PRACTITIONER'S GUIDE TO STUDENT FINANCIAL LITERACY

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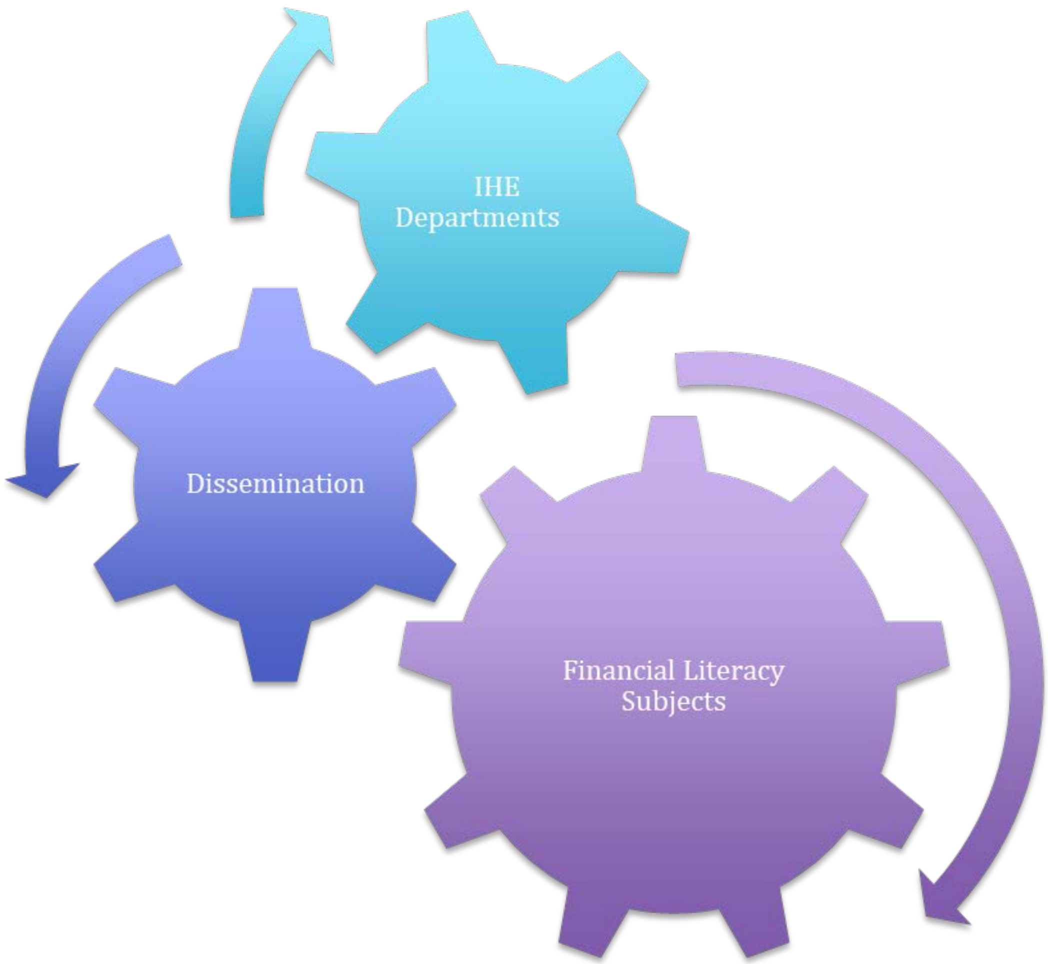

The Institution of Higher Education (IHE) symbiotic relationship between Financial Literacy Subjects, Financial Literacy Information Dissemination, and the role of key IHE departments in educating undergraduate students towards financial literacy.

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This study was conducted as a comprehensive literature review Problem of Practice supplemented by targeted qualitative semi-structured interviews of Institution of Higher Education (IHE) administrators and professionals whose experience includes undergraduate student financial literacy information dissemination, curriculum, programming, and assessment. The administrators and professionals validated the literature review findings and framed the development of the Practioner's Guide to Student Financial Literacy. The study discusses the symbiotic relationship between Financial Literacy Subjects, Financial Literacy Information Dissemination, and the role of key IHE departments in developing an exemplary program to educate undergraduate students towards financial literacy. The guide identifies and addresses key financial issues IHE undergraduate students need to learn to become financially literate and the core characteristics of a learning outcomes-based financial literacy curriculum.

Keywords: critical thinking, priority management, life skills, budgeting, debt service, credit, interest rates, credit reporting, identity theft prevention.

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PREFACE

The Road Not Taken Robert Frost (1917)

Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveler, long I stood
And looked down one as far as I could
To where it bent in the undergrowth;

Then took the other, as just as fair,
And having perhaps the better claim,
Because it was grassy and wanted wear;
Though as for that the passing there
Had worn them really about the same,

And both that morning equally lay
In leaves no step had trodden black.
Oh, I kept the first for another day!
Yet knowing how way leads on to way,
I doubted if I should ever come back.

I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I—
I took the one less traveled by,
And that has made all the difference.

This dissertation is dedicated to my wife, Ilene, my daughter, Michal, and my son, Dan, without whose unwavering belief, love, and encouragement this accomplishment would not have been possible. Words are inadequate to express how truly blessed I am.

I am incredibly grateful for the valuable insight, direction, commitment, and good humor of the members of my committee-Dr. William Bickel, Dr. Charlene Trovato, and Dr. John

Weidman. I wish to thank my advisor, Dr. Stewart Sutin, for his guidance, support, and friendship throughout this process, and his dedication to help me to strive beyond my limits and produce the best work I could offer. Thank you to my friend and editor Sarah Capello, whose advice and laughter helped me stay motivated and on track. And to all of my family members, friends, and colleagues who helped me along this journey and are too numerous for me to list by name, thank you for helping me to fulfill my goal, and who inspire me to continue this work. And lastly, in memory of an incredible educator, Mr. Ned Willard, who instilled in me the hunger to inquire, deliberate, and cherish learning.

1.0 INTRODUCTION

Many undergraduate students at Institutions of Higher Education (IHE) lack basic financial literacy knowledge and skills (Mohamad Fazli et al., 2011). This has not gone unnoticed. In response, some IHEs across the United States have taken notice and are considering how to address student financial illiteracy, are in the process of developing a program, or have developed financial literacy programs.

This thesis is designed to present a prototype practitioner’s guide to student financial literacy; a tool intended to help IHE program administrators understand what undergraduate student financial literacy is, what impact financial illiteracy has on the undergraduate student and the institution, what measures can be taken to establish an exemplary financial literacy program, how to assess the impact of the financial literacy program, and what the literature and interviews with academic professionals reveal about this problem.

1.1 ORGANIZATION OF THE CHAPTERS

Chapter 1: This introductory chapter explains the focus, objectives and scope for this Dissertation, and includes a brief synopsis of how the chapters are organized, the research questions proposed for inquiry, and the significance of the study.

Chapter 2: Literature Review identifies and addresses key financial issues that will be included in the practitioner's guide to student financial literacy. It will include a discussion of the characteristics and core elements of a problem of practice and how the literature review informed this study's problem of practice to establish the foundation for the Practitioner's Guide. Findings from select sources provide information on the design of an outcome-driven curriculum, curriculum characteristics, and methods to assess IHE financial literacy programs. This chapter identifies the financial knowledge and behavioral traits of a financially literate student.

Chapter 3: Methods will restate the characteristics of performing a problem of practice literature review, and discuss how the literature review informed the scope and content that was explored. Chapter 3 reiterates the research goals, describes in detail the information gathering process, the participant selection, the semi-structured interview protocol, and the data collection and analysis. Furthermore, this chapter will explain how the literature review and interview findings will frame the development of the practitioner's guide.

Chapter 4: Research Findings chapter will summarize the results of the findings from the literature review, the qualitative semi-structured interviews, and provide a case for how the results provide the basis for the Practitioner's Guide to Student Financial Literacy.

