# DEVELOPMENT AND EVALUATION OF A STUDY MEASURING FINANCIAL KNOWLEDGE, BEHAVIORS, SKILLS, ATTITUDES, AND DESIRES OF ECONOMICALLY DISADVANTAGED FIRST-GENERATION COLLEGE STUDENTS

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Title: Development and Evaluation of a Study Measuring Financial Knowledge, Behaviors, Skills, Attitudes, and Desires of Economically Disadvantaged First-Generation College Students

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Financial literacy education and financial capacity building are important building blocks for adult economic success. Young adults who come from disadvantaged socioeconomic backgrounds have the least amount of access to financial literacy education, as concepts are generally not taught in the home (Lewis & Scott, 2002) and K-12 education in most U.S. states does not require students to complete a financial literacy curriculum (Urban et al., 2015). The existing financial literacy education curricula lack diversity and are not generally adapted for specific populations, so therefore are not as effective for all students exposed to them (Watson, 2006). Guided by social justice theory, this mixed-methods research study sought to explore the best practices of existing financial literacy and capacity-building programs through a comprehensive review of existing literature and a survey of a sample of low-socioeconomic first-generation college students to gauge their financial knowledge, behaviors, skills, attitudes, and desires, as well as interviews with several survey respondents. The purpose of the study was to inform the development of a financial literacy and capacity-building program to be deployed at colleges and universities and adapted for high school students to serve this population.

*Keywords:* financial capacity building, first-generation college students, poverty prevention, financial literacy education

# REFLEXIVITY STATEMENT

My interest in the subject of financial literacy education has developed over the last 12 years working as a financial aid administrator for a mid-sized private, open-access commuter university. In my experience over the years, I have seen many students get excited over their acceptance into the university and their coursework, but have no idea how they will pay for it, or even worse, expect that whatever financial aid they get will be the answer to all of their money problems in and out of school. Year after year, these students are unpleasantly surprised when they learn that they do not qualify for grant or gift aid, that they are not eligible to receive enough aid to cover their entire tuition and fees, that their aid package included loans (which they actively accepted), and that these loans must be repaid. The list goes on and on.

Most of the time, my own experience as a college freshman keeps me empathetic to the students' struggles with financial literacy; I attended a large university, had a minimum-wage campus job, and amassed 14 credit cards that were quickly "maxed out." I came from a middle-class home with two working parents who attempted to give me and my sister practical money advice; however, it was never really concrete for me until I found myself having to confess to them the $2,000 debt I accumulated and had no way to pay.

Professionally, I want to help my employer develop a financial literacy and capacity-building program to help enrich the academic education of our students and provide essential life skills that will maximize the benefits of their degrees and, in some cases, give them tools to complete their degrees.

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INTRODUCTION

## Background

A report from the Centers for Disease Control and Prevention (2018) indicated that 20% of all suicides in the United States resulted from a job loss, financial problem, or loss of housing. The report also listed strengthening economic supports—household financial security and housing stabilization policies—as its number one suicide prevention strategy. Among college students, 78% who attempted suicide cited financial stress as a reason (Westefeld et al., 2005). While suicide is an extreme response to financial stress, financial literacy and financial capacity building are areas that are ripe for inclusion in prevention strategies to prevent financial exclusion, reduce poverty, reduce dependence on public assistance, and increase financial knowledge and skill (Friedline & West, 2016; Grimes et al., 2010; Kafka, 2019; LeBaron et al., 2018).

A 2006 episode of the popular comedy television show *Saturday Night Live* presented a sketch featuring a couple sitting in their kitchen, balancing their checkbook, and expressing concerns about being able to pay their bills. A spokesman appears in their kitchen, and they engage in the following exchange:

> **Spokesman**: Did you know that millions of Americans live with debt they cannot control? That's why I developed this unique new program for managing your debt. It's called [presents book] "Do Not Buy Stuff You Cannot Afford."
> **Wife**: Let me see that. . . . [Grabs book, reads.] "If you do not have any money, you should not buy anything." Hmm, sounds interesting.
> **Husband**: Sounds confusing.
> **Wife**: I do not know, honey; this makes a lot of sense. There's a whole section here on how to buy expensive things using money you save.
> **Husband**: Give me that. . . . [Grabs book.] And where would you get this saved money?

