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DESIGN PLAN FOR COMPREHENSIVE FINANCIAL LITERACY PROGRAM

by

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A dissertation in practice submitted in partial fulfillment of the requirements
for the degree of Doctor of Education
in the College of Education and Human Performance
at University of Central Florida
Orlando, Florida

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2015

Major Professor: Carolyn Hopp

ABSTRACT

The need for financial literacy among Americans has become a national topic of interest. Economists, financial professionals, educators, and government officials recognize there is an overall deficit of financial knowledge. More specifically, higher education administrators have become increasingly concerned with ensuring that financial literacy tools are available to college students. Students of today face higher tuition and education-related costs, are less likely to receive grant funding to assist with their educational expenses, and are more likely to be in debt, carrying higher student debt loads than previous generations. Further, students lack the financial knowledge needed to make sound financial decisions. Hence, there is a need for effective financial literacy programs at postsecondary institutions. The purpose of this dissertation in practice (DIP) is to design a comprehensive financial literacy program model for students attending large diverse higher education institutions similar to the University of Central Florida.

I dedicate this dissertation to my family: to my great-grandmother for instilling a passion for learning and education in me at the tender age of three; to my grandparents for always supporting all my endeavors with every fiber of their being (I hope the three of you are smiling down from Heaven); to my mother, the strongest woman I know, for teaching me that dreams are meant to be fulfilled; to my brother for his profound words of encouragement; to my aunt for her listening ear and caring words; to my husband for always being my rock, my supporter, and my friend; and to my baby girl, Laila, for motivating me in a way that I did not know was possible.

To each of you, I simply say thank you and I love you.

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I would like to first sincerely thank Dr. Carolyn Hopp, my dissertation chair. You are an amazing educator. I am blessed to have been under your guidance throughout this process. I would also like to acknowledge the other members of my committee: Dr. J. Thomas (Tom) Owens Jr.; Dr. Enrique Ortiz; and Dr. Thomas Vitale for their feedback and support. I would like to thank the esteemed faculty members who provided me with the knowledge needed to complete this dissertation. I would like specifically to acknowledge Dr. Thomas Vitale, Program Director, and Dr. David Boote for their continued support throughout this doctoral program. I would also like to thank the village of extended family and friends who supported and encouraged me throughout my studies. Finally, I would like to acknowledge the members of my cohort: I cannot think of a more awesome group of intelligent, caring people with whom to share this experience.

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CHAPTER ONE: INTRODUCTION

This dissertation in practice (DIP) addresses a complex problem of practice using design-based research. In this DIP, I propose a solution to the problem of practice through the development of a program model. The focus of Chapter 1 is the problem of practice, the historical perspective of the problem and the organizational context in which the problem was occurring. The concept of the model design and key elements of the model are outlined in Chapter 2. Chapter 3 contains an implementation and evaluation plan. The DIP closes with a conclusion in Chapter 4. I integrate supporting literature throughout the DIP. Although this DIP is framed in a specific organizational context based on my experiences in the doctoral program, the suggested model incorporates best practices applicable to other similar organizations.

Problem of Practice

Because many students lack the knowledge needed to make informed financial decisions, and because they are often faced with complex financial situations, this dissertation in practice addressed the development of a comprehensive, relatable, and accessible financial literacy program model for students at the University of Central Florida (UCF). This program model is applicable for students of other similar universities.

The complex problem of practice utilized for this DIP was highlighted during an internship experience. During the summer of 2013, I participated in experiential learning process, as a part of my doctoral studies. Students are required to complete Laboratories of Practice (LOP) during the summer terms as a part of the Professional Practice Doctor of Education program at UCF. The LOP is a field-based internship experience in which students address complex problems of practice (UCF Ed.D., 2015). My first LOP took place in the Office of Student Financial Assistance at UCF. While assisting the former Executive Director of Student Financial Assistance and the Assistant Director of Loans with managing processing issues for students who were borrowing amounts near the total amount allowed by the federal government, it became apparent that students were borrowing more than before at the University and it was essential for them to be educated on student loans and other financial matters.

Financial literacy has become a major point of interest in the higher education arena (Durband & Britt, 2012). The rising costs of tuition, increased student indebtedness, and unstable job market has led many colleges and universities to develop financial literacy programs for their students (Harnisch, 2010). Currently, some departments at UCF offer some financial literacy tools to various subpopulations of the student body. However, the school does not make a formalized university-wide financial literacy program available to the entire student body. Overall, University administrators recognize the need to provide students with the tools they need to be academically successful as well as successful in other aspects of their life as students and graduates. The Office of Student Financial Assistance (OSFA) at UCF is responsible for creating a financial literacy program and conveying the importance of the program to the student body.

The significance of financial literacy extends beyond higher education. In fact, national attention has been given to the need for financial literacy. In 2012, the President's Advisory Council on Financial Capability asserted that low financial literacy is a potential liability to American society (Xiao, Ahn, Serido, & Shim, 2014). The Government Accountability Office (GAO) defined financial literacy as "the ability to make informed judgments and take effective actions regarding the current and future use and management of money" (Harnisch, 2010, p. 1). Consequently, a recent national initiative was launched to improve financial literacy (Xiao et al., 2014).

Beyond the general need for Americans to be more financially well informed, university and college administrators recognize the need for students at postsecondary institutions (PSIs) to be more financially literate. Researchers in financial literacy in higher education have suggested that higher tuition costs, declining grant funding, high student consumer debt and student loan debt, and rising student loan debt default rates are prompting higher education officials to acknowledge the need for implementation of financial literacy programs at colleges and universities (Cunningham & Kienzl, 2011; see also Durband & Britt, 2012). The aforementioned factors, along with increased financial pressure and uncertainty about employment opportunities, have fostered a growing impetus for PSIs to create effective financial literacy programs (Harnisch, 2010). Frequently, a university or college's financial aid office hosts and leads financial literacy programs because student debt issues and college costs are often a driving force for financial literacy program implementation (Durband & Britt, 2012).

Students are carrying high student and consumer debt loads than before (Palmer, Bliss, Goetz & Moorman, 2010). Student loan delinquency and student loan default rates remain topics of interest in the higher education arena (Cunningham & Kienzl, 2011). The trend in low financial literacy among students, and the increasing levels of student debt indicate a strong argument for college students to receive financial literacy tools through the colleges and universities (Palmer et al., 2010, p.661). Although many people can be affected by students' lack of financial knowledge and inability to make sound financial decisions, the students themselves are most affected by their financial illiteracy.

Financial literacy is associated with various financial behaviors, including cash-flow management, savings, investing, and credit management (Archuleta, Dale, & Spann, 2013). Unfortunately, college students, like many other young Americans, lack the financial knowledge to make appropriate decisions about their financial futures (Goetz, Cude, Nielson, Chatterjee, & Mimura, 2011). In fact, researchers have suggested high school seniors are unprepared to handle their own finances upon graduation (Avard, Manton, English, & Walker, 2005). The inability to manage one's personal finances effectively can have grave and long-lasting consequences. Lusardi, Mitchell, and Curto (2010) asserted the decisions being made by young people today can affect their long-term financial stability and ability to accumulate wealth. High debt load is one of the major factors contributing to financial anxiety among students (Archuleta et al., 2013). Poor financial decisions are affecting the mental well-being of the young and specifically, of college students (Palmer et al., 2010). According to Archuleta et al. (2013), high anxiety and depression rates, overall stress, and poor academic performance are some of the outcomes associated with financial dissatisfaction.

Figure 1 shows some of the key components contributing to students' lack of financial literacy. In this figure, the pig represents the bank of financial literacy and the coins outside of the piggy bank represent the barriers hindering students from behaving as financially literate individuals.

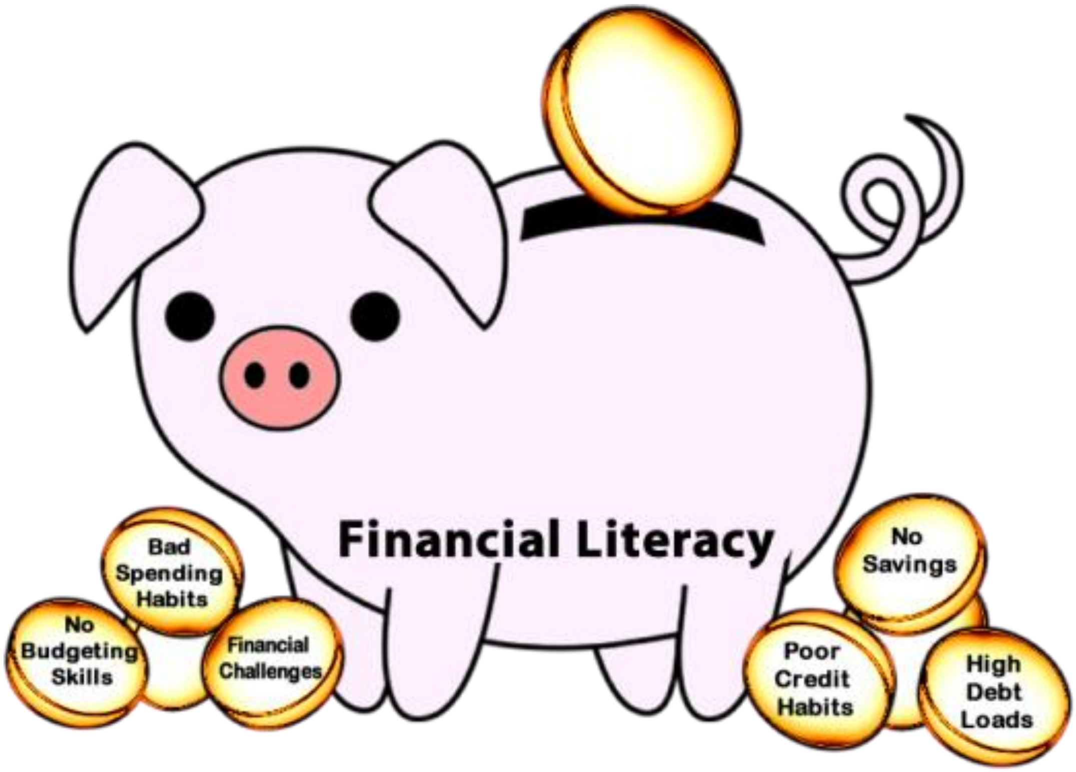


Image created by Author
Figure 1. Students' lack of financial literacy

As student indebtedness increases, concerns are growing about the manageability of student loan portfolios and the impact of student loan debt on the student borrower after college (Cunningham & Kienzl, 2011). Financial literacy is a hot topic in the higher education arena (Durband & Britt, 2012). UCF is ready to follow the current trend in financial aid to provide students with the opportunity to become more financially literate (M. McKinney, personal communication, June 14, 2013). The OSFA has the responsibility of creating a financially literate student body. Although the leaders of the OSFA have recognized the need for the student body to be educated and informed on financial matters (M. McKinney, personal communication, June 14, 2013), the University does not currently have a formalized financial literacy program available to the entire student body.

This dissertation in practice addresses the need for a comprehensive financial literacy program that provides the student body with the opportunity to expand their financial literacy knowledge base at the University Central Florida. The following research question guided this design-based research project:

> Does a comprehensive financial literacy program administered by the Office of Student Financial Assistance increase student knowledge about financial concepts resulting in improved financial behaviors at a large public university in Central Florida?

Organizational Context

To understand the complexity of the problem of practice, one must understand the organization in which the problem is occurring. In 1963, the Florida legislature approved a bill to open a new university to cater to the technological needs of the developing Space Coast. The Board of Control (the present day Board of Regents) selected Orange County as the location. Ground was broken at the 227-acre site on Alafaya Trail in eastern Orange County.

The first classes at the former Florida Technological University (FTU) began in 1968 with 1,948 students (UCF, 2014). Today, UCF (previously FTU) is the nation's second largest university, with over 60,000 students (UCF, 2014). UCF is a one of the 12 universities in the State University System (SUS) in the State of Florida and is considered a large metropolitan research institution (UCF, 2014).

UCF has been under the leadership of President John C. Hitt since 1992 (UCF Office of the President, 2015). I consider Dr. Hitt a transformational leader with vision. Since Dr. Hitt has been president of the university, the institution's enrollment has nearly tripled, new regional campuses have opened, the university has established a medical school, and UCF is recognized as a metropolitan research university with global impact (UCF Office of the President, 2015).

Leithwood and Duke (1998) asserted that transformational leadership focuses on the leader's commitment to members of the organization and personal dedication to the organization goals. Levin (2000) defined *vision* as the direction in which an organization is heading. Under Dr. Hitt's leadership, UCF's vision is evident in his five established goals:

1. Offer the best undergraduate education available in Florida
2. Achieve international prominence in key programs of graduate study and research
3. Provide international focus to our curricula and research programs
4. Become more inclusive and diverse
5. Be America's leading partnership university (UCF Office of the President, 2015)

Dr. Hitt's transformational leadership style seems to keep the University's mission and vision at the forefront of the University's daily operation. According to UCF's mission,

> UCF is a public multi-campus, metropolitan research university that stands for opportunity. The university anchors the Central Florida city-state in meeting its

> economic, cultural, intellectual, environmental, and societal needs by providing high-quality, broad-based education and experienced-based learning; pioneering scholarship and impactful research; enriched student development and leadership growth; and highly relevant continuing education and public service initiatives that address pressing local, state, national, and international issues in support of the global community. (UCF Office of the President, 2015)

For the purpose of this Dissertation in Practice, it is useful to understand how organizations and organizational problems were dissected as a part of my doctoral studies. Bolman and Deal (2008) explained the intricacies of complex organizations through four frames: the political frame, which focuses on power, conflict, and organizational politics; the symbolic frame, which involves the meaning of organizational culture, ceremonies, and rituals; the human resource frame, which highlights the relationships between the organization's people; and the structural frame, which focuses on environment, goals, and social architecture. I utilize Bolman and Deal's structural lens to dissect how the University is organized. According to Bolman and Deal (2008), the structural frame is grounded in six assumptions:

1. Organizations strive to achieve goals and objectives.
2. Specialization and the appropriate division of labor increases efficiency and enhance performance.
3. Diverse efforts of individuals and units mesh through suitable coordination and control.
4. Rationality trumps personal agendas and extraneous pressures.
5. An organization's current circumstances (i.e., goals, technology, workforce, and environment) should govern structural design.