Chapter 5: Practitioner's Guide will restate the key findings from the research, reiterate the characteristics of a financially literate undergraduate student, and will provide a financial literacy curriculum outline. Key undergraduate student learning outcomes will define a framework for a financial literacy curriculum which can be used as a guide for other practitioners in developing a program designed specifically for their student population. A one-size fits-all approach to create a financial literacy program does not exist. Therefore, each IHE financial literacy administrator will need to define learning outcomes, curriculum, and assessment methodologies for their unique undergraduate student financial literacy program. This research is designed to offer literature-based concepts to support these goals.

1.2 RESEARCH QUESTIONS

Engaging in a discussion about financial literacy for IHE undergraduate students leads the participants to address what information the students will need, how that information will be disseminated, and what means will be used to assess the effectiveness of the information dissemination. That discussion created the following four questions for this study:

1. What subjects [knowledge] do IHE undergraduate students need to learn to become more financially literate?
2. What are the core characteristics of a learning outcomes-based curriculum?
3. How can the effectiveness of a student financial literacy program be assessed?
4. Which options are available to program administrators responsible for organizing and delivering these programs?

1.3 SCOPE OF THIS RESEARCH

The literature review component of this research focuses attention upon peer-reviewed articles and studies about the financial literacy of undergraduate students from the Great Recession of 2007-09 to the present. This serves as the foundation upon which I gather practitioner knowledge from active IHE administrators and staff from interviews in order to develop a framework for a practitioner's guide to student financial literacy.

Discussions of financial literacy and consequences of financial illiteracy have increased over the past two decades but swelled exponentially after the Great Recession began in December 2007 (Sherraden & Grinstein-Weiss, 2015). The breadth and depth of United States citizens' financial illiteracy and the subsequent impact became a frequent media topic and was thrust into the public consciousness.

The impact of the Great Recession was felt throughout the United States. The Survey of Income and Program Participation (SIPP) reported that from 2009 to 2011, nearly one-third of the population had at least one spell of poverty lasting two or more months (DeNavas-Walt & Proctor, 2014). Although only lasting two years, the impact of the Great Recession continues to be felt today. Businesses had not seen demand for their goods and services pick up in a way that would require significantly more hiring (Shierholz, 2014). Even though nominal unemployment had declined to an estimated 4% by 2018, long term chronic under and unemployment endures. There continues to be a pervasive attitude that economic circumstances have not improved for many Americans. Finding a decent job and holding onto jobs through layoffs and the changing employment marketplace is challenging (Schiro & Baker, 2009). Anticipating the future can be daunting as well as stressful for students who are graduating, face the task of repaying student loans, and are for applying for their first jobs. All of which suggests that students will be well-served by participating in financial literacy programs that better prepare them to make informed financial decisions.

1.4 CONNECTING UNDERGRADUATE STUDENTS WITH THE FINANCIAL SKILLS THEY REQUIRE

What does it mean for an undergraduate student to be financially literate? There are many definitions of financial literacy, and I offer the following definition of a financially literate IHR undergraduate student based upon my own professional experiences at the University of Pittsburgh described at a later point in this chapter. Development of this initial definition will be elaborated in Chapter 2, with an understanding that this definition may change as a result of the literature review and research findings.

A financially literate IHE undergraduate student understands the implications of budgeting, credit, interest rates, the impact of each of these on their personal financial well-being, and behaves in a manner aligned with that understanding.

Organizations may differ in their definition of financial literacy, and that is expected and appropriate for the population that they serve. Emphasis should not be on the difference between definitions, but the opportunities that each organization provides towards improving and moving towards a means to overcome financial illiteracy for their population. For a specific organization the definition of financial literacy should be clearly defined to provide the ability to assess their population's financial literacy, conduct studies, and compare results (Remund, 2010).

1.5 SIGNIFICANCE OF THE STUDY

This study defines the subjects IHE undergraduate students need to learn to become financially literate, and curriculum characteristics for IHE administrators, staff, and faculty can draw upon to develop programs to meet these challenges. It further suggests how financial literacy information should be disseminated, and identifies the role key departments should take to provide undergraduate students with an exemplary financial literacy program. This study will provide a guide for IHE's that embrace the need for developing financially literate undergraduate students even if their institution doesn't currently have a financial literacy program, their institution is in the midst of creating one, and for IHEs who currently have a financial literacy program but want to improve it.

1.6 PRIOR PROFESSIONAL EXPERIENCES WITH DEVELOPING STUDENT FINANCIAL LITERACY

The amount of information available about financial literacy and the subset of information specific to IHE undergraduate financial literacy continues to grow at an exponential pace. Much of financial literacy is learning language and concepts that can help the student if used and can hurt the student if ignored.

In 2005 two colleagues and I initiated the Financial Literacy program at the University of Pittsburgh. A dozen students were enticed to participate in an interview with a gift card to a local coffee shop if they would take the time to talk with us. We discussed what financial literacy information they wanted to have available, how they wanted it to be disseminated to them, and what we could do to help support and empower them to become financially literate. Although it is an anecdotal example, the students gave us good advice. Our informal study uncovered three key points:

1. Students are very busy and want useful information that they can access as needed.

2. Students are scared about their uncertain futures and don't want to be further scared about the accumulated debt and consequences of their debt load when they are lectured about the potential detrimental consequences of financial illiteracy.
3. Students want faculty, staff, and administrators to talk to them directly as they interact with students daily.

These discussions elevated our awareness of student perceptions of the financial challenges they face. Several impressionistic takeaways emerged. There are a number of ways to disseminate financial literacy information to undergraduate students, such as incorporation into curriculum, peer mentoring, in-person interviews, surveys, one-on-one discussions, small and large group presentations, freshman orientation lectures, first semester courses, blogs, online resources including web pages, Facebook, Moodle or Blackboard, financial literacy texted information, and on-campus video messages to name a few. Faculty are the subject experts and can incorporate financial literacy into the program's coursework. Admissions, Financial Aid, Academic Advising, Student Financials, Student Affairs, Student Health, and Career Services departments interact with students daily, and are uniquely positioned to assist students in developing life skills that will help them throughout their academic program and beyond graduation. One of these key life skills is financial literacy.

Each IHE's student population is different, and each IHE can implement the financial literacy methodology they determine will work best for their students. Following implementation IHEs need to evaluate, measure, and assess if their financial literacy efforts are creating the projected outcome.

Current undergraduate students have grown up in a digital age. They are familiar with digital devices and use them in their daily lives. Three out of four students reported that digital devices help them learn more effectively, and nine in ten want to be able to use cellular phones to assist in their academics (Top Hat 2017). Using face-to-face interactions combined with online and technological activities has been called blended learning. Young adults, having grown up with digital technology, are more adept in learning in a self-directed environment, where the in class portion of the learning is enhanced by delivery of course content in an online environment. This is commonly referred to as a flipped classroom but is merely utilizing familiar tools to allow students to learn most effectively and support the course learning objectives (Linder, 2017). Proficiency-based education, also referred to as competency-based, outcome-based, or mastery-based education, requires undergraduate students to show that they have mastered specific skills and knowledge before they can continue to progress in the subject (Feinberg, 2018). Each of these types of learning requires the student to begin to develop strategic planning, problem solving, and time management skills. Students can learn to develop these skills using familiar tools in new ways while focusing on what the students communicated about the knowledge they need from their IHE undergraduate financial literacy program.

1.7 BASIS FOR SYSTEMATIC DEVELOPMENT OF STUDENT FINANCIAL LITERACY

This study endeavors to move beyond the impressions derived from informal discussions with students. An in-depth literature review and structured interviews with IHE professionals will provide the elements of a practitioner's guide to help develop financial literacy programs. There is no singular or perfect IHE financial literacy program. Financial Literacy programs need to be developed for an IHEs specific undergraduate student population. Effective training and performance measures in implementing a training program and measuring results is important in developing an exemplary financial literacy program. This dissertation will help identify core elements of such a program, student learning outcomes, curriculum foundations for such a program, and ways to evaluate its effectiveness.

