer financial professionals, the curriculum at the time consisted of three 90-minute training modules on shopping, planning, and saving. The shopping module provides information about the purpose of advertising and the distinction between impulsive and premeditated shopping decisions. The planning module highlights the difference between one-off and repeated costs and offers budgeting tools to assist students in reaching their financial goals. The saving module explains the difference between various financial products, specifically discussing trade-offs between risk, liquidity, and return. The class was administered by volunteer financial professionals during normal class hours and allocation between treatment and control groups was done at the school level to avoid spillover effects (Lührmann, Serra-Garcia, and Winter 2012, 2).

⁵ Lührmann, Serra-Garcia, and Winter analyzed a school based financial education program in Germany that also showed gender disparities in financial attitudes and knowledge. Specifically girls begin with lower interest and self-assessed knowledge and save less than boys, with the gender gap appearing at young ages.

⁶ For more information on Germany’s “My Finance Coach”, see: <http://en.myfinancecoach.org/>

Researchers Lührmann, Serra-Garcia, and Winter analyzed the effect of Germany's "My Finance Coach" in 2012 using a randomized controlled trial of German high school teenagers. The researchers used a difference-in-difference approach and examined the changes in outcomes between tests over the course of the year. Pre-test results showed students had a tendency toward risky behavior and low financial knowledge. After the program, however, participants showed significant gains, with 21 percent of participants decreasing their impulsive buying (Lührmann, Serra-Garcia, and Winter 2012, 15). Furthermore, the program showed a 20 percent increase in the interest of financial matters, and 21 percent of students increased their self-assessed financial knowledge (Lührmann, Serra-Garcia, and Winter 2012, 3). Importantly, the study showed that girls have lower interest in and self-assessed financial knowledge, which is consistent with other international literature (c.f., Graham, Stendardi, Meyers, and Graham 2002). These findings suggest that the gender gap in financial literacy and behaviors begins at a very young age (Lührmann, Serra-Garcia, and Winter 2012, 4). Overall, the study indicates that financial education programs can have large impacts on student knowledge and behavior, but entrenched gender disparities must be recognized and addressed.

D. CASE STUDY 4: "I Can Manage My Money": Turkey

In Turkey, a financial education program for students called "I Can Manage My Money" had tremendous success in improving students' financial behaviors. The program included seminar-style classes on budgeting, payments, income, savings, debts, and national economic regulations that used specific examples targeted to the age group of the participants. The program launched in 2009 and the first impact testing was conducted in April 2011, when evaluators measured financial behavior outcomes through pre- and post-tests of students who had taken part

in the program. According to the OECD/INFE's program summaries, a simple descriptive study found substantial improvements in budgeting within the first year. Of the over 9,000 program participants, 75% adopted a monthly budgeting system, and 87% of those adhered to the system in the first year. Eighty-four percent of program participants became more conscious of their monthly spending, and 62% of attendees began to list their spending regularly. Financial knowledge also improved: 75% of program participants claimed that their financial knowledge increased (OECD International Gateway for Financial Education, Database of Programs, Turkey: I Can Manage My Money).⁷ Turkey's case suggests that a targeted, comprehensive budgeting curriculum can lead to profound improvements in youth financial behaviors and knowledge.

E. CASE STUDY 5: State-Mandated Financial Education: United States

Implementation of financial education in the United States has historically been uneven due to the separation of federal and state powers over schooling—each state has the power to mandate financial education and decide what material is required to be taught. The lack of uniform financial education has led to contradictory results in testing the effectiveness of financial education on increasing financial knowledge and improving financial behaviors. To test the effect of state-mandated financial education, authors Brown, Collins, Schmeiser, and Urban (2014) compared the credit behaviors of young adults in Texas, Georgia, and Idaho. The three states all implemented rigorous state mandates in 2007 which required students to take a financial education course and pass a subsequent exam and also required schools to dedicate resources to training teachers.⁸ The authors compared credit scores and delinquency rates of young adults aged 18 to

⁷ To search through the full OECD/INFE database of programs see: <http://www.financial-education.org/gdofe.html>

⁸ These mandates are considered rigorous in comparison to other state mandates that don't require students to take the offered course, be tested on the material, or require teachers be trained on the material.

22⁹ from these three treatment states to those in 25 other control states, using data from the Federal Reserve Bank of New York/Equifax Consumer Credit Panel. They found that three years after a student was exposed to the personal finance education they had on average a 29-point higher credit score in Georgia, a 7-point higher credit score in Idaho, and a 13-point higher credit score in Texas. Additionally, in the incidence of 90+ day delinquency, they saw a reduction of 3.6 percentage points in Georgia, 1 percentage point in Idaho, and 3.3 percentage points in Texas. They found all of their results significant at the 1% level demonstrating that rigorous state-mandated financial education programs that include examinations and teacher trainings yield positive effects.

