Financial Literacy Education for College Students: A Course Assessment

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Due to college students' need for financial education, there have been a variety of efforts to transform them into money-savvy adults (Chandler, 2009; Supiano, 2009; Kibbe, 2008; Lorenzetti, 2007; Lyons, Palmer, Jayaratne & Scherpf, 2006; NH Briefs, 2006; Cox Matthews Associates, Inc, 2005). The undergraduate Financial Literacy course at a private Midwestern university was established in 2008 to improve its students' personal financial behavior. The content, delivery and pedagogy of the course are compared to recommendations from financial literacy education experts and to financial literacy programs at other institutions of higher education. The results are promising.

INTRODUCTION

The goal of financial literacy educational programs is to "provide individuals with the knowledge, aptitude and skills base necessary to become questioning and informed consumers of financial services and manage their finances effectively" (Mason and Wilson, 2000, p.5). Financial literacy programs have been established for people of all ages, beginning from kindergarten through adulthood. Proponents of early financial literacy education, including Lewis Mandell, senior fellow of Aspen Institute's Initiative on Financial Security, believe that positive financial habits need to be established at a young age. However, he cites research by Piaget and others who found that children can understand complicated relationships (such as the difference between the value of a penny and a nickel) only after they have reached a certain age. Therefore, Mandell advises the establishment of a financial literacy curriculum that is age-appropriate (Mandell, 2009).

Young adults in the U.S. are ill-prepared for the significant financial challenges they encounter. Therefore, one of the key stages of life in which financial literacy education is needed is at the college level, for people aged 18-25. Students in this age group have the intellectual ability needed to become financially literate. College is the last chance for this age group to gain the necessary knowledge before becoming adults. Unfortunately, studies have found that students entering college are not financially savvy. Many of them are from families with "helicopter parents" and have never made their own financial decisions or have been rescued by their parents after making bad ones (Hoffman, McKenzie & Paris, 2008). Many college students have never been taught about financial literacy at home. According to Nan Mead from the National Endowment for Financial Education, 94 percent of teens say they are likely to seek advice about money matters, but many parents are not willing to answer them due to their own less than perfect money management habits (Prah, 2006).

As students enter their freshman year, many begin to make financial decisions on their own and are inundated with credit card offers as they arrive on campus (Hoffman, et al., 2008). According to the United College Marketing Services, a large credit card marketer, college students receive 25-50 credit card applications each semester (ucms.com/college-credit-card-statistics.htm). 84% of them hold credit cards and average balances have increased from $1,879 in 1998 to $3,173 in 2008. This is an increase of 46% (Sallie Mae, 2009). Students entering college may not know how to handle their credit card debt. A study from Ohio State University indicated that 45 percent of college freshmen thought that their parents would be responsible for paying their credit balances until they turned 21 years old. Many did not realize that if they were late in making a payment, they might experience a higher interest rate on a car loan or a mortgage (Johnson, 2005).

There are other financial challenges encountered by college students. They are offered access to debit cards. Debit cards are as easy to use as credit cards and payments are immediately deducted from students' checking account balance. In order to use them wisely, they require proper tracking. Many college students rely on banks to provide them with daily balances, which may not be timely enough to avoid overdrafts (National Student Loan Program, 2010).

School loans become an issue as college students complete their studies. Students at four year institutions graduate with an average debt of more than $20,092. Those who complete a graduate degree end up with an average of $61,000. As college tuitions keep rising, students will face an increasing amount of debt (National Student Loan Program, 2010). Even non-traditional students have financial issues. 45% of students at four-year universities and 60% of students at community colleges work more than 20 hours a week and have no one to help them in case of financial emergency (Hoffman, et al., 2008).