2.0 LITERATURE REVIEW

The Practitioner's Guide to Student Financial Literacy is intended for IHE administrators, staff, and faculty whose institution does not currently have an undergraduate student financial literacy program, has a program under development, or for IHEs that have an existing program but want to improve it. The literature review identifies and addresses key financial issues that will be included in the Practitioner's Guide to Student Financial Literacy, discusses the characteristics and core elements of a problem of practice, and how the literature review informed the problem of practice to establish the foundation for the Practitioner's Guide. Findings from select sources provide information on the design of an outcome driven curriculum, curriculum characteristics, and methods to assess IHE financial literacy programs. This chapter identifies the financial knowledge and behavioral traits of a financially literate student.

The scope of the literature review was narrowed to peer-reviewed articles about the financial literacy of undergraduate students from the Great Recession of 2007-09 to the present as part of developing a framework for a practitioner's guide to student financial literacy.

Financial literacy requires the ability to critically think, evaluate, and make appropriate decisions. Financially literate undergraduate students have the tools that enable them to successfully comprehend and incorporate financial literacy concepts and understand the implications of budgeting, credit, and interest rates and the impact of each of these on their financial well-being. Special attention was afforded to scholarly articles, books and studies that are relevant, scholarly and empirical.

In addition, the literature review was limited to sources that focused on U. S. undergraduate students from the *ProQuest Dissertations & Theses* and *ERIC* databases and includes sources from the Great Recession (December 2007) to the present. The primary focus of the literature review was to identify exemplary IHE financial literacy programs and evaluate similarities, differences, what is working, and report opportunities for improvement. Secondary sources gleaned from the bibliographies of the primary sources and reported by reputable publications have been used but only to supplement the primary sources and provide a limited augmentation of primary referenced information. The literature review was conducted as an "end in itself" in order to improve professional practice (Mertens, 2014).

If any source fell outside the preceding constraints it was not used for the literature review. The review began with an overview of financial literacy and the literature that discussed financial literacy information dissemination. While research varies on the definition of financial literacy and the required steps in implementing an undergraduate financial literacy program, the first goal of this literature review was not to reach a consensus on these definitions and methods of implementation for financial literacy education programs but rather to enlighten IHE financial literacy program administrators as to the research and literature that exists from the Great Recession to the present regarding financial literacy education. The literature review narrowed the focus to undergraduate financial literacy, proven and recommended processes of financial literacy information dissemination, and various methods of IHE implementation of undergraduate financial literacy programs.

The results of this literature review will provide each IHE with a framework and context that can be used to develop an exemplary financial literacy program for their population of undergraduate students. No undergraduate student IHE population is exactly the same, and no financial literacy program exists that will fit the needs of every IHE, but by using best practices each IHE can develop a unique, immersive, student-centric environment for developing the financial literacy, life skills, and the needs of their students.

2.1 CONDUCTING THE LITERATURE REVIEW

Special attention was afforded to scholarly articles, books and studies that are relevant, scholarly and empirical. If any source fell outside the preceding constraints it was not be used for the literature review. The review began with an overview of financial literacy and the literature that discussed financial literacy information dissemination. While research varies on the definition of financial literacy and the required steps in implementing an undergraduate financial literacy program, the first goal of this literature review was not to reach a consensus on these definitions and methods of implementation for financial literacy education programs but rather to enlighten IHE financial literacy program administrators as to the research and literature that exist from the Great Recession to the present regarding financial literacy education. The literature review narrowed the focus to undergraduate financial literacy, proven and recommended processes of financial literacy information dissemination, and various methods of IHE implementation of undergraduate financial literacy programs. Financial illiteracy is a issue that requires a solution, can be observed, and can be acted upon to be improved over time, which frames it to be a Problem of Practice.

2.2 PROBLEM OF PRACTICE

The literature review was conducted as a comprehensive, substantive Problem of Practice. In defining a Problem of Practice the educator needs to articulate the instructional or systemic issue that requires a solution. For the purpose of this study, an instructional or systemic issue is a problem that involves the interaction of various stakeholders including: students, educators, researchers, and communal, educational, and governmental organizations. The Problem of Practice must be directly observable, not just theoretical. If the Problem of Practice is observable then it exists, and can be acted upon to be improved over time. The planning for improvement may help to define the problem of practice, but the in-depth study of the particular problem may guide the educator towards the problem's solution. Solving a Problem of Practice should be high leverage and actionable, resulting in a significant improvement in student learning (Simpson, 1995; University of Arkansas, 2015).

Framing this research as a problem of practice allowed me to identify relationships between practice and application, and to expand my understanding of the significance of the problem of financial illiteracy for IHE undergraduate students (Randolph, 2009). By focusing on specific literature, conducting research using an interdisciplinary perspective and reviewing sources for specific patterns the dissertation in practice offers suggestions for improvement (Teitel, 2014) and opportunities for further research and applications of financial literacy (Pogrow, 2017). Reviewing exemplary financial literacy efforts gleaned from the top fifty financial literacy IHEs in the United States have helped to inform the results of this research (Alban, 2012; Brown, 2017; Rust, 2009). Framing the dissertation as a dissertation in practice allows the researcher to present a framework for IHE practitioners to use as they develop a financial literacy handbook and work on financial literacy cultural change at their individual institutions.

2.3 DERIVATION OF THE DEFINITION OF A FINANCIALLY LITERATE IHE UNDERGRADUATE STUDENT

In developing my definition I evaluated several different definitions of financial literacy to glean those key characteristics that were specific for an IHE undergraduate student. Vitt, Anderson, Kent, Lyter, Siegenthaler, and Ward (2000) discussed analyzing, discerning, and competent responses to financial life events. The National Financial Educators Council addresses taking effective financial action. The Jump$tart Coalition for Personal Financial Literacy discusses financial knowledge, skills, and an evolving competency to handle changing personal and financial situations. Investopedia refers to the knowledge and understanding of personal finance matters. The President's Advisory Council on Financial Capability Office of Consumer Policy Resource Center emphasizes effective financial management for a lifetime. The Government Accountability Office emphasizes financially informed judgment and effective action. Samkin, Low, and Taylor (2012, p. 7) discussed practical financial knowledge. Xu and Zia (2012) further discussed money management and financial planning**.** The PISA Financial Literacy Assessment Framework emphasized the ability to participate in “economic life” (OECD, 2014, p. 31). iGrad (www.igrad.com) is a comprehensive online IHE financial literacy resource and emphasizes financial wellness and making intelligent financial decisions living within one’s means.

The evaluation of these definitions lead to the development of an initial definition of IHE undergraduate financial literacy, which incorporates the following knowledge-based and behavioral characteristics:

1. Budgeting: which includes an understanding of earnings, savings, and expenditures, the discipline of not permitting expenses to exceed earnings.
2. Credit: which includes the use of credit cards, the impact of loans upon debt service payments, the significance of credit reports and scores, restraining reliance upon borrowing.
3. Interest rates: which also includes awareness of the compounding effect upon debt accumulation through uses of credit cards, and loans, and applying this knowledge to budgeting.

Financial literacy requires the ability to critically think, evaluate, and make appropriate decisions. Financially literate undergraduate students have the tools that enable them to successfully comprehend and incorporate financial literacy concepts and understand the implications of budgeting, credit, and interest rates and the impact of each of these on their financial well-being. This knowledge empowers them to make intelligent choices about their personal finances that have long-term implications throughout their undergraduate program and long after their graduation, including an in depth understanding their personal finances, planning for repayment of their student loans, and planning for their financial futures.

A culture change at the IHE is crucial to address the lack of financial literacy, problem solving, and strategic planning skills that currently exist in much of the undergraduate student population. This thesis provides IHE administrators, faculty, staff, and executive management a framework and guide to student financial literacy, which explores what subjects students need to learn to become financially literate, what methods the IHE can implement to disseminate the financial literacy information, facilitate learning, and empower the undergraduate student's development of financial literacy skills, and the key role IHE departments play in the creation, development, and sustaining an exemplary financial literacy program.