6. Analysis and restructuring can provide remedies for deficient performance, which stems from structural deficiencies.

Ultimately, the assumptions support a “belief in rationality and a faith that a suitable array of formal roles and responsibilities will minimize personal static and maximize people’s performance on the job” (Bolman & Deal, 2008, p. 47). The theoretical foundations of the structural frame provide a more complex understanding for the role of structure within a complex organization. Thus, structure provides an outline of expectations. However, it is important to ensure the appropriate structure is being utilized according to the qualities of the organization. According to Bolman and Deal (2008), two important components of structural design are (a) differentiation, or how work is allocated; and (b) integration, or how collaboration is coordinated. Defining roles is essential in determining differentiation, whereas creating the appropriate groups or departments lays the foundation for successful integration (Bolman & Deal, 2008).

An important aspect of integration is determining how efforts are coordinated. Vertical coordination provides a hierarchical structure, which emphasizes authority, rules, and control system (Bolman & Deal, 2008). An individual’s contribution tends to matter more than his or her title or position within the organization when lateral coordination, which is less formal than vertical coordination, occurs (Bolman & Deal, 2008).

Applying the aforementioned definitions to understand UCF’s daily operations, one can structurally divide the University into divisions and departments. Each division has specific responsibilities that address the needs of the University. Differentiation occurs within each division and department, each having a specific responsibility. However, integration often occurs interdepartmentally as well; divisions collaborate to reach common goals. Both vertical and lateral coordination are employed at the University level. Each division and department has its own mission and vision, which are intended to support the University's mission and vision.

For the purpose of this dissertation in practice, it is useful to understand the mission and vision of the Office of Student Financial Assistance (OSFA) as well as the Student Development and Enrollment Services (SDES) division of which the OSFA is a part. SDES provides its mission statement on the division's website: "The Division of Student Development and Enrollment Services engages students in the total collegiate experience at UCF [UCF] from matriculation, to successful progression, graduation, and employment in a global workforce" (SDES, 2015).

This objective is accomplished by providing opportunities for enriched student development, leadership growth, experience-based learning, values education, and civic engagement, which lead to overall student success (SDES, 2015). At the time of this writing, the mission statement of the Office of Student Financial Assistance was shown on the front page of the OSFA's website:

> The Office of Student Financial Assistance, a unit within Student Development and Enrollment Services, is dedicated to supporting UCF's mission and goals through the efficient delivery of student aid. The Office provides UCF students with a comprehensive offering of financial assistance options to support student success and the attainment of a university degree. (OSFA, 2015)

The financial literacy program designed in this dissertation in practice aligned with the division and departmental missions, because the ultimate goal of the program is to help students be holistically successful by enhancing their financial literacy knowledge base, and ultimately, affecting the students' financial behaviors. Therefore, an understanding of the student body and the functions of the Office of Student Financial Assistance is necessary to implement a comprehensive financial literacy program.

Approximately 71% of UCF's 60,000 students receive at least one form of financial aid (UCF Office of Student Financial Aid Annual Report, 2013). The Office of Student Financial Assistance disburses over $400 million in student aid annually (UCF Office of Student Financial Aid Annual Report, 2013). The annual amount of disbursed financial aid includes approximately $73 million in scholarships; $98 million in state, federal, and institutional grants; and over $244 million in student loans (UCF Office of Student Financial Aid Annual Report, 2013).

Due to the large volume of processing, the Office of Student Financial Assistance is a highly automated department. At the time of this writing, OSFA personnel used the PeopleSoft applications of the Oracle Product Platform. Many processes operated as delivered or modified function of the PeopleSoft system. These automatic processes helped ensure efficiency in the processing and disbursement of student aid (M. McKinney, personal communication, June 14, 2013). In 2013, the Office of Student Financial Assistance facilitated approximately 62,000 student office visits and answered over 26,000 e-mails annually (UCF Office of Student Financial Aid Annual Report, 2013). Although automated processing streamlines much of the financial aid business process, many financial aid tasks require personalized, detailed attention (M. McKinney, personal communication, June 14, 2013).

Beyond processing and disbursing financial aid, financial aid offices are also responsible for ensuring students do not borrow beyond the aggregate federal loan limits established by the U.S. Department of Education (A. Troche, personal communication, June 7, 2013). The aggregate federal loan limit is the total amount of Stafford Loans a student may borrow based on their academic classification and their dependency status for financial aid purposes. The Department of Education established the aggregate student loan limits to mitigate unnecessary student loan debt. The federal student loans include Stafford, Perkins, and PLUS loans (Wei & Skomsvold, 2011). The limits on the annual and total amounts students may borrow in federal student loans are established by legislation (Stoll, 2004). The aggregate federal Stafford student loan limit varies based on whether a student is considered dependent or independent and whether the student is classified as an undergraduate or graduate student (Stoll, 2004). Dependent undergraduate students may borrow up to $31,000 in Stafford loan funds, independent undergraduate students may borrow up to $57,500 in Stafford loan funds, and graduate students may borrow up to $138,500 in Stafford loan funds (Wei & Skomsvold, 2011).

To ensure that federal aggregate limits are enforced, an individual within the OSFA loan department is responsible for reviewing the comprehensive student loan histories for students who are approaching the established aggregate limit. After carefully reviewing each file, the employee must determine the amount of remaining student loan eligibility for each student. During the summer of 2013, a spike in labor-intensive financial aid processing at UCF highlighted a complex problem of practice: 1,700 students on the summer 2013 aggregate loan limit review list required review (A. Troche, personal communication, June 7, 2013). The large number of students on the aggregate loan limit review list prompted concern from the UCF's Assistant Director of Student Loans and the Executive Director of Student Financial Assistance. The aggregate limit review process took nearly six weeks to complete (A. Troche, personal communication, June 7, 2013). The prolonged processing time occurred because of the high volume of students requiring aggregate limit review. Although this situation showed the number of students approaching their aggregate limits was an area of concern, it also affirmed the purpose of the U.S. Department of Education's established aggregate student loan limits for students.

In addition, the large list of students requiring aggregate limit review was indicative of a complex problem facing students and administrators. Students at UCF, like students all over the nation, are borrowing increasingly more in student loans (Institute for College Access & Success, 2015). It became evident that the Office of Student Financial Aid needed to take action to help create a financially literate student body. The increased number of students requiring review before loan awarding, compared to the number of students approaching the aggregate loan limits, prompted leadership in the OSFA to place a stronger emphasis on educating students—especially student borrowers—on financial matters. As a result, in the summer of 2013, a new Assistant Director position was created. One of the main responsibilities of the newly formed position was to design and implement a financial literacy program for the OSFA.

Although the necessity of a financial literacy program was recognized, many organizational factors hindered the launching of a new financial literacy program at UCF. For example, the OSFA had recently been transferred to a different university division. Previously the OSFA was under the Strategy, Communications, Marketing, and Admissions (SCMA) division; however, organizational restructuring revamped the SCMA division to include only communications and marketing. Subsequently, the OSFA became a part of Student Development and Enrollment Services (SDES). The division continued to implement some financial literacy efforts, including a partnership with FAIRWINDS Credit Union and group financial education sessions for some student subpopulations; however, the need for a financial literacy program persisted, magnified by the 2013 review and departmental infrastructure changes.

In addition to the aforementioned divisional change, the OSFA recently experienced a change in leadership. The Executive Director, who worked in the office for over 25 years, retired in early 2014. Additionally, the individual who was hired as the Assistant Director responsible for launching the financial literacy program vacated the position in July of 2014, after holding the position for less than a year. Amid all these organizational changes, the financial literacy program implementation was stalled. However, in February 2015, I accepted the position of Assistant Director, and I am now responsible for launching a comprehensive financial literacy program that is available and accessible to the student body at UCF.

History and Conceptualization

International

The need for financial literacy is widespread (Nicolini, Cude, & Chatterjee, 2013). For example, a study of residents in Shanghai showed some Shanghainese lacked the ability to perform calculations needed to make informed decisions about their financial futures (Chen, Wang, Yang, & Yuan, 2014). Similarly, a study of Israeli college students revealed low levels of financial literacy (Shahrabani, 2013). A comparative study of Canada, the United Kingdom, the United States, and Italy indicated all nations had low financial literacy indices, based on questions on investment, credit inflation, and money management (Nicolini et al., 2013).

Globalization makes financial literacy a pertinent topic for both developed and developing nations. Consumers can now buy financial goods and services regardless of where they live (Nicolini et al., 2013). It has become increasingly more important for citizens of all countries to be able to make sound and informed financial decisions (Lusardi & Mitchell, 2011). Citizens of nations with less sophisticated financial markets now have the opportunity to make complex financial choices (Nicolini et al., 2013).

Research on financial knowledge has been conducted worldwide, and some nations have taken actions to remedy the lack of financial knowledge among citizens. For example, beginning in 2003, Germany, France, Australia, and Canada conducted assessments of their citizens' financial knowledge (Nicolini et al., 2013). According to Bramley (2012), the Canadian Minister of Finance developed a financial literacy taskforce to make recommendations on improving financial literacy among Canadian citizens in 2009. The taskforce provided 30 recommendations for improving financial literacy, including 14 educational initiatives (Bramley, 2012). The Office of Fair Trading in the United Kingdom launched a strategy to deliver effective and coordinated consumer financial literacy education (Brennan & Coppack, 2008). In 2014, the United Kingdom made financial education required in all schools (Financial Corps, 2015). Australia has included financial literacy education as a part of primary and secondary school curriculum (Blue, Grootenboer, & Brimble, 2014). These examples indicate the internationally recognized need for financial literacy programs.

National

In the United States, financial deregulation in the 1970s created opportunities for consumers. In 1978, the Supreme Court case of *Marquette v. First of Omaha* allowed banks to export usury laws of their home states nationwide, resulting in the elimination of usury laws in multiple states (Center for Economic Policy & Research, 2009). This may be considered the beginning of modern deregulation in the financial sector. Deregulation continued throughout the 1980s, 1990s, and the beginning of the 21st century (Center for Economic Policy & Research, 2009). Unfortunately, deregulation of financial services proved perilous for individuals who lacked the financial sophistication to navigate a complex financial market (Mandell & Klein, 2009). Some have blamed the U.S. financial crisis of the late 2000s on erroneous decisions made at the household level by consumers who lacked financial knowledge (Alhenawi & Elkhal, 2013). Others have attributed the financial crisis of the early twenty-first century to the unscrupulous behaviors of bankers and mortgage brokers who granted credit to financially high-risk individuals (Eades, 2012).

Consumers' inability to make sound financial decisions has a negative consequence on the entire economy (Mandelll & Kein, 2009). The President and the Secretary of the Treasury Department recognized the need to improve Americans' financial literacy by creating an Office of Financial Education and the President's Advisory Board on Financial Literacy (McWilliams, 2008). In addition, nonprofit organizations (NPOs) and nongovernmental organizations (NGOs) have attempted to address the need for financial literacy. Eades (2012) provides information on two prominent financial literacy initiatives: Jump$tart Coalition for Personal Financial Literacy is a well-known NPO consortium of over 150 partners dedicated to improving the financial literacy of prekindergarten children to college-age youth and The National Endowment for Financial Education (NEFE) is the leading national NPO dedicated to financial literacy for individuals and families at every stage in life. The founders and members of these organizations and financial literacy programs seek to encourage wise financial decisions and positive financial behaviors through education (Eades, 2012).

Researchers have indicated there are various subpopulations of United State citizens who have low levels of financial literacy (Lusardi & Mitchell, 2014; see also Goetz et al., 2011). Lusardi, Mitchell and Curto (2010) assert young Americans fall into a subpopulation in need of financial literacy. Similarly, Letkiewicz and Fox (2014) assert that young Americans, as a demographic group, require special attention in terms of financial literacy. Some states have recognized the need to educate young people on financial matters and have begun to include financial literacy in K-12 curriculum (Mandell & Klein, 2009). The educational role of institutions in financial literacy is a growing topic of interest for researchers and practitioners. It has been found that financial literacy and financial knowledge are positively correlated with sound financial behavior (Mandell & Klein, 2009). Further, one of the responsibilities of the education industry is to promote the teachable skills needed to develop individuals' ability to make prudent financial decisions (Eades, 2012).

In higher education, financial literacy is a growing concern for both students and administrators (Durband & Britt, 2012). Based on my personal observations as a financial aid professional, I have noticed that financial literacy programs are becoming more prevalent on the campuses of institutions of higher education. Some of the research on student loans focuses on rising student loan indebtedness, which some attribute to increasing college costs. For example Houle (2014) asserts rising costs causes students and parents to assume student loan debt to pay for educational expenses. Increased college costs have shifted the majority of financial aid funding from grants to loans (Gross, Cekic, Hossler, & Hillman, 2009). Nearly two thirds of students attending four-year institutions borrow federally funded loans to assist with educational expenses (Wei & Horn, 2013). The United States currently holds a student loan debt portfolio of is estimated at $1 trillion; the average undergraduate student loan borrower acquires is estimated to be over $23,000 in federally funded student loans (Burke & Butler, 2012). Wei and Skomsvold (2011) indicated that 45% of Stafford loan borrowers in the 2007–2008 academic year exhausted their annual limit by borrowing the maximum annual amount allowed. Table 1 shows the aggregate Stafford loan limits, the subsidized allowable amount, and the total amount allowed.