F. ADDITIONAL STUDY: Parent and Student Interventions: Brazil

Authors Miriam Bruhn, Luciana de Souza Leão, Arianna Legovini, Rogelio Marchetti, and Bilal Zia used a randomized controlled trial to study the impact of a targeted high school financial education program across 20,000 high school students from six states and 868 schools throughout Brazil (Bruhn, de Souza Leão, Legovini, Marchetti, Zia 2013). Treatment schools were randomly assigned and teachers were trained on the material and implementation methodology. In addition, they also studied the impact of a parent intervention, in which parents of students in treatment schools were invited to a workshop where they were shown either a control video or a financial education video. Results of the survey showed that the program led to an increase in financial knowledge, an increase in saving for purchases, a greater likelihood of financial planning, and greater participation of students in household decision making. The study also showed that students whose parents watched the video had a greater increase in disposable savings compared

⁹ The authors chose to look at those aged 18 to 22 because these students would have taken a mandated financial education course three years earlier.

to those whose parents watched the control video. The study overall illustrates the effectiveness of targeted school programs and complementary parent interventions.

G. Lessons Learned

From the case studies and current literature regarding school-based financial education, we can identify six strategies for improving the efficacy of financial education in schools:

1. Curriculums should be targeted, comprehensive, and age-appropriate.

- Research shows that money and transactions, planning and managing finances, risk and rewards, and the financial landscape are the most important topics for students, but examples should be targeted and age-appropriate. For example, elementary school children should not be expected to calculate compound interest nor should middle school children necessarily be expected to know definitions of mutual funds, stocks and bonds.

2. Programs need to address and acknowledge gender disparities in financial attitudes and behaviors.

- Because girls often have a lower baseline interest in and awareness of financial issues, it is incredibly important for curricula to target them. Therefore, materials and instruction should use a range of examples and images to ensure that it is as relatable and relevant to female students as it is to male students.

3. Programs should focus on trying to improve students' knowledge of qualitative concepts.

- Financial education programs have shown the greatest results in improving students' qualitative knowledge (such as understanding of banking relationships and budgeting); therefore they should focus their content on this material to have the greatest impact (Hospido, Villanuevo, and Zamorro 2015).

4. Programs should be provided to children as early as possible and should continue as children progress through school.

- Research shows that rigorous and continuous financial education programs have substantially greater effects than one-time programs (Brown, Collins, Schmeiser, and Urban 2014 & OECD 2013).

5. Programs should include a rigorous evaluation component to measure effectiveness.

- In order to ensure effectiveness and recognize where programmatic changes should be made, programs should assess students' changes in behavior and include a feedback component (OECD/INFE 2013).

6. Educating parents can strengthen their involvement in their children's education, generate valuable learning dynamics within the household, and reinforce children's learning.

- Research has shown that conducting workshops for parents at the same time as students are taking financial education courses can leverage and reinforce the effectiveness of the course materials (Bruhn, de Souza Leão, Legovini, Marchetti, and Zia 2013).

V. Financial Education in Workplaces

Personal financial decision-making has become increasingly burdensome and complicated. Employees now must decide how much to contribute to their defined contribution (DC) retirement accounts, as well as determine how to manage their debt within complex financial markets. These responsibilities were rapidly passed from employers to employees, and as a result employees are not always adequately equipped to make informed personal financial decisions (Lusardi and Mitchell 2007). Only recently has employee-targeted financial education become a policy priority in this new environment (CFPB 2014).

Current research demonstrates that employer-based financial education programs can generate gains for both employees and employers (Lusardi 2013 & Bayer, Bernheim, and Scholz 2008). For example, many employers face problems retaining employees; however, studies show that employees who receive financial education in the workplace are more likely to be satisfied with/supportive of their employer, making them less likely to quit (Hira and Loibl 2005). Additionally, several studies show that financially secure employees are less likely to be stressed and distracted at work, leading to higher productivity (Joo and Grable 2000). Other studies have shown that financial stress can lead to health issues; therefore, by providing financial education, employers will increase productivity and reduce the amount they need to spend on employee healthcare (CFPB 2014, 15–16). Furthermore, by promoting adequate preparation for retirement, an employer may avoid subsequent conflicts (e.g., demands for more generous pension benefits) with older, poorly prepared workers (Bayer, Bernheim, and Scholz 2008, 11). As such, both employers and employees benefit from workplace financial education programs.