In addition to helping students take on and repay appropriate debt to pay for college, financial literacy education can benefit IHEs in increased student persistence in their academic program. The University of Dayton established a new practice in 2013, one that many IHEs across the country are monitoring and considering for implementation at their own institutions, in which they send each admitted student who has filed the federal financial-aid application a detailed breakdown of what he or she will spend on tuition after financial aid, along with estimates of room and board costs for their entire four-year undergraduate program. That simple practice increased retention from 86 to 91% in a five-year period. The University of Dayton has over 8,000 undergraduate students, and a 5% increase of 8,000 equates to 400 students, which is a significant number of students to retain for any IHE ("2018 edition of Best Colleges is National Universities," 2018.). This foreknowledge helps students and their families conduct long-term financial planning and reduces anxiety due of unknown future IHE costs (B. B. Supiano, 2015). Understanding the interwoven nature of the financial literacy information undergraduate students need, how the information is disseminated, and the roles that key IHE departments play is critical in developing the life skills of financial literacy in the undergraduate student.

As important as it is for undergraduate students to become financially literate, it is as equally important for the IHE to embrace and incorporate financial literacy education into their institution's culture. Student completion rates from matriculation to graduation for IHEs have been at 60% for decades (Ginder, Kelly-Reid, & Mann, 2016). The financial impact of an increase in undergraduate student retention can be made readily apparent. If an IHE is able to improve their completion rate from six out of ten to seven out of ten students, it can substantially increase available income to its budget. Consider a hypothetical example of how an IHE would benefit from increasing student retention by 10%. An IHE has an admissions requirement of 100 freshman students each year. At an total annual cost for each student (including tuition, room board, textbooks, and all other educational expenses) equal to $25,000.00 per year, the IHE can expect an total per academic year of $7,975,000.00 at a 60% completion rate. Increasing completion rates by 10% to 70% results in a total per academic year of $8,500,000.00, an increase in income of over one-half million dollars. The results of this simple example can be extrapolated to each IHE's particular situation, but the concept is clear; the more students who are able to continue and complete their undergraduate program, the more money the IHE will obtain to provide for operating expenses (see Appendix D).

The instruction of life skills such as financial literacy, strategic planning and problem solving can be useful to Admissions as a recruitment tool for prospective students and parents. Admissions, Financial Aid, Academic Advising, and Student Affairs can jointly present and reinforce the IHE's commitment to student success and financial literacy from the beginning of the undergraduate student's academic program, and emphasize how they will assist the young adults to schedule financial aid and academic planning throughout the undergraduate student's IHE experience. Student Health and Academic Advising can also support the undergraduate student in their personal lives in addition to their academics. This unified approach can promote the IHE's commitment to support and nurture the undergraduate student throughout their academic program and allay fears and concerns that prospective students and their parents may have about their young adult attending the IHE. This culture of support for persistence and completion of the undergraduate's academic program benefits the student and the IHE.

2.4 "IT TAKES A VILLAGE." KEY IHE DEPARTMENTS AND FINANCIAL LITERACY

A holistic approach to financial literacy education involves key IHE departments such as Admissions, Financial Aid, Student Financials (Bursar), Student Affairs, Student Health, Career Services, Academic Advising. Undergraduate peer mentors can supplement the work of these key departments and contribute to the holistic approach by guiding students, allaying their concerns and fears about their future, helping them successfully complete their degree, and preparing them for success in the post-graduation job market.

IHEs can be strategic about departmental collaboration and responsibilities for financial literacy education by learning about their specific students' needs. Naysayers may deride the concept of IHE academic departments and student support centers becoming further involved with the students as it will increase costs, increase workload, and prevent the executives, administrators, faculty, and staff from doing their "real work." I counter that the IHE department's "real work" is the student's and their development. Many other functions exist at an IHE including fundraising, research, policy development on the local, state, and national level, and numerous other requirements, all which together help the IHE fulfill their mission.

The one stop shop concept of combining Admissions, Registration, Financial Aid, and Student Payments provides students an interface and connection with the IHE. This connection is further developed with faculty, instructors, Career Services, and peer mentors. A supportive culture is created with the one stop shop, and results for those IHEs that instituted this concept have been successful (Johannes, 2012). The contribution of IHE departments is not a new concept. The symbiotic relationship between financial literacy subjects, financial literacy information dissemination, and the role of key IHE departments in educating undergraduate students towards financial literacy is an expansion of the one stop shop concept to involve all of the relevant people and departments that interact with the undergraduate student on a daily basis.

The first step to finding a solution to any problem is to define what the problem truly is. The investigator researches available data and develops knowledge about the "stated" problem and determines if patterns exist within the data (Fischer, Greiff, & Funke, 2012). By evaluating and reframing the issue, a practitioner can investigate if a new problem exists that if addressed will provide a solution to the "stated" problem (Wedell-Wedellsborg, 2017). The perception repeated in the media over the past decade is that IHE undergraduate students are, on the whole, financially illiterate, are graduating burdened by unreasonable amounts of student loan debt. Further, the massive amounts of accumulated student loan debt will impact graduating IHE students far into the future and limit their ability to buy a home and pursue their potential (Heinrich, 2017) may be true, but that is not the real problem (Best, J. & Best, E., 2014).

Results of research and government policy studies (McCarthy, 2015) indicate that financial illiteracy is due in part to the lack of education by the undergraduate student's parents and secondary school educational institutions and is sustained by the increasing cost of attendance at IHEs (College Board, 2015) and the commercialization of U. S. society, where standing in line overnight outside a store is not unusual for someone to purchase the latest gadget or toy (Davtyan, 2010). However, those reported results still miss the mark.

The true problem is IHE undergraduate students lack key life skills. It is more than the money, the accumulation of student loans, or the impact of student loan debt on the graduating student's future endeavors. The lack of ability to critically think, evaluate, and make decisions is at the core of this problem. Designing programs to offer free community college tuition (Hill, 2011; Mercer, 2018) and expanding the offerings of reduced college tuition or alternative means of loan repayment and forgiveness (Obama et al., 2016) are all positive and laudable approaches but do not contribute to creating an undergraduate student who is financially literate. Mandatory financial literacy courses, freshman orientation programs, student loan entrance and exit counseling (Boddington & Kemp, 1999), or IHE offering online financial literacy resources alone do not guarantee a student will be financially literate. Financial literacy and making sound decisions needs to be a skill set that is developed and nurtured in the undergraduate student until it is a part of their daily thinking and evaluation processes and as familiar as using an electronic device to communicate to their friends using social media (Dunmore, 2013).

Consistently, and as many Career Services departments can attest, employers are looking for recent graduates with strategic planning, problem solving skills, and developed skills to critically think, evaluate, and make decisions (Lockhart, 2013; Wilkinson, 2016). Employers require new hires to have the ability to work independently and as part of a team.

By integrating the financial literacy subjects, means of dissemination, and involvement of key IHE departments that frequently interact with the undergraduate students, students will be immersed in a culture that demonstrates the values associated with financial literacy (Sabbaghi & Hipskind, 2013). This cultural change, in addition to learning by example from peer mentors, presents a strong chance of an undergraduate student incorporating financial literacy practices into their daily lives (Gathergood & Weber, 2017). Unless the undergraduate student sees and understands the value of financial literacy to their own personal situation it will be unlikely they will want to spend the time and effort to learn and incorporate it (Davtyan, 2010).

As important as it is for undergraduate students to become financially literate, it is equally important for the IHE to embrace and incorporate financial literacy education into their institution's culture. Student completion rates from matriculation to graduation for IHEs have been at sixty percent for decades (Ginder et al., 2016). The financial impact of an increase in undergraduate student retention can be made readily apparent. If an IHE is able to improve their completion rate from six out of ten to seven out of ten students, it can substantially increase available income to its budget. Consider a hypothetical example of how an IHE would benefit from increasing student retention by 10%. An IHE has an admissions requirement of 100 freshman students each year. At a total annual cost for each student (including tuition, room board, textbooks, and all other educational expenses) equal to $25,000.00 per year, the IHE can expect a total per academic year of $7,975,000.00 at a 60% student completion rate. Increasing completion rates by 10% from 60% to 70% would result in a total per academic year of $8,500,000.00, an increase in annual income of over one-half million dollars. The results of this simple example can be extrapolated to each IHE's particular situation, but the concept is clear; the more students who are able to continue and complete their undergraduate program, the more revenue the IHE will obtain to provide for operating expenses and services for their students.