Table 1

Aggregate Stafford Loan Limits

Student Classification	Subsidized Amount Allowed	Total Amount Allowed (Subsidized and Unsubsidized)
Dependent undergraduate	$23,000	$31,000
Independent undergraduate	$23,000	$57,500
Graduate student	$65,500	$138,500

Note: Adapted from the "Federal Student Aid Handbook" by The U.S. Department of Education. Retrieved from www.ifap.ed.gov

Lawmakers included student loan default rate legislation in the Higher Education Act (HEA) of 1965 (Pinto & Mansfield, 2006). The HEA is the body of legislation that governs various aspects of higher education, including federal student aid, which is regulated by Title IV of the HEA (U.S. House of Representatives Office of Legislative Counsel, 2015). The need to focus on student loan default rates in the HEA is supported by the fact that an estimated 7%-10% of undergraduate borrowers face difficulty repaying their student loans (Pinto & Mansfield, 2006). Managing student loan portfolios is becoming increasingly more difficult for student loan borrowers (Wei & Horn, 2013).

In addition, the U.S. Department of Education has placed an emphasis on schools' management of student loan defaults. The Department of Education expects financial aid offices to have a student loan default prevention strategy, as PSIs can experience sanctions and even lose their eligibility to award aid because of high default rates (Pinto & Mansfield, 2006). Thus, postsecondary institutions are becoming increasingly aware of cohort default rates (CDRs).

Cohort default rates are the measure utilized by the U.S. Department of Education to gauge an institution's percentage of defaulted borrowers (The Institute of College Access & Success, 2015). CDRs provide accountability to the Department of Education and the public regarding how well an institution has prepared its student borrowers for repayment (Looney, 2011).

Concern is growing that student loan debt is affecting borrowers' ability to purchase homes, move out of their parents' homes, and grow their families (Simpson, Smith, Taylor, & Chadd, 2006). Providing students with financial literacy programs is a proactive measure institutions can take to address the student loan default problem and other financial issues students may face (Looney, 2011). In fact, student financial literacy has become a key area of focus for universities, especially, financial aid offices. Creating a responsible and financially secure alumni base is in the best interest of universities (Durband & Britt, 2012).

Local

In 2014 and again in 2015, the Florida State Legislature attempted to include financial literacy standards in the K-12 curriculum (Florida Legislature, 2015). The legislature proposed successful completion of a financial literacy course as an additional requirement for high school graduation and receipt of a standard high school diploma (Florida Legislature, 2015). However, in both attempts, the bill did not make it beyond the K-12 education subcommittee (Florida Legislature, 2015).

Postsecondary institutions in Central Florida have addressed the need for financial literacy in a variety of ways. For example, Valencia College launched a peer-to-peer financial literacy program in which students are educated on financial literacy and trained as mentors to share their knowledge with other students (Valencia College of Office of Financial Aid, 2015).

Seminole State College launched a financial literacy resource website that includes a financial literacy guide covering budgeting, saving, and understanding credit (Seminole State College Office of Financial Aid, 2015).

At UCF, current efforts to address the need for financial literacy include financial literacy education offered via the federal grant-funded TRIO programs. TRIO programs are intended to meet the specific needs of disadvantaged students (Department of Education, 2015). A stipulation of the grant funding is that students who participate in these programs are expected to gain some level of financial literacy (U.S. Department of Education, 2015). Additionally, SDES's partnership with FAIRWINDS Credit Union has produced multiple financial literacy programs throughout the academic year for a variety of subpopulations of the student body, such as transfer students and incoming freshmen.

Although these efforts may be effective in reaching certain groups of students, UCF currently lacks a comprehensive financial literacy program available to all students. Three main factors—(a) international research on how financial education helps to produce better citizens; (b) national leaders' recognition that the lack of financial knowledge has been a detriment to many U.S. citizens; and (c) the University administrators' understanding that financial literacy is a beneficial tool for students—support UCF's need to implement a comprehensive financial literacy program.

Factors Affecting the Problem

Some subgroups of the American population appear to need financial literacy more than do members of the general population (Lusardi & Mitchell, 2014). One of the subgroups that appears to lack the financial literacy competency needed to navigate the complexity of financial decisions is young Americans, including college students (Lusardi et al., 2010). Supporting studies indicate a need for financial literacy among American college students (Goetz et al., 2011). Further, a lack of mathematical comprehension, an important factor in achieving financial literacy, appears to compound the need for financial literacy (Lusardi & Wallace, 2013).

Individuals must understand numeracy and other simple mathematical computations in order to have good understanding of financial literacy (Lusardi & Mitchell, 2014). Students' difficulties with financial literacy concepts are partly a result of poor quantitative math skills and math anxiety (Lusardi & Wallace, 2013). Bartley (2011) examined student financial literacy levels, dividing financial literacy into three subgroups: basic financial literacy, student loan knowledge, and credit card knowledge. Results were scored using percentage points out of 100 (Bartley, 2011). The results indicated a mean score of 28.0% for questions related to basic financial literacy (Bartley, 2011). Bartley asked questions about basic financial literacy to evaluate the students' ability to calculate simple interest; to determine whether the students understood annual percentage rates; and to discern if the students were aware of their right to check their credit histories. The students in Bartley's study sample scored on average 24.7% on questions related to student-loan knowledge. These questions assessed whether the student could (a) identify the differences between federal student loans and private student loans; (b) explain the difference between subsidized student loans and unsubsidized student loans; and (c) understand loan repayment terms (Bartley, 2011). The questions related to credit card knowledge overlapped the other two areas; the mean score for credit card knowledge was 28.7% (Bartley, 2011).

Another factor affecting the problem was students' attitudes toward financial situations, maintaining a good credit standing, and being in debt. Pinto and Mansfield (2006) evaluated the attitudes of financially at-risk students. Financially at-risk students possessed at least one of the following four requirements:

1. Credit card balances exceeding $1,000
2. Credit card delinquency of two months or more
3. Credit card balances at the maximum limit
4. Inconsistent or nonexistent credit card balance payment (Pinto & Mansfield, 2006)

The researchers found 69.5% of the financially at-risk students in the sample of 1,441 students had incurred student loan debt (Pinto & Mansfield, 2006). Additionally, students identified as financially at-risk borrowed more in student loan debt and had higher outstanding credit card balances than did students who were not considered financially at-risk (Pinto & Mansfield, 2006). The researchers also evaluated students' attitudes about student loan repayment: The findings of the study indicated that financially at-risk students did not view repayment of student loan debt as a priority (Pinto & Mansfield, 2006).

With rising student loan indebtedness, researchers have begun to explore the impact of a high debt load on students and graduates. Student and parental attitudes about incurring debt have shifted since the turn of the century (Simpson et al., 2012). Borrowing from student loan programs was once seen as a last resort; however, it has now become the norm (Stoll, 2014). Students and parents generally accept debt and credit as a part of being a modern consumer (Simpson et al., 2012). In addition to student loan debt, the average college graduate also has incurred approximately $4,100 in credit card debt (Bartley, 2011). Borrowing student loans and utilizing consumer debt has become such a normative practice that some have called young adults "Generation Debt" (Pinto & Mansfield, 2006, p. 22).

Rising tuition costs and increased debt are only two factors among many complex financial decisions college students face. College students are often in a new environment, forced to make financial decisions they are not used to making on their own. In fact, deciding whether to invest in one's education is one of the first complex financial decisions a student must make (Goetz et al., 2011). The complexity of financial products and consumers' lack of understanding of simple economic concepts like compounding interest has resulted in some negative outcomes for certain consumers (Lusardi & Mitchell, 2014). Young Americans have been disproportionately affected by their lack of knowledge in a complicated financial system (Letkiewicz & Fox, 2014). However, though college students may lack the skills and knowledge needed to be considered financially literate, they are intellectually capable of becoming financially literate (Jobst, 2012).

Financial literacy programs represent a way to influence students' financial knowledge, attitudes, and behaviors via education. Fortunately, a national movement exists toward creating a financially literate population. For example, in 2010, the Obama Administration issued the following statement: "The lack of financial literacy among American youth is the next major crisis that will plague the economy in the future if we don't act now as a nation" (Bartley, 2011, p. 1). Because of the focus on financial literacy, some community-based organizations have added financial literacy to their mission and goals, and postsecondary institutions have been seeking ways to integrate financial literacy into the student experience (Bartley, 2011). Financial literacy is intended to increase financial knowledge and have a long-term effect on financial behaviors (Robb & Woodyard, 2011).

Program Design

Colleges and universities have a unique opportunity to provide leadership in the national financial literacy campaign by creating financially literate student bodies (Harnisch, 2010). Many ongoing efforts on the UCF campus have addressed financial literacy. For example, the Division of Student Development and Enrollment Services currently have a partnership with FAIRWINDS Credit Union to provide financial literacy information to various subpopulations of the student body. In addition, students who participate in the TRIO grant programs on campus are exposed to financial literacy information via online tutorials. Peer mentors on campus receive training in financial literacy in case a student they are mentoring needs financial literacy advice. Although each of these efforts is valuable in isolation, a concerted campus-wide comprehensive financial literacy program is needed.

The project undertaken for this dissertation in practice produced a financial literacy model that includes the topics of budgeting, debt management, saving strategies, protecting one's financial information, and using credit wisely. The subject matter of the financial literacy program was adapted from the National Standards on Financial Literacy developed by the Council for Economic Education and served as the program model's guide.

The product resulting from this dissertation in practice provides a foundation for resolving the organizational problem of practice. As of this writing, development of the financial literacy program is underway. The program model will be available to all students at the university. The program will include interactive financial literacy modules available online as well as a series of face-to-face instructional sessions covering subject matter complementary to the online modules.

The Office of Student Financial Assistance (OSFA) at UCF was eager to launch a comprehensive financial literacy program that will be accessible to the entire student body. To this end, the office established an Assistant Director position; this person has the primary responsibility of facilitating financial literacy for the student body at the University. However, other stakeholders are also incorporated in the program model.

Key stakeholders for this dissertation in practice include leadership and staff in the Office of Student Financial Assistance. As mentioned previously, other University administrators are important stakeholders in creating a financially literacy program; as mentioned, it is in the best interests of the university to have a financially literate student body. Student loan repayment servicers and the U.S. Department of Education are also key stakeholders: Research indicates financially educated students are less likely to default on student loans (Looney, 2011). However, the stakeholders who will benefit directly from an effective comprehensive financial literacy program are the students who will participate in the program.

Focus groups of students were utilized to assist with development of the program model. The focus groups provided valuable constructive feedback in the form of qualitative data. Because of time constraints, the tangible deliverables for this dissertation in practice did not include full implementation of the proposed financial literacy program. However, a model for a comprehensive financial literacy program was produced. I present the model in Chapter 2. The model includes the key features of the program, goals of the program, a design strategy. The discussion includes the reasons the selected design model is significant.

CHAPTER TWO: FINANCIAL LITERACY MODEL DESIGN

Design Context

Because many students lack the knowledge needed to make informed financial decisions, and because they are often faced with complex financial situations, in this dissertation in practice, I propose the development of a comprehensive, relatable, and accessible financial literacy program for college students. The model designed for this dissertation in practice addresses the financial literacy needs of the student body at a large, diverse, public postsecondary institution of higher education. Although I designed this model using UCF (UCF) as the organizational context, the model's design context relies on universal concepts generally applicable to other postsecondary institutions.

Research indicates a general need among Americans for financial literacy, from elementary school students to senior citizens (Mandell & Klein, 2009). College students need financial literacy programs specifically targeted to them as they face mounting debt and difficult financial decisions. College and university administrators have recognized the need to create financial education opportunities specifically tailored for students (Durband & Britt, 2012).

At the onset of this design project, I conducted a brief researcher-designed survey in the Office of Student Financial Assistance (OSFA) at UCF. The survey was administered to a small convenience sample of OSFA student employees consisting of undergraduate students ranging from freshmen to seniors. All the students were financial aid recipients.

I used the survey to gauge perceptions about students' financial literacy levels, the need for financial literacy, and financial literacy delivery methods. Answers were based on a Likert scale of 1 to 5, where 5 indicated *strongly agree* or *highly likely*, depending on the question. The survey results were not tested for significance. Instead, I used the results to get a feel for students' thoughts about financial literacy delivery methods.

The results showed students recognized the need for additional financial education for the student body. The results also indicated students were likely to utilize a financial literacy website as a method for receiving information. Key results are shown in Table 2. The results are reported as an aggregate of mean score based on a 1 to 5 Likert scale.

Table 2

Survey Results

Question	Score
Please indicate your level of agreement with the following statement: "Additional information on financial matters would be helpful to the student body as a whole."	4.14
Please indicate the likelihood of you visiting the Office of Student Financial Aid's website to get information on financial literacy.	4.00
Please indicate the likelihood of you participating in face-to-face financial literacy sessions hosted by the Office of Student Financial Aid.	3.86
Please indicate the degree to which you agree with the following statement: "My peers (fellow students) appear to be financially savvy/responsible."	3.71
Please indicate how likely you are to complete an online learning module about managing your finances.	3.29

UCF is the nation's second largest university, with over 60,000 students. Students from all 50 states and over 100 countries attend UCF (University of Central Florida Admissions Office, 2015). In 2013, approximately 75% of UCF students received financial aid (University of Central Florida Admissions Office, 2015). Approximately half of the student body borrowed student loans (Office of Student Financial Assistance Annual Report, 2013). Students who received degrees from UCF in 2013 borrowed an average of $23,186 (Institute for College Access and Success, 2015). In consideration of the large and diverse student population, the model designed for this dissertation in practice utilized student personas as a representation of the student body. These personas were created to ensure the model designed was relatable to the diverse population of students attending UCF and similar institutions.

Personas

Three fictitious student personas represent the student population. First, Brielle is a 19-year-old undergraduate student who is enrolled full-time at UCF. She is a first generation college student, who receives some need-based gift financial aid. She is a student loan recipient who currently carries $17,000 in federal student loan debt. As a member of "Generation Debt," Brielle is comfortable with having consumer debt in addition to her student loan debt. In general, Brielle lacks the knowledge and tools to make complex financial decisions.