Moreover, financial education at work can easily be scaled; spreading the cost of programs over a large number of employees means that the programs are ultimately a low-cost/high-return

endeavor (CFPB 2014, 18). Unfortunately, obstacles sometimes arise with offering financial education at work, as employees may be wary of disclosing financial problems to employers, and employers may worry about being liable for any advice given (CFPB 2014, 22). Nevertheless, with continuous improvements in program design and content, financial education's role in the workplace will continue to grow in importance. More research is needed on the impact of education unrelated to retirement, especially in Europe. That being said, the case studies below, which examine American employer-based retirement education, provide useful lessons for best practices in workplace financial education.

VI. Workplace Financial Education In-Focus

The following section examines five case studies from Europe and the United States, as well as a noteworthy study from India.

A. CASE STUDY 1: KPMG Peat Marwick Retirement Benefits Survey: United States

Using data from the KPMG Peat Marwick Retirement Benefits Survey, a cross-sectional survey of US households, Bernheim and Garrett (2003) find that employees working at firms with financial education had higher rates of all types of retirement savings, but they find heterogeneous income impacts (Bernheim and Garrett 2003). Using a survey randomly administered by telephone, the authors gathered standard economic and demographic information, followed by more specific data regarding retirement education in the workplace, economic and financial knowledge, sources of information and advice on retirement planning, and childhood experiences of possible relevance to later financial decisions. After collecting the data, the authors selectively

resampled from their dataset to obtain a more demographically balanced benchmark and controlled for several factors, including homeownership, age, race, and income. With these data, they estimated the intent-to-treat effect by including all employees for whom financial education programs were available. They find evidence of substantial variation in effect by income but not by other factors. In particular, individuals at lower ends of the income distribution experienced greater savings and asset accumulation (except for total wealth) in response to financial education programs than did their high-income counterparts. Their results support the notion that financial needs differ by income level. Without financial education, low-income individuals may be particularly vulnerable to a financially insecure retirement (Bernheim and Garret 2003). As such, workplace-based financial education programs should consider the high-potential impact on low-income individuals when specifying a target audience and designing content.

B. CASE STUDY 2: Various Employers: United States

Clark, Morrill, and Maki (2011) conducted a randomized controlled trial to determine whether providing information about the benefits of saving for retirement at the workplace increased participation in retirement savings accounts. To test this, the authors randomly distributed two flyers featuring the firm's retirement offerings to employees.¹⁰ One flyer included only information regarding the benefits of saving for retirement versus spending today, while the other contained additional information about peers' saving behavior. In order to measure the impact of the flyers, the authors tested for both informational effects and peer effects. They found that both effects were positive for workers from particular age groups; especially for workers aged

¹⁰ The study was conducted on employees at BB&T, Progress Energy (PGN), Pepsi Bottling Ventures (PBV), Martin Marietta Materials (MMM), North Carolina State University (NCSU), and the Williams Companies (WLM).

18 to 24 and 35 to 44, meaning those who received the flyers were more likely to enroll in their employer's 401(k) plan than their control group counterparts. However, the intervention had negative effects on workers aged 45 and over. This may be attributed to the fact that the flyers explained the importance of saving for retirement through long-term growth, which is more relevant for younger workers than those closer to retirement.¹¹ One of the key takeaways from this research is that financial education programs need to be *targeted*, meaning the programs need to be relevant to the people who receive it. Furthermore, a good practice is to pre-test the information in focus groups beforehand to detect unwanted effects. As such, it is crucial to consider the content of any informational financial education campaign with respect to its specific target audience (Clark, Morrill, and Maki 2011).

C. CASE STUDY 3: University of Minnesota: United States

Another randomized experiment, conducted by Goda, Manchester, and Sojourner (2012) of the Financial Literacy Center, measured the impact of providing information on savings and post-retirement income. The experiment provided detailed information on the new balances and incomes generated from hypothetical retirement contribution amounts to the treatment groups among employees at the University of Minnesota. The researchers then analyzed the effects of the treatment by looking at individuals' change in contribution to their retirement accounts, measuring both intent-to-treat and treatment-on-the-treated effects. For the intent-to-treat effect, the overall impact was moderate yet statistically significant: the treatment group's contributions increased by \$68 per year on average, or approximately 0.17 percent of salary. However for the treatment-on-the-treated effect, the impact was more substantial and still statistically significant: for those who

¹¹ To see the flyer used in the study see page 71 here: https://www.rand.org/content/dam/rand/pubs/working_papers/2011/RAND_WR892.pdf

changed their contribution amount, their savings increased by about \$800 per year more than those in the control group (Goda, Manchester, and Sojourner 2012). As such, the researchers concluded that few workers changed their behavior as a result of the intervention, but those who did made dramatic changes to their retirement contributions. Consistent with other literature, this suggests that saving may not be every worker's ideal financial strategy, but improving financial education allows each individual to make informed, appropriate decisions (Clark and Lusardi 2012, 10-11). As such, this case study demonstrates that *groups face heterogeneous financial challenges*, so in order to develop effective programs employers should conduct a needs assessment and design programs to fit the demonstrated needs of the audience.

