Journal of Consumer Education, 29, (14-24), 2012

http://www. cefe/illinois.edu/JCE/archives/vol29.html

Logic Model-Based Financial Education Program Evaluation

Jean M. Lown
Utah State University, Family, Consumer & Human Development Department. Logan, UT 84322

Samantha Nelson
Utah State University Family Life Center, Logan, UT 84322

More financial literacy programs are being offered, but the question arises of how educators determine if a program is effective. This article demonstrates the application of a logic model to guide an effective program evaluation of a financial capability program focused on women.

Journal of Consumer Education (2012) **29**, (14-24).
http://www.cefe.illinois.edu/JCE/archives/vol 29.html
Published online September 2013

Keywords: Logic-based model, program evaluation, financial education
JEL: A02, G02

BACKGROUND

Results of the *National Financial Capability Study* (Financial Industry Regulatory Authority, 2009) confirmed the low financial literacy levels of Americans. To address this troubling trends, in 2008 the U.S. Office of the Treasury established The President's Advisory Council on Financial Literacy to promote financial education for youth and adults. In response to this need for financial capability, more financial literacy programs are being offered, but the question arises of how educators determine if a program is effective. While a critical component of effective financial capability education is rigorous program evaluation, a recent study by Collins and O'Rourke (2010) found that most consumer education evaluations were seriously lacking. According to Bamberger, Rugh, & Mabry (2006), an essential foundation for effective program evaluation is to first develop a program theory or logic model. This article demonstrates the application of a logic model to guide an effective program evaluation of a financial capability program focused on women.

While Americans in general suffer from poor financial literacy and low savings, women are at higher risk than men (Fisher, 2010; Munnell, 2004). Although some people may question the need for a program geared specifically for women, research supports the unique financial education needs of women (Hays & Flannery, 2000). Because they lack confidence in their financial and investing skills, women often defer to men to make decisions for them (Lown, 2004). Savings behaviors of women and men differ (Fisher, 2010) partly because women are more risk averse and thus invest more conservatively than men (Bajtelsmit & Bernasek, 1996; Grable & Joo, 2004). Results of the 2000 Women's Retirement Confidence Survey documented the need for women to invest more assertively to ensure a secure retirement (Turyn & Helman, 2001). Lusardi and Mitchell (2008) reported low levels of financial literacy among women while Chen and Volpe (2002) documented a similar gender gap in college student financial literacy. Anthes and Most (2000) summarized the need to address the question of how to improve women's financial literacy and self-confidence in handling their finances. Compared to men, women earn less (Munnell & Zhivan, 2006), are more likely to work discontinuously, are more likely to take time out of the workforce to be caretakers of children and the elderly (Metlife Insurance Company, 1999), often lack retirement plans, have lower levels of financial literacy, are at higher risk for financial stress, and thus are an important target for financial education (Munnell, 2004).

LOGIC MODEL AND CONCEPTUAL FRAMEWORK

A logic model, also called a program theory, is a conceptual framework of how an educational program is expected to lead to intended outcomes (Bamberger et al., 2006). A logic model illustrates the expected inputs, outputs, and impacts, as well as the assumptions and other external factors that influence program decisions or achievement of outcomes. The *inputs* represent the resources used to develop the program, which include the meeting time and place, instructor, materials, equipment, and technology used to conduct the seminar. Learning opportunities, which comprise the *outputs*, are created by the financial education inputs including participation and activities (University of Wisconsin Extension, 2002). This program theory serves as a roadmap to help achieve program *outcomes*, which are the short-, medium-, and long-term *impacts.* Using a logic model contributes to a more powerful research design by describing the program implementation process, identifying variables that affect execution and outcomes, and helping to interpret the research findings to assess whether a program should continue, be modified, or terminated (Bamberger et al., 2006). In sum, logic models help to identify specific program goals, learning activities and resources, and the expected outcomes or changes (University of Wisconsin Extension, 2002). The University of Wisconsin (2002) website provides a detailed tutorial on how to develop a logic model and implement a program evaluation.