George is a 32-year-old doctoral student who also works full-time. George does not utilize a budget to manage his finances and often makes impulse purchases. George currently holds a mortgage of $190,000, has $20,000 in consumer debt, and owes $60,000 in student loan debt. Despite George's insurmountable debt load, he feels he is in good command of his financial situation and does not need financial literacy tools from the University.

Annette is a 45-year-old, nontraditional, part-time undergraduate student. In addition to taking at least two classes each semester, Annette maintains steady part-time employment. Annette applies for and receives multiple scholarships annually. Annette is uncomfortable with debt; hence, she does not utilize credit cards and has no student loans. Annette has a strong interest in learning more about financial literacy.

Theoretical Underpinning

The financial literacy program model designed for this dissertation in practice incorporated self-determination theory (SDT) as a foundation. As a practitioner, I have observed low active participation by students in previous financial literacy initiatives. From personal communications with other practitioners, I found a consensus that students who could benefit most from financial literacy were often least likely to participate in financial literacy programming.

Self-determination theory is a learning motivation theory rooted in three major concepts: autonomy, competence, and relatedness (Ryan & Deci, 2000a). Liu et al. (2013) provided definitions for Ryan and Deci's three concepts. Autonomy was defined as an "individual's perception that his or her action is self-originated" (p. 339). One aspect of autonomy is choice—when learners are presented with choices, they are more likely to be motivated about the given activities (Brooks & Young, 2011). Competence is achieved when "optimal challenges meet personal capabilities" (Liu et al., 2013, p. 339). The third concept, relatedness, was described as "the sense of being unified with others" (Liu et al, 2013, p. 339). The notions of relatedness and competence lead to student empowerment, and empowerment in turn can result in changes in day-to-day actions (Brooks & Young, 2011).

When these three innate psychological needs—autonomy, relatedness, and competence—are met, self-motivation is enhanced (Ryan & Deci, 2000a). Motivation is often described as a continuum where amotivation is the lowest level of motivation, at which an individual is not compelled to act (Brooks & Young, 2011); intrinsic motivation, in contrast, is the highest level of motivation, defined as "the inherent tendency to seek out novelty and challenges" (Ryan & Deci, 2000a, p. 70). Self-determination theorists have suggested that meeting the three psychological needs postulated in this theory fosters personal well-being and helps to achieve intrinsic motivation.

Beyond intrinsic motivation, SDT theorists have contended that the concept of extrinsic motivation, defined as "acting to gain approval from others or for some external outcome" (Brooks & Young, 2011, p. 49), and self-regulation are supported by the tenets of self-determination theory (Ryan & Deci, 2000a). Although little research exists on self-determination theory as it relates to financial literacy, student motivation to participate in the financial literacy program, as well as modified behaviors, are key elements of effective financial literacy (Hastings, Madrian, & Shimmyhorn, 2013).

Key Terms

This section provides definitions of terms frequently used regarding higher education financial literacy program development. My intention in defining these terms is to provide the reader with the necessary knowledge of the terminology utilized in the dissertation in practice. The definitions for the terms are listed alphabetically.

Aggregate loan limit. The aggregate loan limit is the maximum outstanding total subsidized and unsubsidized Stafford loan debt (Federal Student Aid, 2014).

Cohort default rate (CDR). The cohort default rate is the percentage of a school's borrowers who enter repayment on certain Federal Family Education Loans (FFELs) and/or William D. Ford Federal Direct Loans (Direct Loans) during that fiscal year and default (or meet the other specified condition) within the cohort default period. The cohort default period is currently three years (Federal Student Aid, 2014).

Consumer debt. Consumer debt is debt acquired to obtain consumer goods, for example, credit card balances, automobile loans, personal loans, and other installment debt (Dean, So-hyun, Gudmunson, Fischer, & Lambert, 2013).

Default. Under section 435(l) of the Higher Education Act (HEA) of 1965, as amended, a borrower in default is one who is 270 or more days past due in repaying a Federal Family Education Loan (FFEL) Program Loan or a William D. Ford Federal Direct Loan (Direct Loan) Program Loan (Federal Student Aid, 2014).

Financial literacy. Financial literacy includes the knowledge, skills, confidence, and motivation necessary to manage money effectively (Remund, 2010).

Generation Debt. "Generation Debt" refers to the young adult segment of the American population that is comfortable with being in debt (Pinto & Mansfield, 2006).

Gift aid. Gift aid is financial aid funding that does not have to be repaid (College Board, 2015).

Loan servicer. A loan servicer is a company that collects payments, responds to customer service inquiries, and performs other administrative tasks associated with maintaining a federal student loan on behalf of a lender (Federal Student Aid, 2015).

Need-based aid. Need-based aid is financial aid awarded to a student based on the student's financial need (Federal Student Aid, 2015).

Postsecondary institution (PSI). A postsecondary institution refers to an institution providing education beyond the high school level. The term refers to trade and technical schools, two-year colleges, community colleges, and four-year colleges and universities (Federal Student Aid, 2014).

Subsidized loan. A subsidized loan qualifies for a federal interest subsidy during in-school status, grace periods, and authorized deferment periods (Federal Student Aid, 2014).

Unsubsidized. An unsubsidized loan does not qualify for a federal interest subsidy during any period (Federal Student Aid, 2014).

Key Design Elements

Financial literacy models in higher education typically fall into one of four categories: (a) financial education/counseling centers; (b) peer-to-peer programs; (c) programs delivered by financial professionals; and (d) distance learning programs (Alban, Britt, Durband, Johnson, & Letcher, 2014). Some research indicates that students appreciate receiving financial literacy through a variety of delivery formats (Alban et. al, 2014). These delivery features include but are not limited to web-based financial literacy programming and face-to-face financial education (Durband & Britt, 2012). Goetz, Cude, Nielsen, Chatterjee, and Mimura (2011) found that college students are most interested in receiving financial literacy information using online resources and student workshops as the delivery methods.

Website

One of the main offerings of financial literacy programs is that they are able to provide program participants with a plethora of information (Organization for Economic Co-operation, 2005). For large student bodies, websites serve as useful tools for providing financial literacy information (Durband & Britt, 2012). According to Lidwell, Holden, and Butler (2003), people tend to view aesthetically pleasing design features as easier to use than less aesthetic designs. Additionally, attractive design elements help to create positive attitudes about the activities being performed. This phenomenon is referred to as the *aesthetic-usability effect* (Lidwell et al., 2003). The utilization of appropriate aesthetic features can increase the impact of the program (Lidwell et al., 2003).

According to Lidwell, Holden and Bulter's *Universal principles of design: 100 ways to enhance usability, influence perception, increase appeal, make better design decisions, and teach through design*, likable aesthetics can also increase the usability of the program. For example, appropriate colors and symbols are key components of visual aesthetics (Lidwell et al., 2003). Aesthetic usability is specifically applicable to the proposed financial literacy website because the website is a key element of the model design. Thus, appropriate aesthetic features were considered during the development of this financial literacy model to optimize usability for the end user.

Modalities

The financial literacy program model for this dissertation in practice is a mixed-mode financial literacy program. Offering financial literacy in multiple modalities affects the accessibility of the program for the student body. Presenting financial literacy information in different modalities increases the impact of financial literacy programs (Alban et al., 2014). Offering different financial learning modalities enables students to access financial literacy information via their method of choice (Goetz et al., 2011).

The financial literacy model for this dissertation in practice includes interactive online tutorials accessible via the financial literacy website. The online component uses best practices in financial literacy online education, as outlined by the 2014 Collaboration of Higher Education Assistance Organization Financial Literacy Task Force. Alban et al. (2014) indicated best practices for web-based financial literacy include using multimedia, incorporating real life scenarios, and employing adaptive learning in which the information supplied to the student is malleable and dependent on student learning.

The development of interactive web-based financial literacy modules requires expertise in instructional design and development as well as knowledge of the financial literacy content. Many colleges and universities have purchased learning management systems (LMS) for online content delivery (Kats, 2010). A LMS allows development of interactive online content (Kats, 2010). Therefore, a LMS was used to develop the online component of the financial literacy model. Through the LMS, students will be able to learn at their own pace while being stimulated with interactive learning tools. The modules employ cognitivism, represented by the learner's ability to incorporate prior knowledge into the learning experience, and constructivism, delivered via the simulation of real-life scenarios that build upon the learner's past experiences to develop new knowledge (Isman, 2011).

Mandell and Klein (2009) suggested presenting financial information in an interactive and entertaining manner increases the effectiveness of financial literacy courses. The online components of the financial literacy model are interactive and utilize multimedia such as animation, videos, and games. Students will receive real-life scenarios via interactive content in which they demonstrate educated financial decision making by applying the subject matter of the module to the scenario. These self-paced online tutorials employ adaptive learning to ensure students are receiving the necessary feedback and content matter for the learning. However, researchers have noted that providing financial literacy solely in an online modality can have drawbacks (Alban et al., 2014).

The major shortcoming of online learning tools is the lack of human interaction (Alban et al., 2014). Hence, in addition to the online module, the Office of Student Financial Assistance will offer face-to-face financial literacy workshops each semester. The information offered in the workshops will complement the online platform.

Students do not need to participate in both online tutorials and the workshops to have a valuable experience. Having face-to-face financial literacy workshops fosters university buy-in from administrators, faculty, and students. Additionally, there is the potential of reaching a large number of students with an event. Best practices with face-to-face workshops include making the workshops a well-publicized event, creating fun and interactive material, and providing incentives such as food, extra-credit, or prizes (Alban et al., 2014).

To address these best practices, the model designed in this DIP includes a marketing campaign presented through social media, print material, e-mail blasts, and student-organization collaborations. The workshop also includes interactive activities such as games and real-world scenarios for workshop attendees. Refreshments and other incentives will be provided to increase program participation.

Partnerships

Although the development of this program is primarily the responsibility of the Office of Student Financial Aid, collaborating with external and internal stakeholders could enhance the program (Durband & Britt, 2012). For the purpose of this dissertation in practice, partnerships will focus on increasing program visibility, increasing student participation in the financial literacy program, and providing supplemental information for the financial literacy program. Some potential partners include student organizations and student-serving campus departments such as Academic Advising, Student Accounts, Career Services, and Housing and Resident Life. Other potential partners include student loan companies such as Texas Guaranty Agency, Nelnet, Sallie Mae, and USA Funds; consumer banks, for example, Wells Fargo; the Department of Education (U.S. and/or Florida); and course instructors (particularly for Life Skills classes offered to incoming freshman). McWilliams (2008) listed various types of collaborations as best practices for financial literacy on a college campus.

The partnerships created with student organizations and campus departments could help facilitate a sense of relatedness, as defined in self-determination theory, for students participating in the financial literacy program. The business sector partnerships are intended to strengthen the program's resources. Through these partnerships, a financial literacy network will be created. Horizontal collaboration through networks and partnerships has proven to be an effective method in implementing new programs in a variety of fields (Wallace, 2009). Therefore, the financial literacy network should include student representatives, University of Central Florida alumni, and staff members from various departments on campus including Student Financial Assistance, Advising Offices, Housing and Student Accounts. Community partners such as banking and student loan companies are also included. Through collaboration, the impact of the financial literacy program will be enhanced (Durband & Britt, 2012).

Model Content

To optimize the learning experience, appropriate content must be presented. In 2013, the Council for Economic Education developed a framework called the National Standards for Financial Literacy (Bosshardt & Walstad, 2014). The standards provide a content outline helpful for individuals developing financial literacy programs. Based on the national standards, six general financial topics should be addressed in financial education: earning income; buying goods and services; saving; using credit; financial investing; and protection and insurance (Bosshardt & Walstad, 2014). Similarly, the U.S. Department of Treasury's National Strategy for Financial Literacy outlines saving, borrowing, protecting, earning, and spending as the core competencies needed for financial literacy (Perry, Jasper, Pellegrini, Alban, & Huffman, 2012). I considered these national guidelines and the context of the organization to ensure the financial literacy model covered the following topics and intended learning outcomes:

1. Healthy spending habits: learning how to budget; understanding needs vs. wants; comparison shopping; managing a checking account
2. Developing a saving strategy: long-term and short-term goals; interest accrual; types of savings accounts; penalties for withdrawal
3. Being an informed borrower: interest capitalization; debt reduction; student loan repayment options; student loan default management; understanding various types of credit; credit reporting

4. Protecting one's finances: types of insurance; identify-theft prevention; protecting financial information
5. Understanding earnings: calculating net pay; federal and state taxes; cost-of-living salary comparisons; average salaries based on occupations
6. Investing wisely: investment terminology; investment strategies; types of investment tools

Interactive participation helps to promote retention of information while holding the learners' attention and keeping them engaged (Durband & Britt, 2012). Interactive tools such as real-life simulations, multimedia, adaptive learning in online modules, and face-to-face seminars will assist in creating a financial literacy program in which students enjoyed engagement. Employing interactive learning tools, including multimedia and games, will help create active and experiential learning experiences for program participants. Positive interactive experiences can help to reduce learner anxiety and enhance the learning experience (Alban et al., 2014).

The content of this model should provide students with a robust understanding of a variety of financial matters. Figure 2 shows the subject matter covered by the financial literacy model. In this figure the pig represents the bank of financial knowledge needed for students to be considered financially literate and the coins represent the subject skills that students will acquire via the module content proposed in this model. Table 3 shows the learning objectives and suggested activities for each module.