D. CASE STUDY 4: GlaxoSmithKline: United Kingdom

GlaxoSmithKline (GSK), a leading UK pharmaceutical company employing 97,000 people worldwide, offered financial education courses for many years, but refreshed their curriculum and program design in January of 2011. The pharmaceutical company previously provided seminar courses for all employees, but was concerned that employees were hesitant to attend courses because they were too long. Harsha Modha, Director of Benefits, and Tony Ark, Benefits Specialist, worked closely with WEALTH at Work, a financial education company that provides corporations with help in developing engaging, scalable, and cost-effective financial education programs. GSK finally developed a comprehensive program that included a series of seminars administered by financial professionals, free one-on-one 30-minute consultation sessions, and an intensive intranet site – all designed to educate employees on and encourage participation in the benefits plans offered to them. In order to develop a scalable program, the seminars and

consultations were available to all employees, but each employee could attend only one seminar every two years to ensure the seminars maximized their reach.

Although the program has not undergone rigorous testing it has seen positive results. The seminars and face-to-face consultation with professionals have been popular with employees, with all seminars overbooked in key hub sites (CIPD 2012, 27). As of August 2012, a year and a half after the launch of the new financial education program, the company saw “99.9% of eligible employees joining its pension schemes, 67% participating in the SAYE share plan and 82% in the share reward plan (SIP),” as well as a high percentage of employees contributing the maximum amount toward their benefits (CIPD 2012, 28). The program’s popularity and success in increasing participation rates among employees demonstrates the effectiveness of combining various forms of financial education: seminars, one-on-one consultations, and an internet site administered by financial professionals.

E. CASE STUDY 5: Staples Inc.: United States

While employers are increasingly offering financial education programs, the effectiveness of these programs is often crippled by low participation rates. One company that has been faced with low participation rates is the global office supply chain, Staples Inc. The company offers a 401(k) plan to all eligible associates, but has continuously seen very low participation rates. After interviewing employees from various stores and warehouses, Lisa Blasdale, Staples Senior Benefits Manager realized many employees faced numerous financial challenges which hindered them from being able to save for retirement. Blasdale wanted to develop a financial education program for employees that would help them address and fix their current financial challenges. However, Blasdale worried that typical classroom-style programs would be impractical,

expensive, and not engaging enough for associates. In response, the company partnered with the Doorways to Dreams (D2D) Fund , a non-profit organization aimed at creating interactive games on financial topics. The two partnered to create a game titled Bite Club, in which players manage a nightclub for vampires. The fun and interactive game teaches individuals how to choose between saving for retirement, paying off student loans, and managing daily club expenditures. Once developed, the game was posted on the Staples portal page and Staples placed informational posters, t-shirts, and pamphlets advertising the game in the stores' break rooms.

During the course of the project, over 9,600 visits to the game from over 7,500 visitors were observed. Furthermore, of employees who interacted with the game and were newly eligible for a 401(k), “11% took positive action in their online 401(k) accounts” (Doorways to Dreams Fund 2012, 13).¹² In addition, game tournaments in two different districts engaged about 80% of targeted store employees in the Staples FE portal site. In comparison with other workplace financial education strategies, the Staples pilot was successful, perhaps in spite of the fact that employees were not required to play and were not provided with any direct financial incentive for playing. Nevertheless, the project saw large participation rates and was considered a success by the company, D2D, and the Consumer Finance Protection Bureau (CFPB), demonstrating that employers should leverage new technologies and the ideas of gamification to increase employee program participation and engagement (CFPB 2014, 29).