The financial education program being evaluated in this study to illustrate the use of logic models for program evaluation is based on the Transtheoretical Model of Change (TTM) (Prochaska & DiClemente, 1983). The TTM is an integrative model focused on how to modify problem behaviors for positive behaviors change. The underlying construct of the model is the Stages of Change. The first Stage of Change is precontemplation where a person is unaware of their problem or has no intention of changing. Individuals in the contemplation stage recognize the need to change but are ambivalent or uncommitted. At the preparation stage, a person intends to change. Persons in the action stage are changing their behavior. Once they have maintained their new behavior for at least six months, they have achieved the maintenance stage (Prochaska & DiClemente, 1983).

WOMEN'S FINANCIAL SEMINAR

The seminar is intended to educate women about personal finance and investing while motivating them to take responsibility for their financial future (Lown, 1999). This educational program provides a monthly educational seminar, email newsletter, and website. Over 250 women receive the monthly email newsletters; program attendance varies from 15 to 40 persons. Specific goals are to: (1) Educate women about personal finance and financial planning. (2) Motivate women to reduce debt and start or increase saving/investing. (3) Teach women to estimate the amount they need to save for retirement and how to invest toward that goal. (4) Provide women with the tools to take action as a result of each program. And (5) Encourage participants to commit to life-long financial capability.

Strategies to attract women in the early stages of change include encouraging women to bring a friend with them to the programs, using testimonials of women who have overcome financial and psychological obstacles as role models, providing time value of money examples to demonstrate that small amounts of savings can add up over time, and keeping educational messages simple and concise. The seminars include PowerPoint presentations to appeal to visual learners and informal sharing among participants of ideas, successes and strategies. In addition to following the literature on how women prefer to learn (Hays & Flannery, 2000), the author (Lown, 2004; 2008) has conducted informal surveys and formal focus groups with women to assess what they want to learn and how they want to receive the education.

The desired short-term outcomes of the program are to increase participants' financial knowledge and confidence, and to help them set and work towards their financial goals. To encourage goal setting and action, participants at each program receive a "Personal Finance Action Plan" worksheet to encourage them to commit to take action by dates that they specify. The long-term outcome is for the women to improve (or to maintain) their financial planning behaviors. Other long-term goals are to promote individual and family economic stability.

METHOD AND INSTRUMENTATION

The evaluation was conducted in November 2009 to: (1) determine which educational methods and strategies effectively motivate women to act, (2) solicit ideas for improving the effectiveness of this educational program, and (3) identify the TTM Stage of Change of participants. To guide the program evaluation process, a logic model (see Appendix) was developed that defined and explained the program concepts. The inputs are similar to those of any educational program, including the instructor, materials, and equipment. Occasional grants, including funding for this program evaluation, provided additional resources. Curriculum development, scheduling, meeting time and place, and conducting sessions are among the outputs. The impacts or the benefits for participants, resulting from the outputs include short-, medium-, and long-term outcomes. While increased knowledge is often considered the end goal of an educational program, this is an example of a short-term result. Actions and behavior change are medium-term impacts, with the ultimate goal of increased economic security being a long-term impact of an effective educational program.

Next, an evaluation instrument was developed using the National Endowment for Financial Education (NEFE) Program Evaluation Toolkit (2012). The research was approved by the university's Institutional Review Board. Using Survey Monkey, an online evaluation was sent to all 254 email addresses with a letter of information and link to the survey. A drawing for a free financial plan was offered by a female financial planner as an incentive to complete the survey.

The Financial Planning Personality Profiler (Lown, 2007) was used to categorize respondents into five Financial Personality Types as a proxy for Prochaska's Stages of Change (Prochaska & DiClemente, 1983). The personality types correspond with Prochaska's stages as follows: planners = maintenance, savers = action, strugglers = preparation, impulsives = contemplation, and deniers = pre-contemplation.

RESULTS

In response to the 254 email invitations, 81 women completed the survey. The response rate was 31.8%. The mean age of respondents was 46 with a median of 50 (range: 20-69). As shown in Table 1, 47 (58.8%) respondents were married and 17 (21.3%) were divorced. Most of the women were employed full-time (61.3%) or part-time (18.8%). Five respondents (6.3%) were unemployed; eight (10.0%) were full-time homemakers. The median and modal income category was $35,000-49,999 (N= 22; 28%), followed by $50,000-74,999 per year (N= 17; 21.5%) and $25,000-34,999 (N=15; 19.0%). Eight women earned less than $25,000; 18 earned more than $75,000. Most were highly educated with 33 (41.3%) reporting a graduate or professional degree, 30 (37.5%) a bachelor's degree and 15 (18.8%) some college.