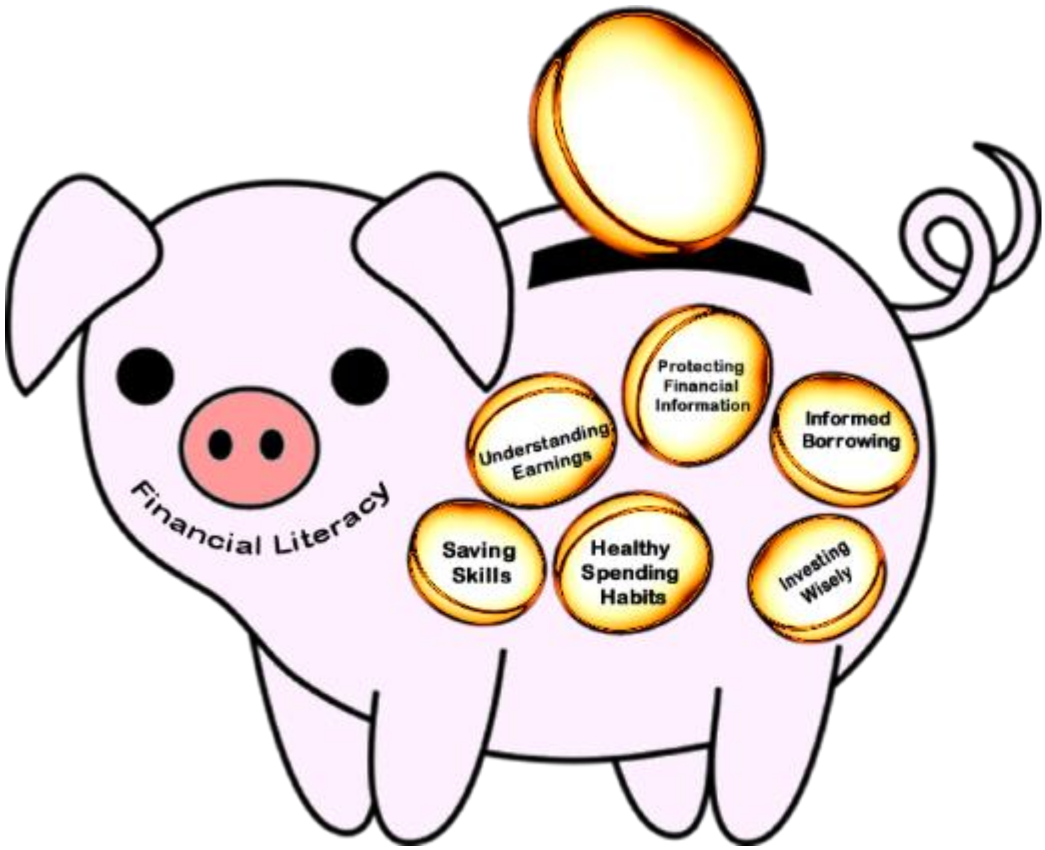


Image created by author
Figure 2. Financial literacy model content

Table 3

Learning Outcomes and Suggested Activities

Session Title	Learning Objectives: Students will be able to…	Suggested Activities
Developing healthy spending habits	• Understand needs vs. wants • Balance a checkbook • Create a budget • Comparison shop	• Students will engage in an interactive game to identify needs vs. wants • Student will complete a checkbook balancing activity using a sample checkbook ledger with multiple deposits and withdrawals • Students will participate in an interactive real-life simulation one month of spending for tracking purposes • Students will develop the components of a monthly budget • Students will participate in an interactive game that utilizes coupon savings, unit price assessment and other comparison shopping strategy will be utilized
Developing a saving strategy	• Understand short-term and long-term savings goals • Differentiate between the various types of savings tools and account types • Understand compounding interest • Recognize withdrawal penalties	• Students will identify short-term and long-term personal savings goals • Students will be given information using multimedia platforms on various savings plans and participate in simulation that allows them to select savings account based on their savings goals • Students will participate in a real-life simulation of how interest compounds in various savings accounts will be used • Student will participate in an interactive real-life simulation of balance decreasing as a result of withdrawals
Protecting one's finances	• Recognize personally identifiable information • Understand measures needed to protect financial information • Know what agencies can assist if financial information is compromised • Identify various types of insurance	• A simulation utilizing real-life scenarios will be used to detect personally identifiable information • Students will learn various strategies to protect financial information and be given resources to protect financial information and rectify any financial fraud • Students will participate in an interactive game about identifying types of insurance as well as the benefits and drawbacks of the various types

Session Title	Learning Objectives: Students will be able to…	Suggested Activities
Understanding earnings	• Differentiate between gross salary and net pay • Understand the costs associated with employee benefits • Complete a W-4 form • Understand federal and state income taxes • Conduct cost of living salary comparisons	• Students will receive simulated pay check records • Students will receive information on federal and state income tax utilizing multimedia • Student will engage in a real-life simulation to complete a W-4 form • Students will engage in an interactive game to identify the best job offer based on salary being offered and job location
Being an informed borrower	• Understand interest capitalization and accrual • Develop strategies for debt reduction • Recognize student loan repayment options • Know ways to avoid student loan default • Comprehend consumer credit reporting • Recognize signs of predatory lending	• Students will participate in a real-life simulation demonstrating how capitalized interest is added to outstanding principal balances • Students will be given information on reducing debt and develop a personal debt reduction strategy using multimedia platforms • Students will engage in a real-life simulation in which they will select monthly payment amounts to pay down debt • Students will learn about various student loan repayment options; what tools are available to them; and develop a student loan repayment plan • Students will utilize real-life simulations to understand the components of credit reporting including types of credit, reporting cycle, and derogatory information • Real-life scenarios will be utilized to present various predatory lending practices to students
Investing wisely	• Recognize key investing terminology • Identify tools of investment • Understand investment strategies • Identify signs of Ponzi schemes and other unsavory investment strategies	• Students will engage in an interactive games which demonstrates their ability to recall key investment terms • Students will receive information tools available for investment • Students will use real-life simulation to develop a personal investment strategy with simulated outcomes • Students will use real-life scenarios to determine if particular situations present legitimate investment opportunities

Student learning will be assessed based on the outlined learning objectives. Learning assessment for the online modules will be administered throughout the modules with quiz-like questions. Based on the participants' responses, the online modules use adaptive learning techniques that may include revisiting previously presented material. Best practices indicate students who score less than 70% on financial literacy assessments should be encouraged to review the material again and retake the assessment, because repetition aids with mastery of the material (USA Funds, 2015). The face-to-face sessions will employ a classroom response system (CRS) in which participants will receive a "clicker," which will allow them to respond to instructor-led learning assessment questions (Vanderbilt University, 2015). A CRS allows the instructor leading the face-to-face session to receive immediate feedback on the learners' understanding of covered content and apply adaptive learning techniques as needed (Carnegie Mellon, 2015).

Design Impact

The model design incorporates many of the best practices outlined by both scholars and practitioners, such as offering financial education opportunities in multiple delivery methods, utilizing collaboration, incentivizing student participation, and leveraging partnerships on and off campus (Durband & Britt, 2012; see also Alban et al., 2014). This model is significant because it utilizes two modalities for financial literacy delivery, which optimizes accessibility for a large, diverse student population while giving students choice in the delivery method which promotes autonomy, a component of self-determination theory (Ryan & Deci, 2000b). Durband and Britt (2012) suggested a multipronged approach to improving financial literacy. Collaboration was noted as a best practice for effective financial literacy programs (Alban et al., 2014).

Collaboration, particularly with registered student organizations, could increase student relatability/relatedness and garner student buy-in for the financial literacy program. The content of the material will be delivered in a manner that enhances students' competence.

The significance of the module design will be confirmed through increased student autonomy, relatedness, and competence, the key elements of self-determination theory. The program model was designed to foster student motivation to participate in financial literacy programs and thus increase their financial knowledge and enhance their ability to make positive financial decisions. The model is intended to be utilized for the implementation of comprehensive, relatable, and accessible financial aid literacy programs.

A Similar Program

The trend in implementing financial literacy programs at postsecondary institutions has proven to be a valuable service to students. Many universities and colleges have implemented financial literacy programs. For example, at the University of North Texas and the Stockton College, financial literacy workshops were well received by students who indicated the subject matter was relevant (Alban et al., 2014). The University of Illinois exemplified higher education financial literacy, which is a critical focus area for the University (Alban et al., 2014). Many campus resources are devoted to increasing student financial knowledge, such as those seen at Duke University.

Duke University has maintained a low cohort student loan default rate, similar to UCF's CDR. However, the administrators at Duke, like the administrators at UCF, recognized the need for a financial literacy program for the student body. Because of this, Duke launched a financial literacy resource for students entitled *Personal Finance*. The program included a financial literacy website (www.personalfinance.duke.edu) and a series of workshops (Alban et al., 2014). This financial literacy program was marketed via print materials and emails (Alban et al., 2014). Duke utilized collaborative efforts to increase the impact of the program (Alban et al., 2014). A consortium of administrative offices, faculty, and students helped the successful launching of their financial literacy program, which included well attended workshops and over 2,200 visitors to the Personal Finance website in the first month (Alban et al., 2014).

Robb & Woodard (2011) assert various studies on financial knowledge have shown that increased financial knowledge results in positive financial behaviors. Mandell and Klein (2009) confirmed widespread agreement that financial education affects financial literacy, financial attitudes, and ultimately, financial behaviors. Hence, the program model for financial literacy addresses the goals of the university's financial literacy program to increase student financial knowledge and influence students' financial behaviors.

Design Assessment

The needs for the financial literacy program model design were determined by reviewing best financial literacy practices established by scholars and practitioners. The review of literature indicates that effective financial literacy programs affect financial behaviors (Lusardi & Mitchell, 2014; see also Calcagno & Monticone, 2014; Robb & Woodyard, 2011). The design elements outlined in the next section were selected to increase the effectiveness of the financial literacy program model.

Goals and Outcomes

There is a need for financial education at the collegiate level: Goetz et al. (2011) note students do not have the financial expertise to enhance their financial well-being and face complex financial decisions. Therefore, many colleges and universities are following the current trend of providing financial education opportunities for their student bodies (Xiao, Ahn, Serido, & Shim, 2014). Creating an effective financial literacy program is an important objective for the UCF Office of Student Financial Assistance and for universities in general.

By providing opportunities for students to become financially knowledgeable, postsecondary institutions can help foster holistically successful students. Goetz et al. (2011) indicate financial stressor can lead to poor academic performance as well as students leaving college to work additional hours to address financial needs. Thus, financial literacy programs can boost the University's retention and graduation rates (Durband & Britt, 2012).

Taking into account the three previously described personas, the design goals of the model emphasize the accessibility, relatedness, and usability of the content design. Student feedback will assist in determining if the proposed design model is accessible to the diverse student body, presented in a manner that is relatable, and optimizes usability in the design features. These three factors were addressed with the key elements of the model design.

The participation goals for the financial literacy program participants include increased financial literacy knowledge as well as a likely change in financial behaviors. The content utilized for the financial literacy model is intended to help create a financially literate student body and affect student financial decision making. Ultimately, the goal for this dissertation in practice is to create a model for a mixed-mode comprehensive financial literacy program that includes interactive web-based modules accompanied by face-to-face courses complementing the web-based material. The intended outcome is a student-centered financial literacy product that can enhance students' financial knowledge and influence their fiscal behaviors.

Relatedness, accessibility, and usability were key goals of the design model. Each of these three goals increases the vigor of the financial literacy program. However, each of these design goals was also intended to optimize the intended outcome of the financial literacy program—increasing student financial literacy knowledge, thus affecting financial behaviors.

Relatedness

The need for effective collaboration was paramount to this design, because relatedness of the content and delivery in the design model connects to self-determination theory. Relatability is one of the three concepts attributed to SDT (Liu et al, 2013). When learners find material relatable, they are more likely to be motivated about learning the subject matter (Brooks & Young, 2011). Collaboration generates student buy-in as well as university buy-in and allows the program to be perceived as relatable (Durband & Britt, 2012).   Further, relatedness is enhanced by a sense of social connection (Brooks & Young, 2011). Hence, the collaboration feature of this design enhances the relatedness of the model for students. Additionally, a variety of different perspectives and expertise can be incorporated into the program development (Durband & Britt, 2012).

Another component of relatedness is ensuring the selected subject matter is relevant to the participants and delivered in a manner in which student relatability and social connections are increased (Alban et al., 2014). Offering comprehensive financial literacy information increases the likelihood that members of a diverse student body will be able to find relatable material despite their unique characteristics. This is demonstrated through the personas created for this dissertation in practice. For example, Brielle, a young, traditional undergraduate student could benefit greatly from the content pertaining to developing healthy spending habits, such as identifying needs vs. wants, budgeting tools, or checkbook balancing. George, a graduate student with overwhelming debt, could benefit most from the content about being an informed borrower, which includes understanding interest capitalization on principal balances, strategies for reducing his debt, and understanding student loan repayment options. Annette, a nontraditional undergraduate student who avoids debt could find the content on saving strategies and investing wisely useful because of her interest in developing or expanding her short-term and long-term savings goals or enhancing her understanding of investment tools and strategies. The information on protecting financial information and understanding earnings is applicable to all types of students represented via the personas. By offering the material in a manner that employs several real-life scenarios, the relatability of the presented information is increased (Alban et al., 2014). Table 4 provides a list of each module, along with whether the module is applicable to each of the three personas being used in this DIP.