F. ADDITIONAL EVIDENCE: HERfinance: India

Run by the Business of Social Responsibility (BSR) and local NGOs throughout India, the HERfinance program was a promising personal finance curriculum and methodology implemented

¹² The full D2D report can be found here: http://www.d2dfund.org/files/publications/D2D_FE-Report_Pages_0.pdf

in 11 garment factories to approximately 10,000 workers.¹³ The program, which was designed to improve the financial capabilities of low-income workers, particularly women working in global supply chains, included modules on financial planning, budgeting, saving, borrowing responsibly, talking with family about finances, and utilizing local financial products and services – all of which were deemed specifically relevant to the target population. The program’s peer-to-peer methodology, in which workers were randomly assigned to groups led by one member who was trained on the methodology and responsible for teaching the other members what she had learned, produced positive results. Results from pre- and post-surveys showed increased basic financial knowledge; increased control over salaries and household decision-making; increased use of formal financial services; and increased saving, budgeting, and planning behaviors. These results demonstrate the effectiveness of peer-to-peer support models, which is consistent with other literature.¹⁴

¹³ For more information on the HERfinance program developed by the BSR see: <http://herproject.org/herfinance>

¹⁴ The CFPB report discusses a company who hired an organization to teach financial education to their employees. Part of the program utilized peer-support groups which generated positive feedback from the majority of participants (CFPB 2014, 26-28)

E. Lessons Learned

From these case studies and relevant literature on workplace financial education, we can identify seven main recommendations to enhance the effectiveness of financial education programs:

- 1. Programs should provide financial information that is tailored to the needs of employees.**
 - Research has shown that targeted content is more effective at improving financial outcomes than generalized content. Examples of targeted content include focus groups and using age / gender / income-appropriate examples in explanations.
- 2. Program content should be kept simple and clear.**
 - Research suggests that excessive use of jargon can confuse employees who do not have a finance background. Employers should ensure that program materials are clear, concise, and comprehensive so employees can easily grasp financial concepts.
- 3. Programs should be conducted regularly and timely.**
 - Research shows that repetitive programs that regularly remind employees of the value of saving can increase employee retirement savings compared to one-time programs. Programs should also be timely and provided at teachable moments such as annual reviews, following promotions, and individual life events such as marriage or birth of first child (Lusardi and Clark 2012, 2).
- 4. Programs should account for heterogeneous needs of different populations.**

- The poor, for instance, may benefit relatively more from budgeting, debt, and credit counseling than the wealthy, whereas the middle class may benefit relatively more from retirement-themed education. To address this, employers should conduct a needs assessment before designing and implementing a financial education program.
5. **Programs should recognize that saving may not be the optimal choice for individuals with debt.**
- In particular, if interest rates on debt are higher than savings rates, individuals with student loans, debt, or low incomes should focus primarily on resolving their other financial burdens before focusing on saving.
6. **Programs should consider peer-to-peer support structure, which can be an effective method for fostering financial discussions and reaching larger audiences.**
- Employees may be wary of opening up about their financial challenges to employers; to combat this, employers can implement peer support programs which have been shown to “create a ‘safe’ environment where participants feel they can share their questions and experience without being judged” (CFPB 2014, 27).
7. **Programs should utilize engaging delivery methods such as gamification.**
- Studies have shown that gamification (using interactive and engaging games) is an attractive methodology for engaging workers in financial education and increasing program participation.

VII. Financial Education Programs in Communities

Several recent financial education initiatives have been conducted through community organizations. Museums and libraries, among others, have hosted financial education programs for the general public or for specific population subgroups, such as the young, women, the elderly, and those with lower incomes. Because these programs are relatively new, few rigorous or quantitative evaluations exist. Nevertheless, a number of lessons can be learned from existing international community-based financial education programs. In particular, library-based financial education programs have the potential to be scaled throughout cities and small towns in Europe. The ubiquity of libraries in Europe and the United States renders them an effective forum for reaching a wider, potentially more vulnerable audience. The case studies below from Italy and the United States offer insight into best practices for community-based financial education in museums, libraries, and elsewhere.

VIII. Community-Based Financial Education Programs In-Focus

The following case studies from Italy and the United States examine community-based financial education programs and the lessons that can be derived from them.

A. CASE STUDY 1: Museo del Risparmio: Italy

Italy's Museo del Risparmio (Savings Museum) in Turin offers unique, innovative savings instruction to children, adolescents, and adults through interactive media and educational seminars. Visitors can play games, conduct fake interviews with holographic figures from both the past and present, and watch videos about financial strategies and economic history.¹⁵ As such, the methods of knowledge transmission at the Museo del Risparmio are more engaging and interactive than

¹⁵ For more information on the exhibits and activities available at the Museo del Risparmio, see: http://www.museodelrisparmio.it/scriptWeb20/vetrina/runtime_wcm/include/jsp/museo-del-risparmio/ita/index.jsp

traditional seminars in schools and in the workplace. While there is little formal evaluation of program effectiveness, other institutions, including the Mexican Banking Association, which established a cooperative agreement between the Museo del Risparmio and the Museo Interactivo de Economia in Mexico City, have praised the Museum's success.¹⁶ In addition, the model is so popular that subsidiary savings museums have been launched in other countries, such as the Finance Palace in Hungary.¹⁷ The success of the Savings Museum demonstrates that interactive media and games are proving to be attractive methods of providing financial education across Europe and the United States.