As shown in Table 2, planners were the largest respondent group (43.2%) followed by savers (25.9%), collectively comprising more than two-thirds (69.1%) of the sample. The remaining respondents were distributed among strugglers, impulsives, and deniers.

An invitation from a friend (39%) and flyers posted around town and campus were the most effective advertising methods, followed by the university's website calendar. Other ways they learned about the program were radio community event PSAs, a health fair booth, an email from a colleague, and announcements in university classes (Table 3).

Each month an email newsletter is sent the week before the meeting with information on the upcoming program and information on local events and workshops, as well as current financial news. Most respondents (81.0%) reported that they read the newsletter each month. The website was used a few times a year by more than half of respondents (N=44; 55.7%) but about one-fourth (N=22; 27.8%) never use the website.

Three-quarters (N=56; 75.7%) of the women wanted to learn more about retirement planning, a goal overlapping to an extent the responses of 74.3% who wanted to learn investing basics. Avoiding investment fraud (N=22; 29.7%) was a popular request. Insurance (N = 21; 28.4%) and investing for college (N=16; 21.6%) were also requested topics.

When asked "what is the single most important financial planning action you need to take" the largest response (N=21; 26.9%) was "increase income." "Pay off debts" (N=19; 24.4%) and "start (or increase) retirement savings" (N=20; 25.6%) were equally popular goals. As shown in Table 4, nine women (11.5%) said they need to control spending.

Thirty-three (41.8%) respondents indicated that the biggest obstacle to achieving their financial goals was "not enough income." Ten (12.7%) said that a decrease in income due to the recession and global financial crisis was their biggest obstacle. As shown in Table 5, "too many debts" (N=7; 8.9%), "lack of self-control in spending"

(N=5; 6.3%), and "can't save until my kids are out of the nest" (N=2; 2.5%) were other perceived obstacles.

Table 1: Demographic Characteristics

Variables	*N*	*%*
Marital Status		
Married	47	58.8
Widowed	2	2.5
Divorced	17	21.3
Separated	3	3.8
Never married	11	13.8
Education		
High school	2	2.5
Some college/technical training	15	18.8
Bachelor's degree	30	37.5
Graduate or professional degree	33	41.3
Employment Status		
Full-time	49	61.3
Part-time	15	18.8
Unemployed	5	6.3
Homemaker	8	10.0
Retired	3	3.8
Income		
Less than $15,000	3	3.8
$15,000 to $24,999	5	6.3
$25,000 to $34,999	15	19.0
$35,000 to $49,999	22	27.8
$50,000 to $74,999	17	21.5
$75,000 to $124,999	11	13.9
$125,000 or more	6	7.6

Table 2: Financial Planning Personality Type (Stage of Change in TTM)

Variable	N	%
Planners (Maintenance)	35	43.2
Savers (Action)	21	25.9
Strugglers (Preparation)	2	2.5
Impulsives (Contemplation)	16	19.8
Deniers (Precontemplation)	5	6.2
Missing	2	2.5
Total	81	100.1

Table 3: How Women Learned About FPW

Options	N	%
A friend	31	38.8
Poster or flyer	27	33.8
University calendar	16	20
FPW Newsletter	13	16.3
FPW Website	5	6.3
Other (please specify)	14	17.5

Note: What initially attracted you to FPW? (Please check all that apply)

Table 4: Financial Planning Action Needed

Actions needed	N	%
Increase income	21	26.9
Start (or increase) retirement savings	20	25.6
Pay off debts	19	24.4
Win the lottery	3	3.8
Learn to budget	3	3.8
Total	78	99.8

Table 5: Obstacles to Achieving Financial Goals

Answer options	%	N
Not enough income	41.8	33
I can't save until kids are out of the nest	2.5	2
Lack of self-control; I enjoy spending	6.3	5
Too many debts	8.9	7
Income loss as a result of the economic crisis	12.7	10
Other (please specify)	27.8	22
Total	100	79

ADDITIONAL RESULTS

The survey also asked: "What would encourage you to attend more often?" The most frequent reason for not attending was "too busy" or having other obligations. Scheduling (day of week and time of day) and location factors were mentioned. Some of the women live far from the university so attending the seminars is not feasible. Many responded that they attend based on the topic. A couple of women indicated they would attend if child care were provided.