Table 4

Module Applicability to Personas

	Developing Healthy Spending Habits	Developing a Saving Strategy	Protecting Your Finances	Understanding Your Earnings	Being an Informed Borrower	Investing Wisely
Learning Outcomes	• Understanding of Needs vs. Wants • Ability to Balance a checkbook • Development of Budgeting Skills • Ability to Comparison Shop	• Understanding Short Term and Long Term Savings Goals • Differentiation between the various types of savings tools and account types • Understanding Compounding Interest • Recognizing Withdrawal Penalties	• Recognizing personally identifiable information • Understanding measures needed to protect financial information • Knowing what agencies can assist if financial information is compromised • Identifying various types of insurance	• Differentiate between gross salary and net pay • Understand the costs associated with employee benefits • Complete a W-4 form • Understand federal and state income taxes • Conduct cost of living salary comparisons	• Understand Interest Capitalization and Accrual • Develop Strategies for Debt Reduction • Recognize Student Loan Repayment Options • Know Ways to Avoid Student Loan Default • Comprehend Consumer Credit Reporting • Recognize Signs of Predatory Lending	• Recognize Key Investing Terminology • Identify Tools of Investment • Understand Investment Strategies • Identify Signs of Ponzi Schemes and other Unsavory Investment Strategies
Activities	• Students will engage in an interactive game to identify needs vs. wants • Student will complete a checkbook balancing activity using a sample checkbook ledger with multiple deposits and withdrawals	• Students will identify short-term and long-term personal savings goals • Students will be given information using multimedia platforms on various savings plans and participate in simulation that allows them to select savings account based on their savings goals	• A simulation utilizing real-life scenarios will be used to detect personally identifiable information • Students will learn various strategies to protect financial information and be given resources to protect financial information and rectify any financial fraud	• Students will receive simulated pay check records • Students will receive information on federal and state income tax utilizing multimedia • Student will engage in a real-life simulation to complete a W-4 form	• Students will participate in a real-life simulation demonstrating how capitalized interest is added to outstanding principal balances • Students will be given information on reducing debt and develop a personal debt reduction strategy using multimedia platforms	• Students will engage in an interactive games which demonstrates their ability to recall key investment terms • Students will receive information tools available for investment • Students will use real-life simulation to develop a personal investment strategy with simulated outcomes

	Developing Healthy Spending Habits	Developing a Saving Strategy	Protecting Your Finances	Understanding Your Earnings	Being an Informed Borrower	Investing Wisely
	• Students will participate in an interactive real-life simulation one month of spending for tracking purposes • Students will Develop the components of a monthly budget • Students will participate in an interactive game that utilizes coupon savings, unit price assessment and other comparison shopping strategy will be utilized	• Students will participate in a real-life simulation of how interest compounds in various savings accounts will be used • Student will participate in an interactive real-life simulation of balance decreasing as a result of withdrawals	• Students will participate in an interactive game about identifying types of insurance as well as the benefits and drawbacks of the various types	• Students will engage in an interactive game to identify the best job offer based on salary being offered and job location	• Students will engage in a real-life simulation in which they will select monthly payment amounts to pay down debt • Students will learn about various student loan repayment options; what tools are available to them; and develop a student loan repayment plan • Students will utilize real-life simulations to understand the components of credit reporting including: types of credit; reporting cycle and derogatory information • Real-life scenarios will be utilized to present various predatory lending practices to students	• Students will use real-life scenarios to determine if particular situations present legitimate investment opportunities

	Developing Healthy Spending Habits	Developing a Saving Strategy	Protecting Your Finances	Understanding Your Earnings	Being an Informed Borrower	Investing Wisely
Applicable to Brielle	X	X	X	X	X	X
Applicable to George	X	X	X	X	X	X
Applicable to Annette		X	X	X		X

Access

Giving students the opportunity to choose the method in which they receive financial literacy information increases overall student access to financial education (Perry et al., 2012). The online feature is accessible to students at their own convenience. Convenience and choice help to eliminate perceived barriers to financial education for students (Durband & Britt, 2012). Offering different delivery modalities enhances the students' feelings of autonomy; offering learners choices and allowing them to make decisions about their learning fosters learning motivation, in alignment with self-determination theory (Brooks & Young, 2011).

Usability

To enhance usability, the target audience should be at the center of the design. Designing with the user in mind produces a better quality product (Flemming, 1998). Considering the aforementioned personas involves taking into account their characteristics. For example, the learning needs and life experiences should be considered for many student groups, including traditional undergraduate students, nontraditional undergraduate students, graduate students, student borrowers, students with consumer debt, students newly entering the workforce, and students with work experience. In practice, these user characteristics should be considered when designing a website, online tutorials, and complementary face-to-face learning sessions. In addition, creating aesthetically pleasing web-based tools and complementary visual aids increases the usability of the program (Lidwell et al., 2003). In fact, usability extends beyond the aesthetic features of the program model. Offering flexibility in the model design is also a feature of usability (Lidwell et al., 2003). In general, interactivity enhances the usefulness and usability of the model (Alban et al., 2014). In this model, the usage of different delivery modalities and the incorporation of interactivity enhance the design's usability. Usability was an important goal of this model, because reaching a diverse student population is a challenge of implementing the program model.

Increasing Knowledge

Ultimately, the program design is intended to increase students' financial literacy knowledge to influence their financial behaviors. The subject matter for the financial literacy program was selected based on national guidelines for financial literacy. These guidelines served as a benchmark not just for what college students should know about financial matters, but also provided guidance for a variety of financial literacy programs that targeted various subpopulations (Alban et al., 2014).

The financial literacy material should be presented using a variety of best practices, including adaptive learning. Adaptive learning is beneficial to the learner and teacher, because it allows instruction to be tailored to the knowledge and competency level of the learners (Organisation for Economic Co-operation, 2008). This feature highlights another component of self-determination theory. Providing appropriate information based on the students' competency level increases student motivation while facilitating the learning experience (Liu et al., 2013). By providing comprehensive financial education to students, students are more likely to engage in positive financial behaviors long term and beyond college (Organisation for Economic Co-operation, 2005).

Model Feedback and Evaluation

As a formative tool, focus groups will be utilized to assist in the development of effective financial literacy modules and content. The focus groups will comprise students who attended the university. The feedback received from students will assist with the development of the model.

Evaluating the effectiveness of the financial literacy program is necessary for continued program improvement (Durband & Britt, 2012). The logic model in Table 4 represents an evaluation tool for the model. Formative evaluations will be conducted to collect information needed for the redesign of the model.

Table 5

Logic Model for Financial Literacy Program

Input	Activities	Output	Short-Term Outcomes	Long-Term Outcomes
Staffing (financial literacy expert; instructional design expert; support staff)	Develop online financial literacy component	Quantity of online tutorials	Student participation	Long-term change in financial behavior
Financial resources	Develop Face-to-Face Financial Literacy Component	Number of participants	Students becoming more financially literate	Financially savvy graduates
Time	Promotion of financial literacy program/ inform students	Number of face-to-face sessions	Short-term changes in student financial behavior	
Print materials (marketing materials; learning tools)	Develop partnerships/ collaboration	Financial literacy network		

CHAPTER THREE: DESIGN IMPLEMENTATION AND ANALYSIS

Model Implementation

Because many students lack the knowledge needed to make informed financial decisions, and because they are often faced with complex financial situations, in this dissertation in practice, I propose a plan for a comprehensive financial literacy program model for postsecondary students. Research has indicated a general lack of understanding of financial concepts, leading to young adults' poor financial behaviors, which can be remedied through financial education (Letkiewicz & Fox, 2014). The model design includes (a) offering financial literacy to students through different modalities consisting of online resources and face-to-face financial literacy events; (b) collaborating to develop a financial literacy network, which enhances the relatability of the program for the student user and the university community; and (c) creating robust and comprehensive content addressing common gaps in financial literacy as determined by established standards from the U.S. Department of Treasury and the National Council on Economic Education . As previously mentioned, this model was not actually implemented in this DIP project; however, the following plan was intended to be comprehensive.

Staffing

Campus-based financial literacy programs staff an average of three full-time employees (Durband & Britt. 2012). However, a lack of financial resources often prohibits postsecondary institutions from adequately staffing financial literacy programs (Durband & Britt, 2012). Ideally, financial literacy programs should include a program director, support staff, and volunteers (Durband & Britt, 2012).

The model designed in this dissertation in practice was created with a required minimum of three full-time staff members. The program model includes a program manager/director who serves as the leader of the campus-based initiative. The program manager, the financial literacy expert, ensures accurate and current information is provided for content development of the online tutorial and the face-to-face seminars. Additionally, the program manager serves as the lead for the development of the financial literacy network described in Chapter 2. The program manager may or may not have instructional design experience.

In addition to the program manager, a program coordinator is needed to assist with the development of the online tutorials and face-to-face sessions. If the program manager does not have instructional design expertise, the program coordinator must possess the skills needed to ensure the development of online tutorials supports the goals of the model, including consideration of accessibility and usability. Finally, best practices indicate clerical staff is needed to assist with the smooth operation of financial literacy programs on campuses (Durband & Britt, 2012). Based on this best practice, the third full-time staff member included in this model is an administrative assistant who provides clerical and organizational support to the financial literacy program.

Financial Resources

Lack of funding is a common barrier to implementing financial literacy programs on college campuses. The need and desire to have a financial literacy program is often met with competing requests. Financial literacy program managers often find creative ways to fund program initiatives (Perry et al., 2012). Some fixed expenses require line items in the institution’s budget or grant funding for the program. The main expense, as a budget line item or for grant funding, is the program staff (Durband & Britt, 2012). Financing other expenses, such as programming, participation incentives, and marketing, may require creative acquisition of additional financial support (Perry et al., 2012).

Collaborating on- and off-campus does not just increase the relatability of the program and university wide buy-in but can also increase the financial resources available for the program (Perry et al. 2012). For example, registered student organizations often receive budgets from university fees. Collaborating with a student organization for a financial literacy event may allow the organization to cover some of the costs associated with the programming. Another example of collaboration garnering financial benefits is including outside entities such as loan companies and banks as a part of the financial literacy network; in this case, these companies can often provide grants or in-kind gifts to support the program's goals (Durband & Britt, 2012). It can be expected that potential collaborators will want to review the program's budget to gain insight into the strategy and projection of the program.

Development of a line-item budget, which includes all of the resources needed to implement the program, is a preliminary step in creating a financial literacy program on a campus (Durban & Britt, 2012). Successful program implementation requires securing adequate funding to achieve the program goals. Institutional level support as well as collaborative funding ensures the program has adequate staffing as well as the materials and resources needed for program development and access to effective marketing.

Marketing

Marketing is essential to ensuring intended users are aware of the service (Durband & Britt, 2012). Simply offering a financial literacy program does not guarantee students will take advantage of the program (Goetz at al., 2011). Keeping the marketing strategy simple facilitates the creation of a memorable motif for students (Perry et al., 2012). Branding the financial literacy program is essential to program success; students must be aware of the program's existence in order to participate. Branding the program includes creating a program name, logo, and tagline that are relatable and easy for students to recognize (Perry et al., 2012). I considered the organizational context of this dissertation in practice—UCF, whose mascot is Knitro the Knight—and developed "Centsible Knights" for a program name with a tagline of "Helping You Make Sense of Your Dollars" A sample logo for the proposed "Centsible Knights" financial literacy program is included in Appendix C.

After coining the program name, the next step is utilizing the institution's marketing resources to promote the program. The institution's marketing department could assist with development of marketing resources such as print materials, promotional items, and news releases. Marketing materials could be distributed at other on-campus events, as mail inserts, or displayed in various on-campus offices (Durband & Britt, 2012).

Beyond traditional marketing tools, effectively reaching a large, diverse student body requires using resources that can reach a large number of students effectively with minimal costs (Perry et al., 2012). Social media serves as an optimal medium to reach a large number of students without incurring excessive costs. Facebook, Twitter, and Instagram are all being used effectively at postsecondary institutions to reach students (Gerber, 2015). Perry et al. (2012) noted e-mail is an inexpensive medium to reach the target demographic. The use of html and other visually pleasing design elements helps make the e-mail an effective marketing tool (Perry et al., 2012). Ironically, although this is the age of electronic communication, word-of-mouth is still the most effective marketing tool available, as well as relying on partnerships, such as those forged with other on-campus departments and student organizations, to spread the word (Durband & Britt, 2012). Student awareness of the program and its benefits was a criterion for program goal achievement.

To achieve the goals of the program, students must participate, which is another program criterion. Marketing tools and a marketing strategy inform students of the program's existence while piquing their interest in the features of the program. Effective marketing essentially increases the program's impact.

Timeline

The program model was developed with a four-step timeline. Pre-implementation includes development of program budget, creation of financial literacy network, development of marketing strategy, and hiring of appropriate staff. The pre-implementation phase may last six to 12 months depending on the resources available.

Once the program's foundation is developed, the program model will be rolled out in three phases. Phase 1 of implementation includes the development and launching of an informational financial literacy website. Phase 2 involves developing the online financial literacy modules and adding the modules to the website. Phase 3 includes the development and delivery of the face-to-face sessions.

The implementation occurs on a continuum, as each phase may not be complete before the next phase begins. For example, the development of the online financial literacy modules may occur concurrently as the website is being developed. Similarly, complementary face-to-face session content may be developed while the online modules are underway. Figure 4 shows a visual representation of the timeline of the program model.