College students' lack of knowledge of financial literacy topics has been documented. The 2008 Jump$tart Coalition survey of 1,030 college students, which consisted of a 31 question financial literacy exam, indicated that college students scored an average of 62%, which is equivalent to a "D" in college level assessment (Hartley, 2008). The consequences of financial illiteracy can be serious for this group. One study indicates that more than half of those who have left college did so because they needed to work and make money (Johnson, 2009). If young people do not acquire the education needed to obtain the type of job that will provide an adequate living, they will not be able to support themselves (National Student Loan Program, 2010).

In 2008, a new model for financial literacy education was established at a private university in the Midwest. The Financial Literacy course that was created utilizes a combination of experiential learning methods to improve not only the financial literacy of its students, but also their financial behavior. It is modeled on action-based learning to improve students' money management behaviors. The course includes budgeting and tracking of personal spending, student reflections about their course experiences, and course participants sharing their new-found literacy knowledge with younger students.

The purpose of this study is to examine the university's Financial Literacy course using a model adapted by Fox, Bartholomae and Lee in 2005 called the Five-Tiered Approach to Financial Education Program Evaluation. The goal of the study is to evaluate the course in terms of the Fox, et al. financial education standard and compare the course to financial literacy programs at other universities.

LITERATURE REVIEW

Financial literacy research has focused on discovering the types of financial education that can help change poor money management habits into good ones. A symposium sponsored by the National Endowment for Financial Education in 2005 entitled "Closing the Gap between Knowledge and Behavior: Turning Education into Action" brought together experts from neuroscience, change theory, behavioral economics and psychology to share their recommendations for changing financial behavior. Their thoughts have developed the groundwork for improvements in financial literacy education. David Laibson, professor of economics at Harvard University, noted that both education and a "mechanism for action" are needed in order for financial education to change financial behavior. An example of such a mechanism might be distribution of a sign-up sheet to 401(k) participants and a request to fill it out before participants complete a retirement seminar (Association for Financial Counseling and Planning Education, 2006).

According to James Prochaska, professor of clinical and health psychology at the University of Rhode Island's Transtheoretical Model of Change, people must go through five stages before their behavior can be changed (pre-contemplation, contemplation, preparation, action maintenance and termination). He advocated designing a program which matches the participant's stage of behavior change to specific change processes. His ten change processes include consciousness raising (education and information about the prospective change), dramatic relief (stories of dramatic life changes which convey the pros and cons of changing ones behavior), environmental reevaluation,(becoming aware of the social benefit of the change to others), self-reevaluation (visualizing positive self-change), self-liberation (developing self-control and commitment to the goal), reinforcement management (learning how to self-reinforce), helping relationships (using social support to help change), counter-conditioning (substitution of healthy alternatives for unhealthy ones), stimulus control (ridding oneself of unhealthy cues and behaviors), and social liberation (social changes which reinforce positive behaviors) (Association for Financial Counseling and Planning Education, 2006).

Colin Camerer, professor of business economics at California Institute of Technology, cited important ideas that can be adapted by financial educators. He mentioned the concept of the "hedonic treadmill," which explains why people begin to classify luxury items as "needs" instead of "wants". He stated that reinforcement of the true meaning of "needs" and "wants" may be a valuable part of financial education. A consumer tip offered by Camerer is for people to think of dollar amounts instead of percentages when making financial decisions. He gave the example of the decision of whether to drive across town to save $10 on a $35 portable CD versus driving across town to save $10 on a $200 suit. If the decision is stated in terms of dollars, as in "is it worth the time and gas expense to drive across town to save $10?" people can make a more sensible decision (Association for Financial Counseling and Planning Education, 2006).

A study by Camerer found that "social learning", a concept developed by the California Institute of Technology (Caltech) in 2003, was effective in promoting learning in his subjects. Social learning is defined as hearing examples of people's financial results from a person who did well, a person who did poorly, and from a person chosen at random who may have done either well or poorly. In his study, over-spending by the subjects was reduced after hearing these stories (Caltech, 2003). Lastly, Camerer recommended the use of computer simulations in order to give people an idea about the consequences of poor financial behavior (Association for Financial Counseling and Planning Education, 2006).