One projection of high school graduates indicates that fewer students will be available to apply for admission to United States IHEs over the next decade (Bransberger & Michelau, 2016). The hardest hit region will be the Northeast where the lack of potential freshman undergraduate students could be felt most severely. If an IHE struggles to obtain sufficient applicants for admission they will be forced to cut operating costs and may reach the point where executives and administrators have no choice but to close the IHE or file for bankruptcy (Seltzer, 2017). By taking a proactive approach and fostering a culture of innovation and change, an IHE can avoid potential financial hardship. There are thousands of IHEs in the United States, which means there is a lot of competition for the existing pool of applicants (Digest of Education Statistics, 2015; NCES, 2016). IHEs will need to develop a means to attract potential students from a dwindling source in order to bring in sufficient revenue to meet their financial obligations and meet the educational and institution goals that exist in their charter.

Institution of Higher Education (IHE) financial aid offices can help advise undergraduate students by providing a warning and contacting the student for advising when the student's projected debt-to-income ratio is nearing the 10% threshold.

Undergraduate students must be presented with appropriate information before and during their study so they will not find themselves in financially untenable situations when they graduate. Making payments on educational debt along with other financial obligations can be a hardship. The financially illiterate undergraduate student may incur excessive debt that can initiate circumstances that will lead to non-completion of their undergraduate program, and, even if they successfully complete their program, these same circumstances can negatively impact their ability to repay student loans after graduating from their IHE.

The executives, administration, faculty and staff need to work collaboratively to create their IHE's financial literacy program. Beginning with an analysis of goals to meet will identify the training requirements. These include analysis of the mission of the IHE, strategic direction, performance goals, competencies needed to reach the goals, and determination of what knowledge and experience the IHE undergraduate students need to meet the IHE's financial literacy goals. Once the initial plan has been established the IHE will need to develop dissemination strategies for the financial literacy information, integrate the financial literacy into the daily activity of the IHE, and develop a means to evaluate and assess the effectiveness of the financial literacy dissemination processes (A guide to strategically planning training and measuring results, 2000).

The literature informs us that each IHE should provide ongoing professional development programs for administrators, staff, and faculty that address the changing nature of the student experience, student learning so that these professionals can continuously assess and improve their efforts in enhancing the undergraduate student's learning process (Day et al., 2004). Developing a financial literacy program relies on the availability of resources including internal or external funding, time, space, staffing, and level of staff expertise. Four program models have been observed in higher education institutions: 1) financial education/counseling centers, 2) peer-to-peer programs, 3) programs delivered by financial professionals, and 4) distance learning programs that utilize interactive online programs, classroom-based programs, game-based education, event-based programs, and individual counseling (Alban, Britt, Durbank, Johnson, & Lechter, 2014). What is successful for one institution may not work as well for another, but IHEs should rewrite curriculum to incorporate financial literacy (Coffin, 2013) and teach the financial impact and implications of taking extra time to complete their program of study. Extra time to completion results in added costs of tuition, fees, books and related expenses, and the indirect opportunity costs of delaying entry into the job market with wages that reflect the undergraduate degree (Shulock & Koester, 2014).

Faculty may also elect to integrate financial planning into existing core curriculum (Eitel & Martin, 2009) by assigning individual and group projects in order to reach a particular goal. This will mirror actual projects and requirements that these young adults will experience in almost any employment position they find themselves in. It is unlikely they will be working in isolation; they will often be working as a member of a team (DeLyser et al., 2013). What skills does a young person need these days to perform well in society and at work? The answer may not be financial skills as such but rather the ability to handle real day-to-day situations skillfully, and the self-efficacy that goes with it. This ties in directly with what they should learn and the role of key departments.

Although mathematics and economics courses appear to be the likely candidates for financial literacy curriculum inclusion, many academic faculty from diverse disciplines may elect to further develop skills such as problem solving, self-advocacy, critical thinking, and, in some cases, financial literacy skills. The literature informs us that many attributes of financial literacy can be taught over time. It can be presented in the context of supply and demand, food and consumer education, and as a part of in-class discussions of economics & law and economics & society. It must be part of a student's daily learning that slowly grows and develops (Aprea, Wuttke, & Greimel-Fuhrmann, 2016, pp.347, 508, 710).

2.5 STUDENT LEARNING OUTCOMES

A curriculum in support of IHE undergraduate financial literacy includes, but is not limited to, critical thinking, priority management, problem solving, budgeting, banking, and interest rates (Akers, Chingos, & Brookings Intitution, 2014; CreditRepair.com, n.d.; Lindsey-Taliefero, Kelly, Brent, & Price, 2011; Petersen, Heins, & Katras, 2013; Neidermeyer & Neidermeyer, 2010) and are discussed in this section followed by discussion of dissemination, the role of key departments, and student learning outcomes. Different approaches will meet the requirements of every person who will need the financial literacy information.

Dissemination by utilizing online information is useful to make a large amount of information available to a wide audience and allows the person to access the information they are looking for easily and with confidentiality. If a person needs more information than can be accessed online, they can attend an information session or set up a one-on-one appointment to discuss their personal information. Many people are reluctant to discuss their personal financial information in a public setting, and it is not appropriate to discuss personal information in front of others due to privacy laws. Self-advocacy is a life skill that undergraduate students need to develop. Training in problem solving and financial literacy can provide the undergraduate student with skills to self-advocate (Flores, 2014).

As an example, in addition to helping students take on and repay appropriate debt to pay for college, financial literacy education can benefit IHEs in increased student persistence in their academic program. The University of Dayton established a new practice in 2013, one that many IHEs across the country are monitoring and considering for implementation at their own institutions, in which they send each admitted student who has filed the federal financial-aid application a detailed breakdown of what he or she will spend on tuition after financial aid, along with estimates of room and board costs for their entire four-year undergraduate program. That simple practice increased retention from 86 to 91% in a five year period. The University of Dayton has over 8,000 undergraduate students, and a 5% increase of 8,000 equates to 400 students, which is a significant number of students to retain for any IHE ("2018 edition of Best Colleges is National Universities," n.d.). This foreknowledge helps students and their families conduct long-term financial planning and reduces anxiety due of unknown future IHE costs (B.

B. Supiano, 2015). Understanding the interwoven nature of the financial literacy information undergraduate students need, how the information is disseminated, and the roles that key IHE departments play is critical in developing the life skills of financial literacy in the undergraduate student.

2.5.1 IHE Exemplars

Exemplary IHE financial literacy programs use a variety of approaches to disseminate financial literacy information to their undergraduate student populations. As mentioned previously, the University of Dayton is exemplary in its practice of sending each admitted student who has filed the federal financial-aid application a detailed breakdown of what he or she will spend on tuition after financial aid, along with estimates of room and board costs for their entire four-year undergraduate program. One may hypothesize that this simple practice contributed to the increased retention from 86 to 91 percent in a five year period ("2018 edition of Best Colleges is National Universities," n.d.; Supiano, 2015).

There are a number of other IHEs that offer exemplary financial literacy programs. In April 2012 iGrad published a College Financial Literacy Compendium, which was a guide to the 23 best college financial literacy programs in the United States (Alban, 2012). In 2017 (Brown, 2017) and 2018 (Hamory, 2018), LendEdu compiled lists of the top 50 IHE financial literacy programs in the United States. LendEdu's studies focused on the number of available workshops and resources; access to one-on-one counseling, and financial literacy program incentives. There are a number of common elements that the top IHE financial literacy programs share. In beginning their programs they asked their student population what financial literacy skills they needed, they listened to their answers, and created programs tailored specifically for them.

Undergraduate students are busy, and for them to utilize a program developed for them they need incentive and to perceive the value in the program.

These exemplary programs offer many resources and learning materials, including an expansive offering of workshops on topics running the gambit from Budgeting to Preventing Identity Theft. They offer small and large group orientated financial workshops and programs, one-on-one counseling, and Peer Mentoring programs. Undergraduate students are incentivized to become Peer Mentors by earning a certification as a financial literacy peer mentor which can be added as another accomplishment to their resume. IHE use institution based newsletters, blogs, email messages, and video displays across campus to post financial tips and advice.