"What do you like most about the programs?" generated a variety of responses including: realizing they were not the only one experiencing the problem, the comfortable format and ease of asking questions, the group closeness, emphasis on the practical and informative, focus on women's needs and concerns, relevance of topics, complex issues are made easy to understand, atmosphere is not intimidating, friendly group, no pressure, low key, casual atmosphere, and great way to keep up to date.

OUTCOMES ATTRIBUTED TO THE SEMINAR

The ultimate test of a financial capability program is whether participants take action. Two-thirds of participants (N=51; 68%) started or increased saving for retirement as a result of the program. Thirty-two women (42.7%) implemented a budget, 17 (22.7%) achieved specific financial goals, 13 (17.3%) revised their insurance coverage, and eight (10.7%) saved for college expenses for a family member. Assorted other accomplishments were mentioned. Most of the respondents were moderately confident that they could overcome financial obstacles. Because this is a cross sectional survey, and respondents have attended for varying lengths of time, we are limited in our ability to measure impacts by time horizon. A longitudinal study is needed to better identify long-term outcomes.

DISCUSSION AND RECOMMENDATIONS FOR EDUCATORS

Based on the FPPT and the TTM Stages of Change, it is not surprising that the women who participated in this financial capability program and completed the survey are mostly in the action and maintenance stages. In contrast, the women who most need to learn about personal finances and take action may not be taking advantage of educational programs; or at least, if they are, they did not respond to the survey. How to effectively motivate women to improve their financial capabilities remains a challenge. But an even greater challenge is how to attract individuals in the contemplation and pre-contemplation stages: the impulsives, strugglers and deniers. One encouraging finding was the surprising number of deniers (precontemplation stage) who responded to the survey. One could argue that they can't be deniers if they participate and responded to the survey. Perhaps the FPPT instrument needs refining and/or they may be newcomers to the program. An alternative perspective is that the program is effectively attracting women who need the education and motivation to improve their personal finances.

How can educators entice deniers, impulsives, and strugglers to seek financial education and advice? Based on the results of this program evaluation, strategies include encouraging women who participate to invite their friends. Personal finance books were offered as incentives to bring newcomers a few years ago as part of a grant. Educators can encourage an informal buddy support system to promote wider participation and support in following through on program recommendations. Another strategy is to use testimonials of women who have overcome financial and psychological obstacles as role models. Based on responses to the open-ended questions, the women who attend the program appreciate educational messages that are simple and concise. Further, they are more willing to follow through on financial planning actions that are readily implemented since they perceive that lack of time is a major obstacle to attending. The women value the friendly, low-key format, emphasis on basic concepts relevant to their lives, the focus on women, and the accepting, non-judgmental atmosphere.

While increasing income is a near universal reaction to how to improve one's finances, it may not be the most realistic, especially in today's economy. Like many Americans suffering from the hangover of too much easy credit, many of these women need to pay down debt. However, none of the women admitted to buying too expensive a home or too many "expensive toys." Of course the definition of "expensive toys" is like beauty, in the eye of the beholder. While none of the respondents admitted to frivolous spending, a program on cash flow analysis might reveal areas where expenses could be reduced to find money to invest.

With the home being the household's single largest expense, and in light of the housing bubble that contributed to the global financial crisis, it is likely that at least some of these women are obligated to burdensome housing payments. While downsizing to a less expensive home is very difficult for buyers who purchased at the top of the inflated market, addressing housing costs needs to be part of the discussion. However, there are no easy strategies to get out from under a burdensome mortgage during the prolonged hangover resulting from the housing bubble. Since this educational program is affiliated with a financial counseling center, participants are reminded of the services each month.