B. CASE STUDY 2: Museum of American Finance: United States

Financial education is integral to the operation and mission of the Museum of American Finance. In 2010, the Museum's Center for Financial Education was founded, and it currently offers a number of classes and programs. Its most popular program, the Museum Finance Academy, is designed to develop eleventh and twelfth graders' financial knowledge and behaviors. The Museum Finance Academy, which lasts eight weeks, consists of several 90-minute, free, single-session courses on a variety of financial education topics as well as site visits to critical financial institutions. Lesson topics include the importance of saving, the lifecycle of savings, income and careers, and financial products. Students also visit the New York Stock Exchange and the Federal Reserve Bank of New York.¹⁸ In addition to the Museum Finance Academy, the Museum of American Finance provides a large selection of classes for adults, college students,

¹⁶ The full Memorandum of Understanding between the Museo del Risparmio and the Museo Interactivo de Economia can be found here:

<http://www.museodelrisparmio.it/scriptWeb20/vetrina/contentData/view/link?id=CNT-04-00000001E7AE4>

¹⁷ See <http://www.muzejzrenjanin.org.rs/sr/index.html> for information on the Finance Palace in Hungary.

¹⁸ For a sample syllabus of the Museum Finance Academy, see: <http://www.moaf.org/education/museum-finance-academy/materials/MFASyllabusGeneral.pdf>

high schools students, and grade school students that cover topics which are relevant to each age group. The Museum provides all supplemental course materials on their website for other teachers to use.^{19,20} After receiving continuous positive feedback, the Museum of American Finance and the aforementioned Savings Museum of Italy partnered with the Global Financial Literacy Excellence Center and the Chinese Museum of Finance to form the International Federation of Finance Museums (IFFM) in June of 2013. The federation aims to provide a framework for greater collaboration among museums and develop innovative ways to advance financial literacy globally.²¹ Since the inception of the IFFM, the Museum of American Finance has continued to develop and improve its finance curriculum and exhibits to engage various populations, including individuals who may not otherwise receive financial education in school or the workplace.

C. CASE STUDY 3: Save To Win™: United States

In 2009, the Doorways to Dreams (D2D) Fund, the Filene Research Institute, and the Michigan Credit Union League & Affiliates launched a pilot program in Michigan titled Save To Win™. The pilot program partnered with eight credit unions in Michigan to use gamified strategy and prize-linked savings incentives to help low- to moderate-income people improve their financial lives and create better saving habits. Individuals could enter the program by opening a twelve-month Save To Win™ share certificate with at least \$25, and depositing at least \$25 per month into the share certificate. Every \$25 deposit entered individuals into a drawing for a cash prize each month (ranging from \$2,500 to \$3,750 split among 50 to 75 winners) and a grand prize

¹⁹ For a list of all classes provided by the Museum of American Finance, see: <http://reservations.moaf.org/Info.aspx?EventID=16>

²⁰ Supplemental materials and curriculum guides used in the Museum's classes can be found here: <http://www.moaf.org/education/curriculum/index>

²¹ For more information on the IFFM, see: <http://gflec.org/initiatives/international-federation-finance-museums-iffm/>

at the end of the twelve months (\$60,000 split among 60 winners) (Doorways to Dreams Fund 2013, 1). The program's prize-linked savings incentives saw great success its first year, attracting over 11,000 participants. Since 2009, the program has expanded from eight credit unions in one state to 58 credit unions in four states, with over 53,000 account holders (Doorways to Dreams Fund 2014, 1). The massive increases in participation and expansion of the program demonstrate how the prize-linked savings incentives prove to be an appealing model. Building off of this model, D2D has also created online games on financial topics, where individuals have fun using simulations which help increase knowledge retention.²² Similar to the Save To Win™ program, these games have seen high use (CFPB 2014, 27), further demonstrating the attractiveness of prize-linked incentives and gamification as methods of improving financial education and inclusion between individuals and community organizations.