In addition to incentivizing peer mentors, a number of IHEs use incentives as a means of promoting financial literacy activities. Some IHEs provide mandatory freshman first semester or academic year course, others require passing a financial literacy quiz in order to register for the following semester's courses, include a complete financial literacy program each semester, use creative incentives such as an opportunity to earn a scholarship by attending financial literacy programs, offering grant awards to replace student loans, and creative contests.

These exceptional programs focus on developing life skills including financial, physical, and mental wellness (Keeling, R.P. 2006; Trombitas, 2014), community involvement and bringing financial literacy initiatives off campus (McCarthy, 2015), alumni partnerships with the undergraduate students (Looney, 2011), and working closely in an IHE culture with faculty, researchers, and local businesses (Rubley, 2017).

Review and evaluating each IHE's websites from these three reports indicates that approximately 40% of top 50 IHEs mention a focus on critical thinking, priority management and strategic planning as part of their financial literacy program. Additionally, eleven IHEs were present in all three reports: Boston College, Creighton University, Iowa State University, Menlo College, Sam Houston State University, Syracuse University, Texas Tech University, the University of Arizona, the University of North Texas, the University of South Carolina, and the University of Pittsburgh (at which my colleagues and I led the effort in building the financial literacy program from 2005 through 2014). IHEs looking to develop their financial literacy programs into an exemplary status should evaluate other exceptional IHE programs and incorporate best practice into their own programming.

2.6 CRITICAL THINKING AND PRIORITY MANAGEMENT

Best practice includes the ability to acquire and evaluate information. This ability is essential to enable students to develop the skills to function as lifelong learners. The learning of critical thinking and priority management skills will set the stage for an undergraduate IHE student to successfully complete their education and will serve them into life beyond graduation. Incorporating financial literacy and problem solving into an undergraduate student's daily experiences will allow the student to develop self advocacy as almost an unconscious reaction (Xiao, Chatterjee, & Kim, 2014).

The undergraduate student's use of problem solving skills will enable them to develop critical thinking skills described by Bloom's Taxonomy of knowledge, comprehension, application, analysis, synthesis and evaluation. Learning to recall or recognize facts (Knowledge), interpret those facts (Comprehension), and use that information (Application) in a context that may differ from the experience where it was learned. By evaluating (Analysis) the similarities and differences of the presented problem, developing a creative solution (Synthesis), and reviewing the expected results (Evaluation) will help the student to determine if the approach to solve the problem will be effective (Heer, 2012; Macpherson, 2004; McMahon & Thakore, 2006).

Included in problem solving is the development of an understanding of resource planning, resource allocation, timeline planning, and contingency planning (Sprow Forte, 2012) (Klinger, 2010). Problem solving examples and exercises can be incorporated into many curriculums, such as developing a plan for logistics in providing supplies for the war in the Pacific during WWII, developing a plan for a team to make a one way trip to the planet, Mars, providing hurricane relief for an area of the United States, or something more mundane but pertinent by planning out their academic requirements for the current semester (Yakhou & Dorweiler, 2007).

We all encounter different problems every day, some minor, some more involved, and infrequently (hopefully) major problems. They run the gambit from oversleeping and needing to rush to get somewhere to the other extreme of major family or personal health crises, but in each case problem solving involves utilizing resources, time, and allowing for contingencies.

A good starting point for IHE undergraduate financial literacy programs is time management. The ability to plan time effectively will help the student to manage all of their academic and personal responsibilities and will help to prepare them for continued success throughout their academic program and beyond (Arendale & Minnesota University, 2015).

A discussion about time allocation time is a useful tool in introducing the topic of budgeting. We all consciously and often unconsciously plan and budget our time, and we may feel we do not have enough time in our day to get everything done that we would like to accomplish. Learning to effectively and realistically plan the time required to accomplish goals will help the student handle unforeseen obstacles and still allow the student to successfully complete their particular goal. One time planning example and three Academic Advising and Educational Program Time Planning examples are shown below:

Table 1. *One Example of Time Budgeting/Planning*

Activity (Hours)	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total/Week
Sleep	**10.0**	**8.0**	**8.0**	**8.0**	**8.0**	**8.0**	**10.0**	**60.0**
Eating. grooming, exercise, etc.	**3.0**	**3.0**	**3.0**	**3.0**	**3.0**	**3.0**	**3.0**	**21.0**
Classes and assignments	**5.7**	**5.7**	**5.7**	**5.7**	**5.7**	**5.7**	**5.7**	**40.0**
Employment	**3.6**	**3.6**	**3.6**	**3.6**	**3.6**	**3.6**	**3.6**	**25.2**
Laundry & Miscellaneous	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**8.0**
Free Time Daily	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**	**14**
24 hours per day and 7 days per week							**Total =**	**168**

***Note:** *The examples in Tables 1-4 are hypothetical examples created by the researcher.*

Examples of Academic Planning over four-year undergraduate program

Table 2. *Academic Planning Full-Time*

Academic Year	Credit Hours	
	Fall Semester	**Spring Semester**
Freshman	**15**	**15**
Sophomore	**15**	**15**
Junior	**15**	**15**
Senior	**15**	**15**
Total Credit Hours	**120**	

Table 3. *Academic Planning – Reduced Credit Hours Fall Semester Sophomore Year*

Academic Year	Credit Hours	
	Fall Semester	**Spring Semester**
Freshman	**15**	**15**
Sophomore	**12**	**15**
Junior	**15**	**15**
Senior	**15**	**15**
Total Credit Hours	**117**	

Table 4. *Academic Planning Seven Semester Plan*

Academic Year	Credit Hours	
	Fall Semester	Spring Semester
Freshman	18	18
Sophomore	18	18
Junior	18	18
Senior	12	0
Total Credit Hours	120	

In the preceding Time Planning example, a student mapped out their entire week and ensured that they would have sufficient time to get sufficient sleep, take classes and study just like they were working a full-time job, allotting time for employment, daily activities, and time to relax. Time Budgets are fluid and can be changed to accommodate a change in priorities as needed, but they help a person ensure that they budget sufficient time to take care of themselves and maintain a proper life balance. If a student cannot get adequate sleep, nutrition, and take care of their physical needs they will be hard pressed to meet their academic, employment, and personal commitments. Learning to appropriately maintain a proper life balance is an intrinsic part of developing critical thinking and priority management skills.

The three examples of an Academic Planning budget map out possible scenarios for a student intending to complete a 120 credit hour undergraduate academic program. In the first example the student maps out 15 credit hours per fall and spring semester and is able to complete their academic program in four years.

The second example shows a situation where a student only completed 12 credit hours in their sophomore fall semester. This represents a shortfall of credit hours to complete their degree program in four years, unless additional action is taken. The student can choose to add a three credit course to one of the remaining semesters in order to catch up, can choose to take a summer semester course if available, or may need to take one additional semester after their senior spring semester to complete their degree requirements. There are a number of different scenarios that the student can work with academic advising to determine their individual best course of action.

The third example shows a student who is capable of being successful managing more than 15 credit hours per semester. Not only do they only have to handle 12 credit hours in their final semester, which may allow them more time to use Career Services and try to become employed by the time they graduate, but they also finish their academic program a semester earlier.

Each scenario may result in not only a different time frame to completion but also has a financial impact.   If a student has to take a summer course or extra semester they will incur more charges than a student who completes their degree in eight semesters due to not only additional IHE tuition and fee costs but also lost opportunity costs because they may be unable to move into the working world as quickly and thereby lose potential salary from their post-graduation employment.

Priority Management (time planning) budgets are guides only and need to be created to work for the individual. Time planning budgets are not carved in stone and can be modified as circumstances and obligations change.

2.6.1 Disseminating Critical Thinking and Priority Management Information

Students can learn time management and apply these skills to plan out each semester’s course load, establish timelines for completion of homework, projects, and preparation for tests and exams. Time management utilization can become incorporated within each course syllabus and emphasized by faculty (Danns, 2016).