**Spokesman**: I tell you where and how in Chapter 3. (Fey et al., 2006)

The sketch continues, and for every question the couple asks, the spokesman essentially reiterates the same idea of not spending money they do not have.

This sketch is a simplistic and comedic example of what most Americans would define as financial literacy, or financial illiteracy in this couple's case. Huston (2010) loosely defined financial literacy as a combination of knowledge and application of human capital specific to personal finance. Financial literacy is an important life skill that needs to be taught and practiced from an early age; however, how, when, and where financial literacy education (FLE) takes place are questions that experts have been debating for some time. Friedline (2015) determined that children are developmentally capable of economic agency (the capacity to act independently and make free choices with their money) as early as age 5 or 6 and make gains in economic knowledge and behavior at this age in tandem with developmental gains in cognition, social relationships, and language. The fact that children exhibit economic agency at young ages lends support for encouraging financial capability early in life (Sherraden, 2013). Participants in a study by LeBaron et al. (2018) expressed that if they had been given more knowledge as children, they would be making fewer mistakes and be more financially stable as emerging adults and adults.

Lerman (2000) reported that while in high school, the youth less likely to have a job were low income. Factors that contributed to low teen employment in this group were lower motivation, a disadvantage in finding work, and lack of encouragement from their parents to work. Lewis and Scott (2002) hypothesized that a range of economic activities, not only allowance practices, are less common in poorer homes, where parents are in nonprofessional occupations and have fewer educational qualifications. Interestingly, while Lewis and Scott (2002) found that financial activities were more common in professional families with older children, large majorities of these households felt that schools should be providing advice on how to manage personal finances. Parents in semi-skilled and unskilled manual occupations saw less need for schools to provide personal finance education (Lewis & Scott, 2002).

In 2006, the United States launched a first-ever national strategy to improve financial literacy (U.S. Department of the Treasury, Office of Financial Education, 2006). This strategy was, unfortunately, initiated without clearly defining financial literacy or how it should be measured. From 2006 to 2009, organizations and individual researchers who were conducting program evaluations and applied research on the topic of financial literacy used their own definitions and measures of financial literacy until a conceptual definition of financial literacy was added to the U.S. national strategy in 2009. This inconsistency certainly slowed progress and hindered the ability to design effective FLE programs (Remund, 2010). In her quest to narrow down the content areas for which financial literacy could be measured, Huston (2010) discovered that four distinct content areas surfaced across various measurement tools that were utilized over several years:

- Money basics: time value of money, purchasing power, personal financial accounting concepts
- Borrowing: bringing future resources into the present through the use of credit cards, consumer loans, or mortgages
- Investing: saving present resources for future use through the use of saving accounts, stocks, bonds, or mutual funds

- Protecting resources: making use of insurance products or other risk management techniques

The inclusion of these content areas varied across the tools and measurements of financial literacy, with money basics appearing in more than half but all four appearing in only 25% of the tools. Huston's (2010) research concluded that measures that included all four content areas were most likely to have the highest degree of accuracy.

A valid and reliable measurement tool for financial literacy did not exist until 2011 when the International Network on Financial Education and the Organisation for Economic Co-operation and Development (OECD) developed the OECD Financial Literacy Questionnaire. The questionnaire was developed after several reviews and comments and a large-scale pilot project in 13 countries. The final version incorporated the feedback from the pilot study, the views of expert subgroup members, and the results of the analysis process (OECD, 2011).

The 2012 Programme for International Student Assessment (PISA) Financial Literacy Framework was the first large-scale international study to assess the financial literacy of young people. The PISA 2012 financial literacy assessment was administered to approximately 29,000 students in 13 countries and economies representing 40% of world gross domestic product (OECD, 2014). The 2012 PISA study found that

- Shanghai, China had the highest average score in financial literacy.
- Only 1 in 10 students across participating countries was able to tackle the hardest financial literacy tasks: analyze transaction costs, understand the inclusion of fees in the calculation of account balances, and demonstrate an understanding of the implications of income tax brackets.