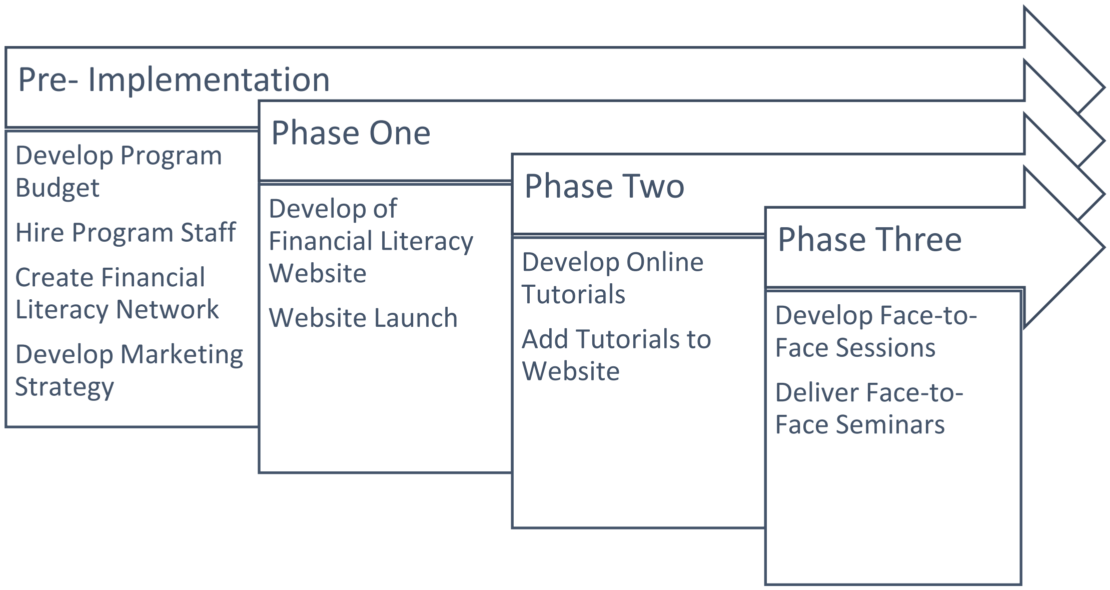


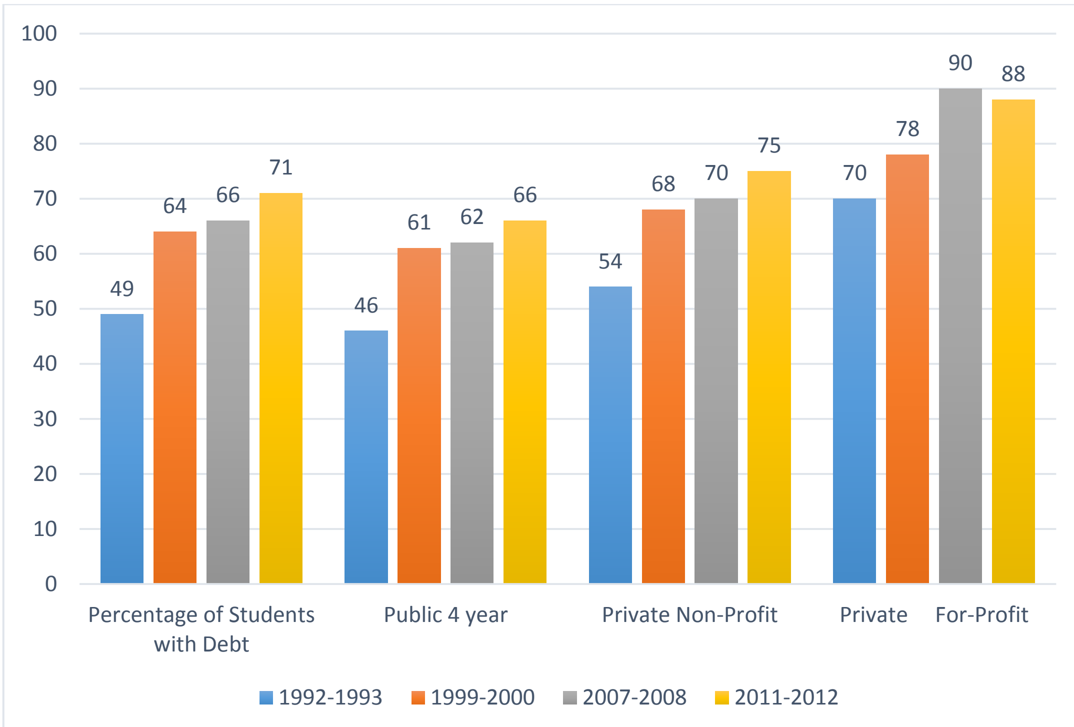
Image created by author
Figure 3. Implemention timeline

Model Analysis

Target Audience

One of the challenges of creating a financial literacy program model for students attending large, diverse postsecondary institutions is the nonhomogeneous student body. Students have varying levels of financial knowledge, differing financial behaviors, distinct levels of motivation to learn more about financial literacy, unique life experiences, and varied learning preferences. Harnisch (2010) enumerated the demographic complexities on college campuses: more racial diversity than in the past; more students with work experience; more students with familial obligations; and students with varying levels of exposure to financial experiences. These differences were considered in the design of this financial literacy program model. However, despite the variances that may exist in the student body, the need for financial literacy remains prevalent.

For a variety of reasons, financial independence is becoming increasingly more difficult for college students (Letkeiwicz & Fox, 2014). Research indicates financial stress has become increasingly more common among college students, forcing them to seek employment in addition to attending school and often affecting their ability to succeed academically (Goetz et al., 2011). Approximately two thirds of U.S. college students borrow student loans to finance their educational expenses, contributing to a $1 trillion total outstanding student loan debt (Letkiewicz & Fox, 2014). High credit card and student loan debt complicate the ability of college students to accumulate wealth upon graduation (Lusardi, Mitchell, & Curto, 2010). As grant funding dissipates and college tuition soars, students are accumulating an average nearing $30,000 in undergraduate student loan debt (Wei & Skomsvold, 2011). Figure 5 shows a graphic representation of the average debt percentages of student loan borrowers based on the type of postsecondary institution, at specific points in time since 1992.



Source: Adapted from "The Project on Student Loan Debt" The Institute of College Access and Success

Figure 4. Average percentages of student loan debt by institution type

Research has shown that students are interested in learning more about financial literacy and believe financial education is useful (Durband & Britt, 2012). However, many financial literacy models are used at postsecondary institutions. Durband and Britt (2012) identified common financial literacy delivery methods, including one-on-one financial literacy counseling, web-based financial literacy resources, and seminars. Goetz et al. (2011) described student preferences in financial literacy delivery methods, noting that student preferences often included web-based delivery and seminars. These preferences of the target audience were considered in the development of the financial literacy program model for this dissertation in practice.

Program Goals

In Chapter 2, I outlined the design goals of the model, which include accessibility, relatedness, and usability. These goals were included in the model to enhance the model design and to ensure the content and delivery methods selected were appropriate for the target audience. Beyond these design goals, there were additional goals for program participation and program impact that were essential to measuring the success of the financial literacy program.

Goals should follow the SMART model (specific, measurable, achievable, reasonable, and time-specific; National Endowment for Financial Education, 2015). Using the SMART model, program goals for the financial literacy program model should include the number of unique visitors to the financial literacy website over a given period of time, the number of participants desired for each online module over a given period, and the number of participants expected at each face-to-face session. Using UCF organizational context for this dissertation in practice, the initial SMART goals for the financial literacy program consist of (a) 6,000 unique visitors to the financial literacy website within the first six months; (b) 1,000 students completing at least one online module within the first month of the launching; and (c) participation of a minimum 50 students at each face-to-face session.

In addition to program participation goals, the financial literacy program should also include goals related to the program's impact. The nature of brief online or face-to-face sessions limit the possibility of pretest/posttest evaluation strategies that would allow measurement of prior knowledge followed by measurement of knowledge after the session has been completed. Impact-related goals are that (a) 70% of program participants will indicate perceived gained knowledge; (b) 60% of participants will have increased positive attitudes about financial matters; and (c) 70% of program participants will indicate likely changes in financial behaviors. Hence, the participants' perception about knowledge gained, changes in attitudes, and likely changes in behavior can be measured utilizing the appropriate evaluation tools (National Endowment for Financial Education, 2015). This type of information will assist the program director to measure the effectiveness of the program.

Anticipated Change and Indirect Outcomes

There is an established a link between the financial knowledge of college students and their financial behaviors (Robb & Woodyard, 2011). Financial literacy serves as a foundation for financial decision making (Lusardi et al., 2010). There is widespread agreement that given the appropriate education, consumers become more financially literate, resulting in a better understanding of complex financial situations and ultimately influencing their ability to make good financial decisions (Letkiewicz & Fox, 2014). Therefore, the anticipated change resulting from this financial literacy program model is that students' financial knowledge will increase and ultimately influence their ability to make sound financial decisions and engage in positive financial behaviors.

Poor financial literacy negatively affects student academic performance as well as postsecondary retention and graduation rates (Goetz et al., 2011). In light of this indicator, one potential indirect outcome of this financial literacy model is a positive impact on participants' academic performances. Additionally, as they learn to manage their finances more effectively, participants may be more likely to continue their education and graduate, thus improving the institution's graduation and retention rates. This outcome in turn could help grow a financially responsible base of alumni who are more likely to donate to the institution (Durband & Britt, 2012).

Program Modifications

After implementation, according to this plan, program assessment should be utilized to ensure the appropriate program modifications are made as necessary. Formative assessment tools include using focus groups of representative students to assist with program development. The students' feedback should be employed to modify the program when appropriate. Additionally, participants should receive surveys upon completion of web-based tutorials and face-to-face seminars to gauge their perception of increased knowledge as well as likely changes in their behaviors. This information could be used to determine if program modifications are needed.

Evaluating the Program

In order to determine if the financial literacy model is meeting the intended goals and outcomes, the program must utilize tools for assessment and evaluation. Upon inception of the program, the tools used for measuring program success should be considered. Evaluation determines whether the program is employing the correct strategy and if modifications are necessary (National Endowment for Financial Education, 2015).

Needs Assessment

Before implementing a financial literacy program at a postsecondary institution, best practices indicate conducting a needs assessment to determine the needs of the particular organization (Durband & Britt, 2012). At the onset of this model design development, a needs assessment was conducted to determine the financial literacy gaps at the University of Central Florida (UCF), the organizational context for this model. Through the needs assessment, financial literacy efforts on UCF's campus were identified, and I determined that some subpopulations of students had the opportunity to engage in financial education program. However, the general student body did not have access to financial literacy tools.

Measuring Prior Knowledge

Three questions developed by Lusardi and Mitchell for the 2004 wave of the Health and Retirement Survey have been widely used to measure financial knowledge (Robb & Woodyard, 2011). The questions measure the respondents' understanding of three concepts: interest rates, inflation, and risk diversification (Letkiewicz & Fox, 2014). Lusardi and Mitchell (2014) formulated the questions to measure financial capability in consideration of the following four principles: simplicity, relevance, brevity, and capacity to differentiate (each question addresses a different type of financial knowledge).

At the onset of participation in the financial literacy program, students will receive a short three-question pretest to assess their prior financial knowledge. Students who participate in the online modules will only receive this pretest during their first online modules. Students who attend face-to-face sessions will be asked to respond to the three questions at the beginning of each session using the classroom response system. Students who have previously answered the questions, either online or at a face-to-face session, will be asked to refrain from answering the questions.

The questions outlined by Lusardi and Mitchell (2011) and corresponding answer selections are as follows:

1. Suppose you had $100 in a savings account and the interest rate was 2% per year. After five years, how much do you think you would have in the account if you left the money to grow: [more than $102; exactly $102; less than $102; I don't know; I refuse to answer]
2. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, you would be able to buy: [more than today; exactly the same as today; less than today with the money in this account; I don't know; I refuse to answer]
3. Do you think that the following statement is true or false? "Buying a single company stock usually provides a safer return than a stock mutual fund." [true; false; I don't know; I refuse to answer] (p.499)

Student Perceptions

After the design of modules and face-to-face sessions for the financial literacy program is complete, focus groups should be utilized to determine if the designed program accomplishes the intended objectives. The focus groups could provide formative feedback for potential redesigns. Durband and Britt (2012) indicated focus groups can provide valuable feedback for evaluating whether the program is reaching its intended users in the manner desired. For the purpose of this model, the focus groups will likely provide feedback on whether the model meets the intended goals and outcomes. Sample focus group questions can be found in Appendix D.

Program Impact

Program evaluation should be considered at the inception of program design (Taylor-Powell & Renner, 2009). The Center for Financial Education (2015) has provided an evaluation action plan for financial literacy programs. This action plan serves as a useful guide for developing an evaluation plan. Using the evaluation action plan as a template, the evaluation plan includes (a) a description of the program, program objectives (b) identification of the target audience (c) program delivery methods (d) list of recipients of evaluation results (e) data collection methods (f) an evaluation timeline, (g) evaluation challenges and (h)analysis of evaluation results. The action plan can be found in Appendix E.

End-of-session questionnaires provide useful and immediate information to program facilitators (Taylor-Powell & Renner, 2009). Upon module or session completion, students will receive posttest assessments to determine their perceptions of changes in financial knowledge and likely changes in financial behavior. The questionnaire includes questions to measure program outcomes. Taylor-Powell and Renner (2009) recommended outcome-related end-of-session questionnaires include (a) questions about perceived changes in motivation, confidence, and abilities; (b) questions about perceived changes in knowledge and ability; (c) questions that measure perceived changes in attitudes, beliefs, and opinions; (d) questions about intended behavioral changes; and (e) questions to gather information on perceived differences as a result of the program. A sample end-of-session questionnaire is in Appendix F. The questions on the questionnaire were adapted from questions suggested by Taylor-Powell and Renner (2009). Through my doctoral studies I have learned using established, reliable, and valid questions to measure the program outcomes is useful in determining the program impact.

CHAPTER FOUR: IMPLICATIONS AND RECOMMENDATIONS

Implications of Model Design

Ultimately, the program model designed for a comprehensive financial literacy program was intended to provide students with the financial knowledge needed to navigate a complex financial marketplace and make financial decisions favorable to their overall prosperity. Studies have shown financial knowledge improves financial management skills (Goetz et al., 2011). Research also has indicated students who have better command of their financial situations are more likely to thrive academically, remain enrolled, and graduate (Durband & Britt, 2012). In addition, the impact of students' financial literacy on retention and graduation may increase the institution's return on investment—in fact, a likely result of a successful financial literacy program is the creation of a financially stable alumni base.

Although this comprehensive financial literacy program model was designed using UCF as the organizational context, this model could be implemented at similar institutions. The model incorporates the complexities of reaching a large, diverse student population, student learning preferences, program accessibility, program relatability, robustness of content, and program usability. Considering these factors in the development of this model enhances the applicability of the model for other postsecondary institutions. In creating this design, I employed best practices and scholarship to ensure the program addresses the compound needs of students attending large, diverse postsecondary institutions. Additionally, educators could modify the model and deliver it to other target audiences, including high school students, university employees, and other members of the community surrounding the university.