Critical thinking, priority management, time management, and financial literacy all share a common thread, they are all about the allocation of resources and strategic planning (Klinger, 2010; Mae, 2016). Time is a resource that is limited; no one can obtain more than 24 hours in a day. Money, however, is a resource where a person can obtain more than they have available, by borrowing money and thus incurring debt. Developing an understanding about managing resources including money is a critical skill that undergraduate students need to develop, along with developing knowledge of the consequences of incurring debt and creating a plan to repay any monies they borrow.

Admissions can tell prospective students and parents about the IHE's immersive environment, development programs of life skills, and how critical thinking and time management would be helpful throughout the student's undergraduate education and beyond graduation. This could be a useful recruitment tool for Admissions. Additionally, Admissions and Financial Aid can join forces to demystify financial aid and FAFSA. Workshops can be held well in advance of the academic year and establish the IHE's focus and commitment to student success and financial literacy from the start. IHE Admission offices need to bring in sufficient numbers of freshman students each year to ensure that the number of students correlates to sufficient income as planned and budgeted by IHE administration. Admitted students should be those students who have the best chance of successful completion of their academic program and can successfully finance their education, but that may not always be the case. Care must be taken to avoid a conflict of interest in which the financial requirements of the IHE supersede the needs of the undergraduate students (Thompson, 1993).

Financial Aid can help to develop critical thinking and time management strategies with the students to plan out financial aid for each year and project expenses throughout the student's four-year program. Financial Aid can advise the student to plan for contingencies, time sensitive IHE grants and scholarships, deadlines for FAFSA and other financial aid deadlines. Financial Aid can discuss the grades required to maintain scholarship awards and other scholarship fulfillment criteria. Financial Aid can discuss with senior management the feasibility of offering a contract at the beginning of a student's undergraduate program to hold costs the same for four years, which allows the student and their families the ability to do long range financial planning, such as the University of Dayton currently does. Financial Aid and senior management can discuss incentive programs for students such as a fixed amount or a percentage of loan forgiveness for the student's academic program completion and graduation.

Alumni Affairs can use strategic planning in establishing ongoing, open, and available relationships with the undergraduate students while in school and afterwards. This allows Alumni Affairs to access alumni availability for donation of time and money, talking with prospective students and their parents and inform the prospective student and their family of available IHE resources, discussion about the prospective student's academic path, and the commitment of the IHE to the prospective student's academic success.

Student Health, Student Affairs (peer mentors), and Academic Advising can work together to interact with the undergraduate student to reinforce that there is always help available. Academic life can be stressful for undergraduate students, and these departments can help the student to schedule time and develop methods to reduce stress, get enough sleep, obtain daily exercise, and maintain life balance. Interaction with all of these key departments with the student helps to reinforce the involved, caring, and supportive nature of the IHE's environment and encourages students to ask for help and in turn can positively impact degree program persistence and completion. In addition to budgeting time, students need to learn about budgeting money and developing a spending plan.

2.7 BUDGETING AND DEBT SERVICE

Establishing and managing a budget, setting financial goals, and regularly saving money is at the core of establishing financial literacy for students (Durband, Britt, & Travnichek, 2012). Students require an understanding of how to strategically plan out their expenses and how their available funds will be used to pay their current expenses. Students require an understanding of how to save money on a regular basis so that they can have sufficient funds in time to help to support the goals and achievements that they desire and to allow themselves to reach the financial goals that they have set for themselves.

Each year colleges and universities send award letters to admitted students who applied for financial aid, detailing their cost of attendance and the grants, loans, and Federal Work Study available to help them pay it. In many cases, the information in those letters helps families decide where a student will ultimately enroll. However, every college designs its own letter, so it can be hard for families to make comparisons of the financial aid offers.

The *Higher Education Opportunity Act of 2008* required the U.S. Department of Education to create a standardized award letter within a year of the law's passage. The deadline has long passed, but the U.S. Department of Education still has not yet developed the letter (Marcus, 2015). A standardization of the award letter would help students and their parents make better financial decisions on how to strategically plan out their expenses and to allow them to reach their financial goals (Supiano 2010).

Stephanie Anderson, Assistant Vice President for Enrollment Management and Undergraduate Admissions at Texas State University-San Marcos, sees the role of financial aid in retention as being a “tipping point” (Scannell, 2011) When students have financial aid issues plus concerns about their academic performance, campus relationships, and other issues, this can bring students to the “tipping point” faster, when the student decides to leave the IHE before completing their academic program and with the burden of student loan debt. Affordability problems, plus excessive amounts of work hours and lack of academic success, often create the tipping point (Scannell, 2011).

Undergraduate students need to learn about creating a budget, identifying their needs versus their wants, spending, saving for emergencies, planning for unanticipated expenses, in short, resource management. Budgeting and problem solving are closely related. The undergraduate student will need to learn to identify the potential problem (needs versus wants), manage income (accumulation of resources), manage expenses (distribution of resources), balance income versus expenses, and learn to understand the consequences of excessive spending, insufficient savings, and having too much money (excessive student loan refund) (CNNMoney.com, 2010; Letkiewicz, 2012).

2.7.1 Dissemination of Budget and Debt Service Information

Financial Aid is the key department to disseminate financial literacy information to undergraduate students on how to pay for their undergraduate program. Financial Aid can teach the students to understand financial aid and explain grants and scholarships and how to find and apply for them. Financial Aid can explain the intricacies of student loans and the differences between federal, institutional, and private lender student loans. Debt service refers to the funds required for repayment of interest and principal on a debt for a particular period. If a student is obtaining a student loan, the borrower needs to calculate the annual debt service required for the loan (Little, 2014).

Financial Aid can discuss the details about completing the FAFSA, determining financial need, determining cost of attendance, how eligibility is determined, the actual cost of attendance, student loan repayment, consolidation, forgiveness, deferment and forbearance, and loan default. United States student loan default rates are increasing. Per the Consumer Federation of America, defaults increased 17% in 2016 (Sell, 2017) and in 2017 were averaging 3,000 per day (Chopra, 2017). Students who started at an IHE in 2003-2004 would be the cohort of students who were in student loan repayment over the last decade. Of that cohort 27% had defaulted on at least one student loan (Kreighbaum, 2017). Financial Aid staff can help undergraduate students navigate the complexities of the student loan process. If a student is looking to borrow a high-interest, private loan they need to be informed how accumulating excessive loan debt could result in future financial hardships. Informed borrowing of federal or private loans could provide the financial resources an undergraduate student needs to remain enrolled and complete their degree program (McKinney, Roberts, & Shefman, 2013). Additional information can be found at FinAid.org, the IHE's Financial Aid website, and in Appendix C IHE Financial Literacy Resources. Students do not need to develop budgets and try to manage their finances on their own. Resources and help is available, and as part of learning the life skill of self-advocacy students can create a relationship with a bank to help them learn to manage their income and expenses.

2.8 BANKING

Banks offer savings accounts, checking accounts, and other services to students. The undergraduate student needs to determine their banking needs, understand associated fees and costs for the banking services, the mechanism for depositing and withdrawing money, using debit cards, understanding the cost and benefits of overdraft protection, electronic bill paying, and develop an understanding about interest rates. As such, banks can help develop enhanced financial literacy of their student customers.

Many IHE's and banking institutions develop contract agreements that are financially lucrative to both the lender and the IHE. The IHE obtains money to open an agreement with the lender, and based on the number or percentage of IHE students that open IHE sponsored bank accounts with that lender, the IHE can earn additional funds. PNC Bank, Wells Fargo, and U.S. Bank have paid millions of dollars to over 100 IHEs since 2001. Additionally, the lender is obligated as part of the agreement to offer financial literacy resources including workshops and online resources to the undergraduate students (Bauman, 2017; Chen & Soldner, 2013). The IHE needs to ensure that any agreement with a lender is openly disclosed to avoid any appearance of impropriety as reflected by some well publicized IHE-Lender "sweetheart deals" ("Education Department Seeks to Curb Deals Among Colleges and Banks," 2015; Chu, 2008).