- On average, a more socioeconomically advantaged student scored 41 points higher in financial literacy than a less-advantaged student across participating countries and economies.
- Gender gaps in financial literacy among 15-year-olds were small, unlike those found in adult populations.
- Students' attitudes toward learning, such as perseverance and openness to problem-solving, were positively associated with financial literacy.

The results of the most recent PISA financial literacy assessment were announced in May of 2020, and OECD reported that the 2018 PISA assessment results are largely consistent with previous findings and that 10% of students who completed the assessment scored at level 5, the highest level of proficiency, and 15% scored at or below level 1 (Schleicher, 2019).



## Statement of the Problem

The problem addressed by this study is the logistics of when, where, to whom, and how financial literacy and capacity-building education should be disseminated. Research findings have presented conflicting information, as the individuals who need FLE the most (those with a lower income and education) do not have access to FLE at home and their parents do not believe that it needs to be taught in school (Lewis & Scott, 2002). Additionally, in the United States, FLE has only recently been mandated at the state level for K-12 education. According to the Council for Economic Education (2020), only 21 states require high school students to take a course in personal finance, and five states and the District of Columbia do not require personal finance in their K-12 standards. The 24 remaining states generally only require that an FLE curriculum is offered as a stand-alone course or integrated into the curriculum of another course (Urban et al., 2015).

FLE programs should be adapted for the population for which they are aimed, yet in most secondary and postsecondary schools where they are presented, they are not (Tisdell et al., 2013). Furthermore, exposure to an FLE curriculum in high school is voluntary in 24 states (Urban et al., 2015), and in college is primarily aimed at business majors (Fry et al., 2013). Secondary- and postsecondary-level FLE programs seldom approach students where they are, meaning that the curriculum generally focuses on learning objectives that may be beyond the scope of knowledge of the learner. For example, Delaware's Financial Literacy Standard 3 states: "Students will evaluate the costs and benefits of major savings and investing options" (Delaware Department of Education, 2018, p. 3). Students in grades 9 to 12 are expected to be able to "evaluate the role of the government and financial markets in savings and investment decisions" (p. 3) in order to meet the standard. To meet Standard 4, "Students will understand how to evaluate financial products and services to minimize financial risks" (p. 4), high school students must be able to "analyze costs and benefits of various methods of managing risk" (p. 4). Expectations to meet these standards at the high school level are ideal at best, but are lofty for a significant portion of college students whose reality involves living paycheck to paycheck (Catalidi et al., 2018). According to a Charles Schwab study, investing, let alone having choices of investments, is something that is not considered because young adults do not think they have enough money to merit a formal financial plan that includes making investments (Shariff, 2018).

## Significance of the Study

As it relates to the prevention of financial exclusion, individual economic failure, and increasing college retention, a study that investigates the best practices of college-level FLE curricula will inform the development of an FLE and financial capacity-building program aimed at first-generation college students from economically disadvantaged backgrounds.

Research from Ma, Pender, and Welch (2019) supports the claim that earning a bachelor's degree is a protective factor for preventing antisocial and poor economic behavior. In 2015, the median full-time earnings of bachelor degree recipients aged 25 and older were 67% higher than those of high school graduates (Ma et al., 2019). In that same year, the unemployment rate for 25- to 34-year-olds with at least a bachelor's degree was 2.6%, compared to 8.1% of high school graduates in the same age range. Additionally, of adults aged 25 and older who live in poverty, 13% were high school graduates compared to 4% who had earned a bachelor's degree. College completion also increases other prosocial behavior in 25- to 34-year-olds, like volunteerism (39% vs. 16%), participation in voting in elections (45% vs. 20%), decreased smoking (8% vs. 26%), and increased exercise (69% vs. 45%) (Ma et al., 2019).

First-generation students make up one-third of all American college students, with an increase in enrollments from 17.5 million to 20.0 million between 2005 and 2015 (Snyder et al., 2018). However, first-generation students are at high risk for dropping out of school, as they possess demographic and enrollment characteristics like low socioeconomic status and lower enrollment intensity, often related to financial constraints, which are correlated with poor college retention (Catalidi et al., 2018).