Integration of Doctoral Coursework

The coursework required for the Doctor of Education degree provided me with the foundation needed to identify complex problems of practice and design reasonable solutions to address the concerns of the stakeholders of the organization. For example, the Organizational Theory in Education course fortified my ability to analyze the nuances of complex organization through various theoretical lenses. Throughout the Organizational Theory course, I analyzed one particular complex problem of practice through the four theoretical frames outlined in the Bolman and Deal (2008) text: structural; political; human resources, and symbolic. Although I addressed a different complex problem for my coursework than the problem I addressed in this dissertation in practice, the exercises in that course increased my ability to analyze multifaceted organizational problems.

Another useful course for this dissertation in practice was Facilitating Learning Development and Motivation. In this course, I learned about learning, development, and motivation theories. As someone without a background in K-12 education or pedagogy, I first learned about self-determination theory (SDT) in this course. The concepts of SDT have applicability both in and outside the classroom. Understanding this theory enhanced the design of this model: Autonomy, relatability, and competence can increase intrinsic motivation about learning (Ryan & Deci, 2000a).

Additionally, two other courses (Identifying Complex Problem of Practice and Proposing and Implementing Data) provided the foundation I needed to identify the types of data that would help in developing this program model. These courses showed me how the use of qualitative data could be valuable for providing a robust understanding of intricate problems, as well as how to select valid and reliable instrumentation for data collection. Another course that prepared me for this dissertation in practice was Evaluating Complex Problems of Practice. This course introduced me to the evaluation process. The aforementioned coursework, along with scholarly discourse with my peers, provided the foundation I needed to complete this dissertation in practice, in which I offer a comprehensive financial literacy program model for students attending large, diverse postsecondary institutions.

Recommendations

The program model designed for this dissertation in practice is a comprehensive approach to implementing a financial literacy program at a large postsecondary institution; however, design limitations may include a restricted timeline for program model development and limited financial resources for additional research. Future research should include a full program evaluation to determine the effectiveness of the program model design. In addition, employing a more detailed pretest to determine prior financial knowledge could prove useful in assessing the program impact on financial knowledge, although the short duration of the online tutorials and face-to-face sessions makes using a longer pretest component challenging. Further, more formative evaluation tools could be useful in the development of the program model. Conducting additional, broader-scale surveys, interviews, and focus groups could provide a better understanding of the intended program participants. Because of these limitations, I recommend additional future research.

APPENDIX A: IRB EXEMPTION

University of Central Florida

University of Central Florida Institutional Review Board
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Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**
FWA00000351, IRB00001138

To: **Karemah Manselle**

Date: **June 11, 2015**

Dear Researcher:

On 06/11/2015, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review:	Exempt Determination
Project Title:	The Design Plan for A Financial Literacy Program for Students at the University of Central Florida.
Investigator:	Karemah Manselle
IRB Number:	SBE-15-11083
Funding Agency:	
Grant Title:	
Research ID:	N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Patria Davis on 06/11/2015 12:14:13 PM EDT

IRB Coordinator

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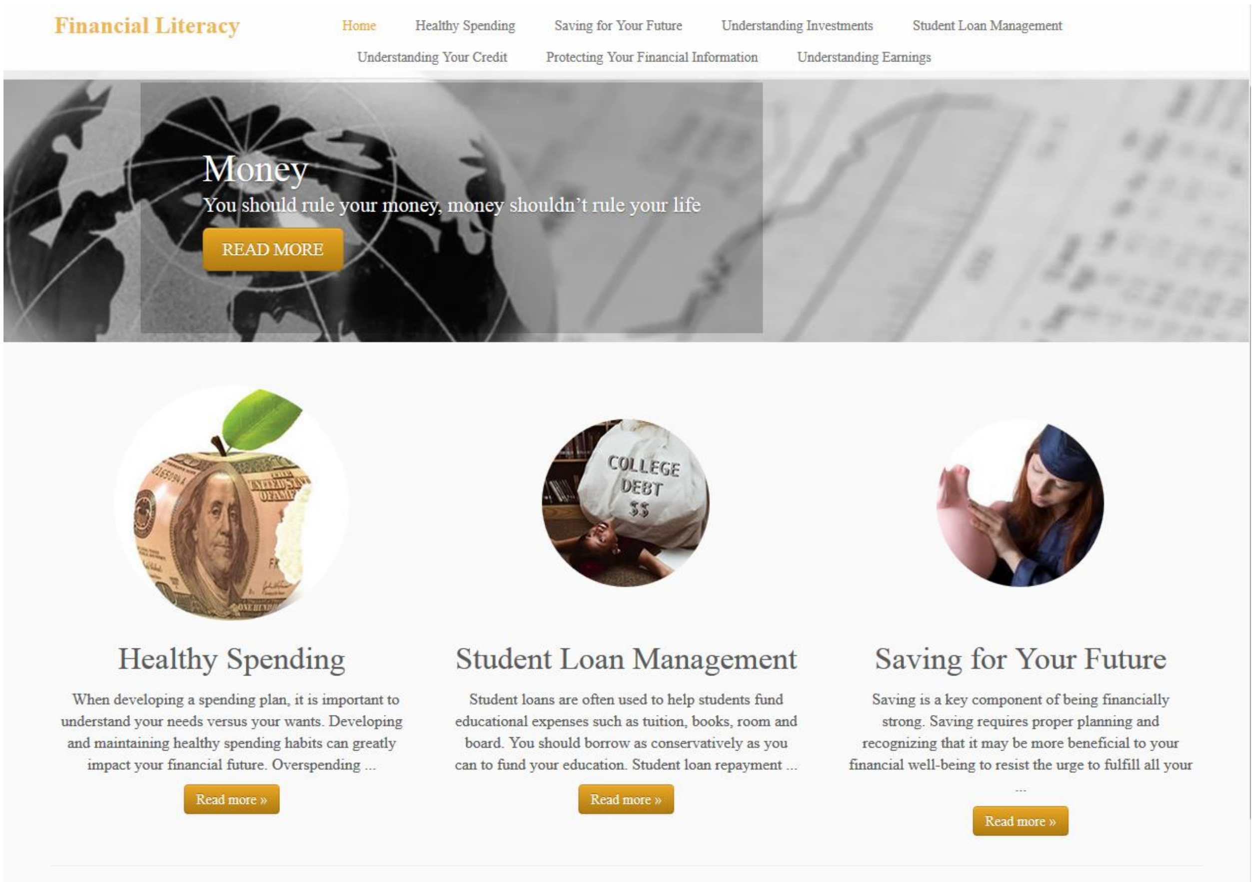
APPENDIX B: SAMPLE WEBSITE


Financial Literacy
Home
Healthy Spending
Saving for Your Future
Understanding Investments
Student Loan Management
Understanding Your Credit
Protecting Your Financial Information
Understanding Earnings
Money
You should rule your money, money shouldn't rule your life
READ MORE
COLLEGE DEBT $$
Healthy Spending
When developing a spending plan, it is important to understand your needs versus your wants. Developing and maintaining healthy spending habits can greatly impact your financial future. Overspending ...
Read more »
Student Loan Management
Student loans are often used to help students fund educational expenses such as tuition, books, room and board. You should borrow as conservatively as you can to fund your education. Student loan repayment ...
Read more »
Saving for Your Future
Saving is a key component of being financially strong. Saving requires proper planning and recognizing that it may be more beneficial to your financial well-being to resist the urge to fulfill all your ...
Read more »

APPENDIX C: SAMPLE LOGO

¢entsible Knights

APPENDIX D: SAMPLE FOCUS GROUP QUESTIONS

1. Was the information provided helpful?
2. Did the information add to your knowledge base about financial literacy?
3. Was the information presented in a manner which you find relatable?
4. Does the method of delivery (online or face-to-face) complement the information?
5. Is the information likely to impact your short term future behaviors? Long term behaviors?
6. Are you interested in learning more?
7. How can the module or session be improved.
8. What did you like most about the delivery of information?
9. Do you find the design features easy to use? Visually pleasing?
10. Does offering this information online and in person make the information more accessible to you?
11. Are you likely to participate in financial literacy programming delivered in this manner (online or face-to-face)?

APPENDIX E: EVALUATION ACTION PLAN

Evaluation Action Plan

Name of signature program: ____

Briefly describe the program:

____

____

____

____

A. Defining the objectives of the program

A1. What is the purpose of the evaluation? List the objective(s) of the program. At the end of the day, what do you need to know and what do you want to show?

1. ____

2. ____

3. ____

A2. Who is the target audience(s)?

____

____

____

A3. Is there anything you need to take into consideration when designing the evaluation for the target audience(s) (i.e., age, education, income, language and cultural barriers)?

____

____

____

A4. What is your primary delivery method(s) (e.g., in-person, telephone, Internet)?

- ☐ In-person – group education
- ☐ In-person – one-on-one education
- ☐ Telephone – group education
- ☐ Telephone – one-on-one education
- ☐ Internet
- ☐ Educational materials
- ☐ Mass media (e.g., radio, television)
- ☐ Other: ______________________________
- ☐ Other: ______________________________

A5. Who will use the evaluation? How will they use it?

Who/users	*How will they use information?*

B. Selecting appropriate methods for data collection

B1. What evaluation method(s) will you use to collect impact data? (Check all that apply)

- ☐ Post-test only evaluation
- ☐ Retrospective pre-test
- ☐ Pre and post-test evaluation
- ☐ Follow-up survey
- ☐ Stages-to-change evaluation
- ☐ Focus groups
- ☐ Interviews
- ☐ Case studies
- ☐ Observations
- ☐ Stories/anecdotal evidence
- ☐ Tests of ability
- ☐ Other: ______________________________

B2. What general types of questions will the evaluation seek to answer? List three to five topics or questions that represent what you really want to know about the program.

I would really like to know….

1. ______________________________

2. ______________________________

3. ______________________________

B3. What types of indicators will you use to show program impact? (Check all that apply)

- ☐ Changes in satisfaction levels
- ☐ Changes in knowledge
- ☐ Changes in skills and confidence levels
- ☐ Changes in attitudes
- ☐ Changes in aspirations
- ☐ Anticipated or intended changes in behavior
- ☐ Actual changes in behavior
- ☐ Socio-economic changes
- ☐ Other: ______________________

B4. For each category below, list three or four specific indicators that you will use to measure program impact.

Knowledge:

1. ______________________________

2. ______________________________

3. ______________________________

4. ______________________________

Skills and Confidence Levels:

1. ______________________________

2. ______________________________

3. ______________________________

4. ______________________________

Anticipated and Actual Changes in Behavior:

1. ______________________________

2. ______________________________

3. ______________________________

4. ______________________________

C. Identifying and overcoming evaluation challenges

C1. What are your 3 biggest challenges to implementing a successful evaluation?

1. ______________________________

2. ______________________________

3. ______________________________

C2. What steps can you take to overcome these challenges?

1. ______________________________

2. ______________________________

3. ______________________________

4. ______________________________

5. ______________________________

C3. What are your available resources? Include both financial and non-financial resources.

Time:

____

____

Money:

____

____

Staff:

____

____

Evaluation resources and expertise:

____

____

C4. Are there others who can help you? List partners, stakeholders, funders, volunteers, and other professionals. Also, list their available resources.

Who are your partners, funders, stakeholders, etc.?	*What available resources can they provide (financial and non-financial)?*

C5. Given all of your constraints, briefly describe the type of evaluation that you think you can realistically implement.

____

____

____

____

____

____

____

D. Evaluation timeline

What is your timeline for completing the evaluation?

Date (Month / Year)	*Key evaluation activities to be completed*

E. Analyzing and disseminating the findings

E1. How will the data by analyzed (i.e., who will analyze it, what methods will be used, and how will the information be interpreted)?

E2. What do you hope to learn from the findings? What are the potential impacts?

E3. Based on what you hope to learn from your evaluation, write a potential impact statement.

As a result of participating in the program…..

E4. How will you use the findings for program improvement and internal reporting?

E5. How will the evaluation findings be communicated and shared with others?

Who will you share the findings with?	*How/where will the findings be presented?*

Prepared by: Dr. Angela C. Lyons, Associate Professor, University of Illinois at Urbana-Champaign, 440 Mumford Hall, 1301 W. Gregory Drive, Urbana, IL 61801 (phone: 217-244-2612; e-mail: anglyons@illinois.edu)

APPENDIX F: SAMPLE END-OF-SESSION QUESTIONNAIRE

Please provide the following information

Academic Classification (Please Indicate)

Freshman Sophomore Junior Senior Masters Doctoral

Major

Gender (Please Indicate One)

Male

Female

Are you a student loan borrower?

a. Yes

b. No

c. I don’t know

1. What did you gain from this session? (Select All that Apply)

    a. Answers to my questions

    b. Resource materials I can use

    c. Ideas I can try immediately

    d. Nothing new

    e. Anything else? ___________________________

2. How much of this session’s content did you already know? (Check One)

3. What percentage of the session’s content did you already know? (Check One)

4. Do you intend to try any of the techniques discuss today?

    a. Yes

    b. No

    c. If yes, what to you plan to try?

    ____

5. Do you plan to use the information from the session?

    a. Yes

    b. No

    c. If yes, how do you plan to use the information?

    ____

6. Do you intend to do anything differently as a result of today's session?

    a. Yes

    b. No

    c. If yes, please describe?

    ____

7. As a result of this session, to what extent to you understand the following topics? (Circle one number to each topic).

	Not Very Well	Quite Well	Very Well	Already Knew
a. Identifying Needs vs. Wants	1	2	3	4
b. Balancing a	1	2	3	4
c. Creating a Budget	1	2	3	4
d. Comparison Shopping	1	2	3	4

8. Do you plan to use healthy spending habits as a result of this session?

    a. Yes

    b. No

    c. Don't Know

d. If yes, how? Please specify____

9. What is the one thing you plan on doing as a result of today's session?

____

____

____

10. Which of the following practices do you intend to use that you did not use before this training?

	Used Before	Intent to Use	Don't Intent to Use
a. Identifying Needs vs. Wants	________	________	________
b. Balancing a Checkbook	________	________	________
c. Creating a Budget	________	________	________
d. Comparison Shopping	________	________	________

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