Kathleen Gurney, President and CEO of Financial Psychology Corporation, advocated that people first identify their individual feelings about money and their spending and saving styles. After identifying their style, they may decide to make adjustments to it. One might decide to change their style to become a saver or to spend less on "wants" versus "needs" (Association for Financial Counseling and Planning Education, 2006).

In order to incorporate the recommendations for changing financial behavior into an educational program, it is first necessary to make decisions on how to structure the course. An online survey conducted by Lyons, Palmer, Jayaratne and Scherpf (2006) of 170 university-affiliated providers of financial education found that the main topics covered were budgeting and cash flow management (92.6%), credit/debit management (91.4%), savings and investment (90.8%) and consumer protection (70.5%). Most educators used workshops/seminars (44.3%), multi-session courses (31.2%), and printed material (11.3%) to deliver the information.

Pedagogical methods used for financial literacy education are varied. Kezar and Yang (2010) stated that financial education experts are in favor of using active, experiential and problem-based learning techniques. When students are able to relate their personal financial experiences to the course material; apply what they have learned to real-life financial situations; and share their learning experiences with others, they can learn more effectively.

Fox, et al. (2005) proposed the adoption of a general framework to aid in the development and delivery of financial educational programs. Even though they admitted that these programs may be very different, they advocated "an overarching framework" for program evaluation which could "provide a guide or road map for collection information about program development, delivery, effectiveness, and accountability" (p. 204). Fox, et al. believed this framework would standardize the way that data is collected and allow programs to be more easily compared. They modified Jacobs' (1988) model of evaluation so that it could be used for financial literacy programs. Excerpts from their model are located in Table A.

The Financial Literacy course created by the Midwest university referred to in this paper will be discussed by using the evaluation tiers in Fox, et al.'s model. The first tier, Pre-implementation, involves providing information justifying the need for the program. The second tier is Accountability, which is the information used to prove that the program can and will be used. The third tier is Program Clarification, information used to make adjustments to the program. The fourth is Progress towards Objectives, information demonstrating program effectiveness. The fifth and final tier is Program Impact, information relating the program to its environment (Fox, et al., 2005).

RESEARCH AND METHODOLOGY

Pre-Implementation

The financial literacy course at the university was created as a result of the Dean of the College of Business' interest in financial literacy programs and a connection with Alice Wood, President and Founder of Wealth Watchers® International and author of "Wealth Watchers". Ms. Wood's firm produces the Wealth Watchers® journal, which is used to track daily personal spending. Users of the journal compare daily purchases with a pre-established Daily Disposable Income (DDI) based on the amount of funds available to be spent after budgeting for basic needs and an amount for savings. Wealth Watchers® International also provides financial counseling based on the Weight Watchers® model which emphasizes group support for those who are trying to reach their goals. The main driver for the development of the Financial Literacy course at the university was the high level of overdrafts and overdraft fees paid by college students and their lack of knowledge on how to manage credit and debit cards. The dean of the College of Business in conjunction with the Associate Dean of the Student Success Center and the Associate Vice-President of Student Life and the instructor determined that a financial literacy course which included Wealth Watchers® and other components would be of benefit to their undergraduate students in all majors.

The two hour course (named Financial Literacy) starts mid-semester and meets once a week in the evenings. The university emphasizes service learning throughout the campus and it was decided to partner with the local chapter of Junior Achievement® in order for students to share what they have learned with younger students. The course is open to all students on campus and contains the following objectives:

- Using college-level computation skills, develop future personal goals and a plan to fund them
- Using college-level computational skills, create a personal budget
- Keep track of spending and learn how to better manage credit card debt as preparation for active participation in society
- Learn ways to save regularly and wisely
- Share knowledge by working with members of the community in a financial literacy service learning project

Accountability

Students are given grades for attendance at class sessions, tracking their spending in Wealth Watchers® journals; participating two times a week in online discussions; listing their financial goals and determining how to fund them; summarizing chapters from Goodmoneyhabits.com® (an online financial literacy education program); participating in Junior Achievement® presentations; preparing written reflections of what they learned in the course, and creating financial literacy presentations.