The investigation and collection of best FLE practices is a primary step towards the development and adaptation of an evidence-based FLE curriculum for first-generation students most at risk of dropping out of college for financial reasons. Further, completing an effective financial literacy program will be a key theoretical element that influences the adult financial behavior of the students receiving it as well as strengthening the students' probability of completing their degrees, which acts as a protective factor and influences other prosocial adult behavior (Ma et al., 2019).

## Research Questions

Three primary research questions evolved from the problems related to when, where, to whom, and how financial literacy and capacity-building education should be disseminated. Two subquestions were added to further enhance understanding of the target population.

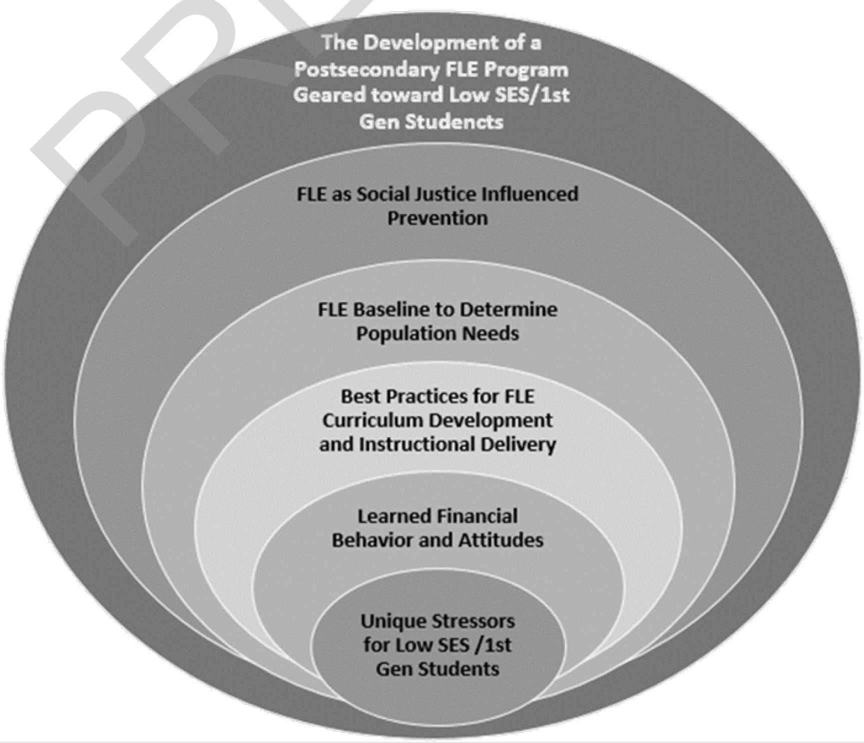
1. What are the current best practices in higher education FLE programs?
2. What are the most common underdeveloped financial literacy elements among low-income first-generation (LIFG) higher education students?
    a) What financial literacy elements do the LIFG population think they need to master to become financially literate?
    b) In what ways does the LIFG population's perceived lack of financial literacy mastery align with their actual financial literacy development needs?
3. How can these best practices inform the development of a postsecondary financial capacity-building program geared towards LIFG college students?

## Working Model

Figure 1 represents a working model of the research study. Themes and constructs discovered in the review of current literature are displayed as interconnected circles that diagram the rationale and direction of the study. Starting with the exploration of unique stressors and origins of financial behaviors and attitudes common in the target population, the study's review of current literature identified best practices in FLE curriculum development and instruction. Quantitative and qualitative data to determine the baseline needs of the population were collected and discussed within a social justice framework. Finally, a discussion of the next steps included recommendations for the development of a postsecondary FLE program specialized for low-socioeconomic-status and first-generation college students.

**Figure 1**

*Working Model of the Project*



## Hypothesis

The study hypothesized that the population of LIFG students have similar financial behaviors, but levels of financial knowledge and skill differ due to variation in exposure to FLE and finance education in the population. As discussed further in Chapter III, the study sample came from a population of students who were enrolled in a mentorship program that provided them with personal financial coaching and other opportunities for FLE within the program. The expectation is that alumni of the program would score higher on the financial knowledge and skill questions in the study. This hypothesis was formed based on the review of the literature and various study findings discussed in detail throughout the literature review as well as knowledge about the study sample's specific exposure to FLE.