The biggest challenge for educators may be convincing clients that more income will not solve their financial problems. Here is where real life examples of women who have accomplished their goals on modest incomes are needed. Time value of money examples showing the impact of regular investments (or debt repayment) over time can be valuable. Results of the annual *Retirement Confidence Survey* (http://www.ebri.org/surveys/rcs/) or similar surveys can be used as a benchmark to help participants see how they compare to a representative sample of workers and retirees. According to economic psychologists, knowing that their peers are practicing a behavior (i.e., wearing seatbelts, saving for retirement, etc.) can encourage others to adopt the practice. We need to make saving and investing the social norm for women.

The survey results were compared to the logic model to assess the program outcomes. Specific requests for program topics guided the following year's schedule. News articles about individuals who successfully paid down large debts or built substantial savings with modest incomes are incorporated into programs to demonstrate that more income isn't the most realistic answer to financial problems. Although we could all use larger budgets, the results confirm social marketing advice that the best advertising for your program are satisfied participants, as shown in this study.

EFFECTIVE PROGRAM EVALUATION USING LOGIC MODELS

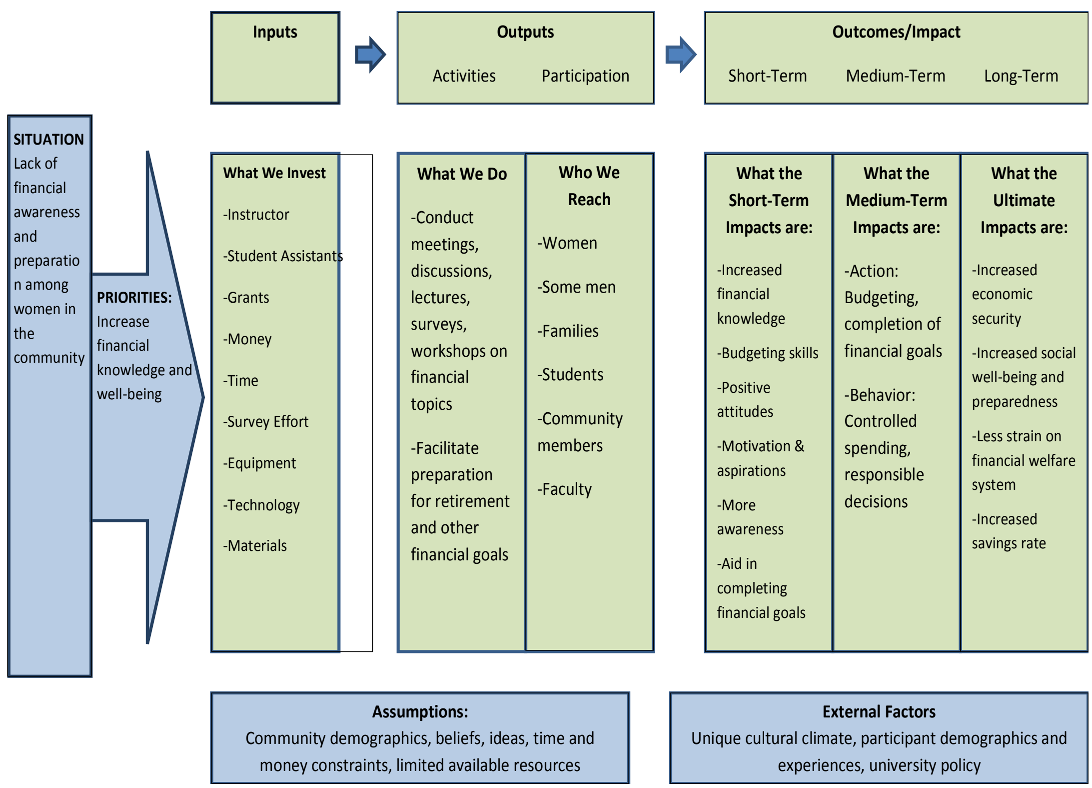
The program evaluation process, and specifically the logic model, guided the development of the survey questions. While it is difficult to assess the ultimate long-term impacts of this ongoing educational seminar, survey results suggest that the program is effective based on the actions women took as a result of the seminar. Limitations include the cross sectional nature of the data and lack of input from non-respondents.