Program Clarification

The Financial Literacy course was offered for the first time in October 2008. Enrollment was 34 students. It was offered again in March 2009, October 2009 and March 2010. Total enrollment for all four semesters was 101 students. The average age of the students was 21. 60% were male and 40% female. 42% were of Asian ethnicity, 26% were White (origins in Europe, Middle East or North Africa), 17% were Black, and the remaining 15% were American Indian or Alaskan, Native Hawaiian or Other Pacific Islander, Hispanic or Latino.

RESULTS

Progress towards Objectives

The Financial Literacy course topics are compared to the online survey results by Lyons, et al. (2006) to discover the similarities between this course and 387 college-affiliated financial education programs. The Financial Literacy course includes the four most common topics and five out of the eight topics in the Lyons survey. The course focuses on improving students' spending and savings habits and requires students to create a personal budget. 92.6% of programs in the Lyons survey contain budgeting and cash flow management topics. The course also includes management of credit and debit cards as compared to 91.4% of the college-affiliated programs. This university's students learn about savings and investment as do 90.8% of the students in the programs surveyed by Lyons. The Financial Literacy course also includes coverage of insurance and taxes, compared to 46.4% and 50.9%, respectively, of programs in the survey.

This course is delivered as a multi-session, eight-week course, corresponding to 31.2% of the programs covered in the Lyons survey. The Financial Literacy course is composed of a combination of online and onsite meetings. The course contains several interactive and experiential learning components. A survey of selected universities' financial education programs indicates that most of the financial education programs were offered in the form of workshops or one-on-one sessions with students. They did not last an entire semester, and their programs were directed to specific audiences such as freshmen or financial aid recipients, instead of being open to all students. Programs were either online or onsite (not a combination) and most of them did not require students to engage in interactive or experiential learning (Chandler, 2009; Supiano, 2009; Kibbe, 2008; Lorenzetti, 2007; Lyons, Palmer, Jayaratne & Scherpf, 2006; NH Briefs, 2006; Cox Matthews Associates, Inc, 2005).

To evaluate the Financial Literacy course in more detail, it is helpful to look at each individual course component. A major component of the course is the requirement for students to post their spending on a daily basis. Students prepare an annual personal budget and from this budget, they compute their daily disposable income (DDI), which is defined as the money they have left after their bills are paid and an amount is put aside for savings. Students record their spending in a Wealth Watchers® journal and monitor it to make sure that it is does not exceed their DDI. In terms of Prochaska's ten change processes, posting spending raises the student's consciousness of what they are spending their money on and strengthens their personal willpower and commitment (self-liberation). One student commented, "By using the Wealth Watchers® journal I finally took thought into a decision to buy something before I bought the item. I usually thought about buying items before but never as how will this affect me down the road and how does this fit into my budget? After using DDI and seeing at the end of each month I achieved my goal, I learned that I can live on a budget…" The course also avoids Camerer's "isolation of decisions" phenomena in which individuals favor short-term financial decision making over long-term. Students start with their annual budget in order to calculate their daily disposable income. Tracking spending in the Wealth Watchers® journal also makes students aware of their "wants" versus their "needs" and prevents them from hopping on the "hedonistic treadmill" cited by Camerer (Association for Financial Counseling and Planning Education, 2006). Students spend time analyzing each purchase-"is it something I really need or is it something I can do without?"

The Wealth Watchers® journal provides a way for students to think in terms of dollar amounts instead of percentages, as recommended by Camerer. Alice Wood, President and Founder of Wealth Watchers® International, advises students to multiply the dollar amount of each considered purchase by 365 in order to realize the magnitude of this purchase on an annual basis. Many students decide not to spend the money after they make the calculation. The Wealth Watchers® journal also serves as a "mechanism for action" which David Laibson noted is necessary in order to change financial behavior.