## Definition of Terms

For purposes of this study, the following terms are defined:

- *Economic agency:* The capacity to act independently and make free choices with one's money (Friedline, 2015).
- *Financial attitudes*: Attitudes and preferences related to finances, such as towards saving and making longer-term financial plans versus prioritizing short-term wants (OECD, 2013).
- *Financial behavior*: Behavior such as planning expenditures and building up a financial safety net. Positive outcomes from being financially literate are driven by these behaviors; conversely, certain behaviors, such as overusing credit, can reduce financial well-being (OECD, 2013).

- *Financial capacity:* The ability to manage one's financial affairs in a manner consistent with personal self-interest and values. Financial capacity has been equated in importance to other key indicators of adult overall health and is closely related to personal independence and successful functioning in the community (Marson, 2016).
- *Financial exclusion*: The state of an individual as being considered unbanked or underbanked. Unbanked households do not have an account at an insured institution, while underbanked households have an account but have used alternative financial services (payday loans, cash checking) within the past 12 months (Yun, 2017).
- *Financial knowledge*: Basic knowledge of key financial concepts and the ability to apply numeracy skills in financial situations as part of financial literacy (OECD, 2012).
- *Financial literacy*: The ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being (President's Advisory Council on Financial Literacy, 2009).
- *Financial resilience*: The ability to cope with external shocks, at least in the short term (OECD, 2016).
- *Financial skill*: The ability to apply relevant knowledge and comprehension to manage or solve a financial situation (expected or unexpected).
- *First-generation college student:* American undergraduate student whose parents or grandparents have not attended college (Catalidi et al., 2018).

- *Intergenerational transmission of poverty:* The phenomenon whereby the probability of being poor is increased based on having impoverished parents. Of those who do not emulate their parents' poverty level, about 50% have a net family income that amounts to less than twice the poverty line (Rodgers, 1995). For 2020, the poverty guideline for a family of four is a household income of $26,200 (U.S. Department of Health and Human Services, 2020).

## Chapter Summary

This chapter introduced the history and significance of FLE in the United States. The chapter outlined the problems that are associated with the current state of FLE in the United States as well as specific challenges for first-generation college students and how those two issues converge. Research questions that address the problem were presented as the framework for the study to determine best practices in postsecondary-level FLE and assess the levels of financial knowledge, behavior, skills, attitudes, and experiences of low-socioeconomic-status, first-generation college students. Finally, definitions of terms were provided for this research project.

Chapter II explores the relation between FLE and low-socioeconomic-status first-generation college students via analysis and synthesis of the available current literature.

# CHAPTER II:

# REVIEW OF THE LITERATURE

A letter from President John Adams to Thomas Jefferson in August of 1787 contained a quote that is believed to be one of the earliest acknowledgments of both the importance and lack of financial literacy in America (National Financial Educators Council [NFEC], 2019). Adams stated, “All the Perplexities, Confusions and Distresses in America arise not from defects in their Constitutions or Confederation, not from a want of Honour or Virtue, So much as from downright Ignorance of the Nature of Coin, Credit and Circulation” (as cited in Boyd, 1955, p. 55). Because the human lifespan has increased and new financial products are prevalent and easily accessible, individuals find themselves making more financial decisions in their lifetimes than ever before (Lusardi, 2019). Combining these trends with globally low financial literacy is a call to action to elevate financial literacy education (FLE) (Lusardi, 2019).

As it applies to this study, the literature on FLE and related topics triangulates around Adams’ sentiment and supports the magnitude of the topic and its influence over several facets of an individual’s life experiences, specifically college completion and intergenerational transmission of poverty. This review of the literature explores how the theoretical perspectives of social justice, economic stress, and self-determination are intertwined with the needs of the target population (first-generation and low-socioeconomic-status college students), the best practices of secondary- and postsecondary-level FLE curriculum and program development, and the benefits of including FLE under the scope of prevention as it relates to the target population and the prevention of intergenerational transmission of poverty.