While it is ideal to hire an external evaluator to insure objectivity, most educators' budgets preclude this luxury. A well-planned logic model and carefully planned evaluation help ensure that programs achieve their goals. While the book by

Bamberger et al. (2006) provides an in depth guide to program evaluation, the University of Wisconsin website (2002) is the ideal practical tool for educators wanting to improve their evaluation process. Designed specifically for consumer education program evaluation, the updated NEFE Toolkit (2012) provides templates and specific questions that are easily adaptable.

Appendix

Logic Model: Women's Financial Program



References

Anthes, W. L., & Most, B. W. (2000). Frozen in the headlights: The dynamics of women and money. *Journal of Financial Planning, 13* (9), 130-142.

Lown, J. M. (1999). Financial planning for women: An educational model. *Journal of Consumer Education, 17,* 8-13.

Lown, J. M. (2004). Women's preferences for learning about financial planning. *Journal of Personal Finance, 3*(4), 49-58.

Lown, J. M. (2007). Measuring financial planning personality type based on the stages of change. *Journal of Consumer Education, 24,* 28-39.

Lown, J. M. (2008, September). The role of retirement personality type in motivating women to plan for retirement. *TIAA-CREF Institute Trends and Issues*. Retrieved from http://www1.tiaa-cref.org/institute/research/dialogue/rd_tr090108b.html

Bajtelsmit, V. L., & Bernasek, A. (1996). Why do women invest differently than men? *Financial Counseling and Planning, 7*, 1-10.

Bamberger, M., Rugh, J., & Mabry, L. (2006). *RealWorld evaluation*. Thousand Oaks, CA: Sage Publications, Inc.

Chen, H., & Volpe, R. P. (2002). Gender differences in personal financial literacy among college students. *Financial Services Review,* 1: 289-307.

Collins, J.M. & O'Rourke, C.M. (2010). Financial education and counseling – still holding promise. *The Journal of Consumer Affairs, 44*, 483-498.

Financial Industry Regulatory Authority. (2009). *National Financial Capability Study.* Retrieved from http://www.finrafoundation.org/resources/research/p120478

Fisher, P. J. (2010). Gender differences in personal saving behaviors. *Journal of Financial Counseling and Planning, 21*(1), 14-24.

Grable, J. E. & Joo, S. (2004). Environmental and biopsychosocial factors associated with financial risk tolerance. *Financial Planning and Counseling, 15*(1), 73-82.

Hays, E. & Flannery, D. D. (2000). *Women as Learners.* San Francisco: Jossey-Bass.

Lusardi, A., & Mitchell, O. S. (2008). Planning and financial literacy: How do women fare? *American Economic Review: Papers & Proceedings, 98*(2), 413–41.

Metlife Insurance Company (1999). *The Metlife juggling act study*. Retrieved from http://www.geckosystems.com/downloads/juggling.pdf

Munnell, A. H. (2004). Why are so many older women poor? *Just the facts on retirement issues*. Chestnut Hill, MA: Center for Retirement Research.

Munnell, A. H., & Zhivan, N. (2006, June). Earnings and women's retirement security. *Working Paper*. Chestnut Hill, MA: Center for Retirement.

National Endowment for Financial Education. (2012). *Financial Education Evaluation Toolkit*. Retrieved from: http://toolkit.nefe.org/

Prochaska, J. O., & DiClemente, C. C. (1983). Stages and processes of self-change of smoking: Toward an integrative model of change. *Journal of Consulting and Clinical Psychology, 51*(3), 39-395.

Turyn, T. L., & Helman, R. (2001). Women on savings and retirement: Results from the 2000 Women's Retirement Confidence Survey. *EBRI Notes, 22*(2), pp. 1-7.

University of Wisconsin Extension. (2002). *Enhancing program performance with logic models.* Retrieved from http://www.uwex.edu/ces/lmcourse/#

Acknowledgment

The authors thank the Utah State University Women and Gender Research Institute for funding for the survey. The statistical assistance of Roxane Pfister is gratefully acknowledged.