Upon receiving the Wealth Watchers® Journal, students in the course have a tool which can immediately help them change their spending habits. Also, the journal allows them to relate their personal financial experiences to the course material. This was cited as one of the best practices in financial education per Kezar and Yang (2010).

A second component of the course is presentations by experts on proper savings and investment, managing credit, debit and credit card spending, and insurance and tax issues. This component of the course is delivered in the same manner as the financial education programs of the university affiliated organizations in the Lyons survey. Students are educated on financial topics pertinent to their stage in life and ask questions related to their own situations. This part of the course serves to raise students' consciousness of the value of financial literacy information, which was the first step in Prochaska's ten change processes (Association for Financial Counseling and Planning Education, 2006).

Other course components include on-site and online discussions. In class, Alice Wood from Wealth Watchers® tells her personal story of the dramatic change in her personal finances and how she handled it. She also asks each student to share their own stories about bad spending habits and explain why they are spending money on unnecessary items. She discusses more cost effective ways to satisfy their needs and wants. This discussion fulfills the counter-conditioning and stimulus control steps in Prochaska's ten change processes. At the end of the course, Alice asks each student to share their spending and savings success stories, which reinforces their positive behaviors. This is the social liberation step in Prochaska's ten change processes (Association for Financial Counseling and Planning Education, 2006).

Financial Literacy students are required to post twice weekly to an online student-led discussion related to their experiences in the course. They discuss their money handling style (are they spenders or savers?) and what they have learned from listening to presentations, posting in their spending journals and from other components of the course. They are asked to respond to each others' posts to create a genuine discussion. Sharing learning experiences is suggested as a best practice by Kezar and Yang (2010) and is an example of the dramatic relief and helping relationship change processes suggested by Prochaska. The 2003 Caltech study cited by Camerer found that social learning (hearing stories of people's financial results) reduced over-spending by the study participants (Association for Financial Counseling and Planning Education, 2006).

By completing the lessons contained in Goodmoneyhabits.com® interactive financial education software, students apply their personal financial situation to the material in the course. They produce a personal budget, a statement of net worth, a prioritized list of financial goals and select ways to finance them. This is another example of the active learning methods and real-life applications in the course, part of the best practices for financial education recommended by Kezar and Yang (2010). Student comments about Goodmoneyhabits.com® demonstrated their appreciation of the software as a course component. One said:

> The site offers in depth knowledge on factors to consider in achieving short and long term goals…Features such as the goal funding exercise, personal budget exercise and credit card payment exercise provide real world scenarios where saving money becomes just as important as earning income.

A final component of the course is student presentations. Students present Junior Achievement® lessons to middle school and elementary school children and also create presentations and deliver them to their peers. Students in the Financial Literacy course researched online money management resources and used what they had learned in the course to create their presentations. The topics of their presentations included budgeting, credit and credit card management, and managing spending and savings.

The Junior Achievement® presentation topics included career choices, the role of business, taxes, decision making and the flow of money in the economy. Students in the middle schools were also introduced to budgeting, credit and financial risk. The presentation component in the Financial Literacy course is another example of active learning on the part of the students. It is one of the ten change processes (environmental reevaluation) cited by Prochaska (Association for Financial counseling and Planning Education, 2006). It also reinforces the learning that is being accomplished in the classroom. By extending their learning outside the Financial Literacy class, students became aware of the importance of financial literacy to other people. One student commented on the value of educating others by saying, "Another thing that I think helped me was the JA presentation. Not only did it give me an opportunity to make a difference in someone's life, but it also helped me cement in my own head what I had been learning in class all along."