D. Lessons Learned

Four conclusions can be drawn from these case studies and the current literature regarding community-based financial education programs:

- 1. Interactive media is an attractive alternative teaching method for community settings.**
 - The popularity of the Savings Museum in Italy shows that interactive media offers an attractive alternative method for teaching financial education across various demographics in a community setting.
- 2. Providing a variety of programs tailored to a specific demographic helps attract a larger audience.**

²² D2D's games can be played here: <http://financialentertainment.org/>

- Organizations, such as the Museum of American Finance, that provide programs for different populations attract a broader audience, some of whom may not be benefiting from workplace or school-based programs.

3. Prize-linked incentives have proven to be an attractive methodology for programs.

- Research has shown that prize-linked savings incentives such as those used in the Save To Win™ program are attractive to individuals and help increase program participation/retention.

4. Gamification is an effective method of increasing program participation.

- Research has shown that gamification, or using games as a method of teaching financial education, has positive impacts on program participation (CFPB 2014, 30).

IX. Online Financial Education Programs

Reflecting trends in educational media, a number of financial education programs, including those monitored by the OECD, are internet-based. Of 64 financial education programs recorded in the OECD's International Gateway for Financial Education Database in European Investment Bank member countries, 31 are primarily or exclusively online. Ten other programs incorporate websites as an integral component of their seminars or institutional functioning. All member countries have at least one financial education website geared toward the general public and/or financial service providers (OECD International Gateway for Financial Education). Though many lack the ability to intensively monitor and evaluate their impact, web-based financial education programs benefit from being able to reach a much wider audience than seminars

(OECD/INFE 2013, 11). Furthermore, online education can efficiently offer targeted content based on interest and need. While it may be more difficult to measure impact from websites, online materials are an integral component of any modern effort to reach and instruct individuals who would benefit from financial education. More evaluation is needed to determine best practices in online financial education instruction, but there are many examples of programs turning to online platforms to supplement traditional methods of classroom instruction. Financial educators must balance and complement competing benefits and drawbacks of these alternative teaching methods. The case studies below outline some of the current web-based financial education programs and their benefits.

X. Online Financial Education In-Focus

Research shows that online financial education can help fill knowledge gaps and supplement formal types of financial education. The following case studies analyze four specific online programs in an attempt to outline the best methods, strategies, and practices for online financial education.

A. CASE STUDY 1: Government Websites: New Zealand and United Kingdom

Given the ubiquity of the internet and the recognition of the need for financial education, several federal governments have developed scalable, easy-to-use, publicly funded financial education websites. Two notable and successful websites are New Zealand's Sorted website and the United Kingdom's Money Advice Service website.

New Zealand's Sorted²³ site was designed to provide an additional platform for financial education on broad topics such as assets, liabilities, banking, investing, and credit cards. The website provides A–Z guides, planning/budgeting simulations, and videos to help educate the public on basic financial topics. The website is unique in its measurement of usage and impact and has enjoyed remarkable success. Geared toward the general public, the website has high usage rates: “one in three New Zealanders have used the ‘Sorted’ website or its associated resources, and one in four have done so in the past 12 months” (Crossan 2010, 8). Additionally, the site’s social media components and range of content has expanded substantially from savings and debt management (Crossan, 8). Further measurements are collected, with impact evaluation materials based on “visits, user sessions, and demographics...complemented with online surveys, general market research, and advertising cost-effectiveness measures” (Crossan, 15). Recent results indicate that most users begin planning to take some type of personal financial action due to their interaction with the website, most commonly related to financial planning and budgeting (Crossan, 8). Ongoing data collection allows the web designers to regularly update the site to better address changing client needs and improve content and delivery strategies. As such, New Zealand’s website demonstrates how feedback mechanisms within online websites allow financial education programs to have greater flexibility and responsiveness to consumer needs and knowledge gaps.

The United Kingdom’s Money Advice website,²⁴ set up by the UK government, offers free, reliable financial advice to internet users. It provides information on diverse financial topics, including but not limited to debt and borrowing, work and retirement, budgeting, benefits, saving and investing, homes and mortgages, insurance, births and deaths, cars and traveling, and disability. It also hosts a money advice blog with features on debt warning signs, new pension

²³ See: <https://www.sorted.org.nz/>

²⁴ See: <https://www.moneyadviceservice.org.uk/en>

reforms, and tips for living on a low income, among others. Many of its features are interactive and engaging, including a variety of tools to calculate financial costs and needs, such as a retirement income tool and a mortgage calculator. This provides the site the flexibility to individually tailor recommendations to diverse financial needs. Consequently, the Money Advice website combines the ability to reach a wide audience with the need for specific, targeted content. Moreover, the advice service has forums for contacting a free financial advisor through the website, thereby democratizing the space of financial knowledge (which usually excludes the lower and middle classes). Although the service has undertaken few monitoring and evaluation efforts so far, its unique, comprehensive, and wide-reaching approach likely has a noticeable positive impact on high-quality financial educational access.