CONCLUSIONS AND FUTURE RESEARCH

In this study, this university's Financial Literacy course was evaluated using the Five-Tiered Approach to Financial Education (Fox, et al., 2005). Development of the course has progressed from Pre-implementation (realization of the need for a financial literacy course on campus) to joint planning of the course by all university stakeholders to the Accountability tier. In this tier, the university decided to offer the course to all undergraduate students and gathered course attendance details and demographics. In the Program Clarification and Progress toward Objectives tiers, the topics and course components were determined. Also under the Progress towards Objectives tier, all participants in the course since it began were surveyed and the results will be shared in a forthcoming paper. Under the Program Impact tier, the University is beginning to evaluate the course by surveying control groups consisting of students in other courses and comparing their results to our Financial Literacy students. More work can be done in this tier. The University can also begin to compare their course to Financial Literacy courses at other universities.

This study indicates that the topics in Financial Literacy course offered by the university match most of the topics and evaluation methods of the 170 university-affiliated financial education programs studied by Lyons, et al. (2006). It differs from other university-based financial education in the type of learning and variety of course components and delivery methods. There are more than ten different course components and many of them involve experiential learning methods. The course contains both online and onsite components. Students in the course are required to relate their personal experiences to the course materials, which was also cited as a best practice in financial education by Kezar and Yan (2010). The course follows many of the recommendations by experts who participated in the "Closing the Gap between Knowledge and Behavior: Turning Education into Action" seminar in 2006. Prochaska's ten change processes are addressed, as well as suggestions by Camerer and Laibson (Association for Financial Counseling and Planning Education, 2006).

The effectiveness of the university's Financial Literacy course to help students improve their money management knowledge, skills and behaviors will not be established until more work is done in the Progress toward Objectives and Program Impact tiers of the Fox et al. model. However, this course follows all of the recommendations from the financial experts cited in this paper. It includes a mechanism for action and material addressing Prochaska's ten change processes. The course includes a focus on determining the students' wants versus needs and stresses the impact of daily spending on an annual budget. It is unique from other universities' financial literacy programs because of its experiential (service learning) component, a mix of onsite and online learning, and the opportunity it provides for all students at the university to obtain financial literacy skills during an entire semester.

TABLE A

Five-Tiered Approach to Financial Education Program Evaluation		
Evaluation Tier	Purpose of the evaluation	Application to a Financial Education Program
Pre-implementation- Information justifying need for program	Collect information that documents need within community	-Collect community-based financial statistics -Interview community leaders regarding causes and effects of financial literacy -Locate local press coverage on financial topics -Write a description of financial education program
Accountability- Information justifying program viability and utilization	Collect information about about program users and program utilization	-Provide descriptive profile of individuals using program -Be able to report over certain time frame (year) the number of individuals participating in program and at what cost
Program clarification Information to fine-tune the program	Collect information used by program developers and and personnel to improve the program	-Survey program participants about satisfaction with program -Staff feedback (from participants regarding future financial topics) -Describe program operation (topics, instructor, students, components used by students)
Progress toward objectives information demonstrating effectiveness	Collect information that documents the effectiveness of the program and to provide information program staff and administration can use to make program improvements	-Design and collect objective measures of program success (Pre-, post-test of knowledge) -Several simple and advanced behavioral indicators should also measure program outcome (participant reports activities to reduce debt over three-month period) -Collect other types of data related to financial behavior (decision making, feelings of efficacy) -Analyze indicators of success relative to participant characteristics (age, gender) -Publish findings
Program impact- program information relative to the big picture	Provide information that contributes to an area of knowledge and/or evaluation and to document program effectiveness in comparison to other programs	-Engage in advanced methodological data collection (random assignment of ‘treatment” of financial education program; construct a control group of individuals who don’t participate in program -Evidence regarding the financial education program should be: (1) Tailored to specific audiences (2) Evaluated relative to other programs (3) Critiqued in terms of strengths and weaknesses of study design and methodological design

Note: From Fox, J., Bartholomae, S., and Lee, J. (2005). Building the case for financial education. The *Journal of Consumer Affairs, 39*(1), 213-214 (excerpts). Adapted from Jacobs, F.H. (1988). The five-tiered approach to evaluation: Context and implementation. In *Evaluating Family Programs,* edited by Heather B. Weiss and Francine H. Jacobs (37-68). New York: Aldine DeGruyter.

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