Overall, the recent success of the two websites demonstrates how providing diverse content and allowing for feedback mechanisms can help institutions develop scalable, cost-effective, easy to use, and accessible financial education websites.

B. CASE STUDY 2: Supervisory Authority for Insurance and Pension Funds

In Portugal, the Supervisory Authority for Insurance and Pension Funds (ASF: Autoridade de Supervisão de Seguros e Fundos de Pensões) has created a website that provides accessible, accurate insurance information and guidance to the general Portuguese public.²⁵ Through this site, the Supervisory Authority reinforces financial knowledge taught in schools, the workplace, and the community, and fills any insurance-related knowledge gaps. One benefit of its format is that the information is detailed and targeted, such that users with specific questions can easily find useful answers. In particular for resolving small information gaps or for individuals with busy

²⁵ See <http://www.asf.com.pt/NR/exeres/97C24D91-5FD7-4874-9D7D-FFE049D206D9.htm>

schedules, this website might be an ideal method for learning about insurance options. Additionally, its cost is low for both the agency and site visitors. The Supervisory Authority has no need to recruit, hire, or train financial educators for its website, and users do not need to pay for a class or find a consistent time to attend seminars or workshops. Portugal's Supervisory Authority for Insurance and Pension Fund's website is one example of many online financial education resources that is cost-effectively expanding financial awareness and knowledge.

C. CASE STUDY 3: GFLEC Toolkit: United States

As a part of the ongoing global financial literacy project with the European Investment Bank, the Global Financial Literacy Excellence Center at the George Washington School of Business has developed an online toolkit compiling a variety of resources on financial education.²⁶ Located on the website of the financial literacy project,²⁷ the toolkit provides valuable information on the need for, impact of, and best practices for financial education in schools. The website provides useful links for those developing financial education programs in their schools, workplaces, or communities. It provides information on how to structure financial education programs and details what content to include, making it a comprehensive and easy-to-use resource.

D. Lessons Learned

These case studies and other current literature regarding online financial education indicate that there are six critical considerations for online financial educational content:

²⁶ The GFLEC toolkit can be found here: <http://www.globalfinancialliteracyproject.org/#!toolkit/c222e>

²⁷ For more information on the global financial literacy project, see: <http://www.globalfinancialliteracyproject.org/>

1. Online content can be a cost-effective method of reaching a wide audience.

- It is relatively cheap to host a website, and there is no need to hire and train instructors. A website also has a tremendously wide range, because it can be reached by anyone with an internet-enabled device, which increasingly includes individuals of lower socioeconomic status in developed countries.

2. Online content should complement seminar-style instruction, where appropriate and if possible.

- Online education does not eliminate the need for classroom instruction, but it can and should support financial education instructors by reinforcing information provided in the seminar and filling any information gaps in the lecture.

3. Content should be kept simple, comprehensive, and clear.

- Online resources have the greatest value in reaching large audiences; however, because of the complexity of financial topics, website designers must ensure content is clear and comprehensive to avoid inclusion of misleading information.

4. Feedback is necessary for creating and ensuring high quality online financial advice.

- In order to develop and improve programs, designers should allow for feedback and interaction with users. With this information, governments and organizations can make a more accurate assessment of how their financial education websites are impacting their audiences.

5. Websites should utilize hands-on simulations and budgeting/calculating tools.

- Hands-on tools allow individuals to gain real life experience from the comfort of their home. These tools are also much more stimulating than reading materials, which helps individuals engage with the complex content.

6. Online games are an attractive method for teaching financial education.

- Research has shown that the use of online games for financial education has had high participation rates and is a fun way for individuals to interact with financial topics (CFPB 2014, 30).

XI. Conclusion

Financial education is fundamental to improving financial literacy and well-being. In workplaces, schools, communities, and online, financial education prepares people to make responsible financial decisions throughout their lives. Financial education practitioners worldwide can draw on the lessons from the above case studies to create the most cost-effective and impactful financial education programming. Among the key lessons are targeting financial programs by income, gender, and age group, keeping the curriculum stylistically simple, and taking advantage of new media's wider potential reach. In the United States, Europe and elsewhere, firms, schools, community organizations, and governments can adopt these practices to improve the efficacy of their financial education programs in a variety of settings. These guidelines provide a useful starting framework for policy makers and practitioners. Armed with the knowledge of what has been effective in similar settings, policymakers and practitioners can design effective, successful financial education policies and programs.

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