2.8.1 Dissemination of Banking Information

Local banks and lending institutions may be able to provide financial literacy services for the undergraduate students. The IHE and banks engage in a dynamic partnering by creating a relationship to provide help with curriculum design, supply financial literacy trainers, and provide notices of financial literacy meetings and offered services. Students may be encouraged to seek financial services from the lender (Vitt et al., 2000). The IHE's Financial Aid and Student Financials (Bursar/ Student Billing Office) can advise the students about managing the financial aid they receive, refunds, signing up for refund and paycheck banking direct deposit, managing their money, and understanding banking services and associated costs. Financial Aid and Student Financials can help undergraduate students understand the implications of accruing interest on their student loans, and how that relates to the debt service amounts they will eventually need to repay. In addition to providing Banking information, many lenders offer credit cards, which is something undergraduate students need to understand the use and potential pitfalls of having a credit card.

2.8.2 Credit Cards and Debt Accumulation

Simply put, a credit card is a tool. It is a useful way to have the ability to make purchases of goods and services without having to carry cash and is useful for emergencies, such as an unexpected car repair. If it is not paid in full and a balance rolls over the following month the credit card may become a high interest loan. Undergraduate students need to learn to understand about using a credit card, paying the balance monthly, remaining out of credit debts, fees, interest rates and how they are calculated, hidden charges, and authorization holds (Kristof, 2011).

Credit card companies often target college and university students because they are a new market, and each year the population is refreshed with incoming first year students. The young adults can become easy prey for credit card companies, as they are often unaware of the financial obligations and restrictions associated with the use of credit cards. Many students do not have a regular monthly income, which is required in order to pay off credit card charges in a timely manner and minimize the accumulation of interest charges and associated fees. Credit cards differ from the student loans that a student may receive as there is no deferment of the repayment until after the student graduates. Credit card balances can quickly become overwhelming and may impact the student's ability to be academically successful if they are required to work extra hours in order to try and pay their credit card bills, or they may need to leave school for a period of time in order to pay off the credit card bills. This can have a devastating effect on their future prospects, as they may need to also begin repaying any student loan six months after they leave school. If the student needs to leave school for a time to repay their credit card bills and it is a long enough period for them to have to start to repay their student loans on top of their credit card payments, it may delay for a longer period or postpone indefinitely their ability to return to school and continue their education. Credit card holders who carry a balance from month to month do not have a grace period. The credit card company charges interest every day of the month until the bill is paid, and the interest is compounded so that the consumer is paying interest on their principal and their interest that has already accrued (Duffy, 2010).

The Federal Reserve in March 2011 moved to close some of the loopholes in the *Credit Card Accountability, Responsibility and Disclosure Act* (2009) which was established to curb abusive credit card lending. College students are still vulnerable to aggressive tactics from lenders. The *CARD Act* prohibited issuers from handing out free gifts such as Frisbees and t-shirts to college students, and required that students under 21 years of age have a co-signer before they are granted a card. Tabling, where credit card companies set up near student hangouts to pitch cards, was banned. Issuers can no longer offer gifts to induce students to sign up for cards, but the gift prohibition can be circumvented easily. The law specifies only that card companies cannot offer "any tangible item as a gift." (Congress & America, 2009). That leaves the lenders free to offer intangible gifts like online coupons or bonuses credited to accounts (Silver-Greenberg, 2011).

2.8.3 Dissemination of Credit Card Information

As with banking, the Bursars/Student Financials office and local lenders can provide the undergraduate student with financial literacy training and information on credit cards and insight into financial behavior when a student is being conscientious about their spending habits (Letkiewicz & Fox, 2014). Student Financials is in a unique position to explain to students about credit card fees. Many IHEs contract with a third party lenders in order to offer credit cards as a payment method for tuition, fee, and housing charges (Evans & Schmalensee, 2005; Ford, 2008). With typical fees of two to three percent for these payments every thousand dollars that is paid will result in a fee charge of $20 to $30 dollars. For the total tuition, room and board charges the fees can add up substantially. This is useful information for the student to understand. If the credit card is tied to a points reward, such as airline miles, discounts, or money back the amount of the fees may be worth the extra cost, but understanding and being aware of the charges could allow the student to make a financially literate choice. Credit card debt is just one of the elements that the Fair Isaac Corporation uses to calculate their proprietary FICO credit score, which is a measure of credit worthiness or risk and one of the measures that lenders will use to determine if they will allow a person to obtain a loan (Aprea et al., 2016; CreditRepair.com, n.d.).

2.9 CREDIT SCORES, CREDIT REPORTS, AND IDENTIFY THEFT AWARENESS

2.9.1 FICO

As previously stated, Fair Isaac Corporation's FICO score is a measure of credit worthiness or risk. The understanding of establishing credit, credit scores, annual credit reports and FICO scores is vital for the student to understand the ramifications of obtaining loans and other forms of credit and the implication of various interest rates and the effect on monthly repayment amounts, annual repayment amounts, and total repayment amounts on their loans. A thorough understanding of credit reports and credit scores will help the student to understand the impact of their credit report and score will have on their ability to obtain credit, to make major purchases such as buying a car and a home, and on their long range financial liquidity. AnnualCreditReport.com is the only source authorized by United States Federal law to allow consumers to access a yearly free credit report from the three credit reporting agencies; Equifax, Experian, and TransUnion. Links to access information on these four websites can be found in Appendix C IHE Financial Literacy Resources. FICO scores range from a low of 300 to a high of 850. The calculation that is used is proprietary, but in general the higher the FICO score, the better a person's consumer credit is, and the ease of obtaining a loan at a lower interest rate exists. The FICO score is based off of Payment History, Amount Borrowed Compared To Available Credit, Length of Credit History, Inquiries and New Debt, and Installment Debt. Explanations on each of these five components can be found on the previously reported four websites.

A consumer's credit score can have a significant impact on the type of loan they can obtain and the interest rate that they will receive. In Figure 1 a hypothetical example was created for a $10,000.00 automobile loan. The repayment amounts are calculated using four different realistic loan interest rates and calculated over a forty-eight, sixty, and seventy-two month repayment period. The monthly payment amounts and the total repayment amount of the loan vary significantly depending on the time period of repayment and of the loan interest rates. Students who obtain a loan at a sub-prime rate of thirty percent will pay a significant amount more over time than a student who researched and was able to obtain a better rate. Credit scoring evaluates the same information lenders already look at which includes a consumer's credit bureau report, credit application, and/or their bank information (My FICO, 2010). This example illustrates why young adults need to do their financial homework prior to purchasing a car and not just consider the amount of the monthly payment.

	$10,000.00 Auto loan			Amount Over $10,000.00
	48 Month repayment			
	Interest Rate	Monthly payment amount	Total Repayment Amount	
Excellent Bank	3.99%	$225.75	$10,836.00	$836.00
Good Bank	5.99%	$234.80	$11,270.40	$1,270.40
Subprime Bank	10.00%	$253.63	$12,174.24	$2,174.24
Avarice Bank	30.00%	$360.06	$17,282.88	$7,282.88
	60 Month repayment			
	Interest Rate	Monthly payment amount	Total Repayment Amount	
Excellent Bank	3.99%	$182.12	$10,927.20	$927.20
Good Bank	5.99%	$193.28	$11,596.80	$1,596.80
Subprime Bank	10.00%	$212.47	$12,748.20	$2,748.20
Avarice Bank	30.00%	$323.53	$19,411.80	$9,411.80
	72 Month repayment			
	Interest Rate	Monthly payment amount	Total Repayment Amount	
Excellent Bank	3.99%	$156.41	$11,261.52	$1,261.52
Good Bank	5.99%	$165.68	$11,928.96	$1,928.96
Subprime Bank	10.00%	$185.26	$13,338.72	$3,338.72
Avarice Bank	30.00%	$300.84	$21,660.48	$11,660.48

Figure 1. *Auto Loan Examples of Why It's Important to Keep a Good Credit Score*

References: (MSNMoney.com;; State Interest rates and Usury Rates; Subprime Auto Loans)

2.9.2 Identity Theft

Identity theft is a growing problem in the United States. Even if a student is fastidious about managing their budget carefully, if they are a victim of identity theft their credit history and credit score can be negatively impacted and cause them severe difficulty while they attempt to go through the process of clearing their name and their credit history. This process can take months to accomplish. Many students are only minimally aware of the danger of identity theft and are easy victims of unscrupulous individuals.

According to the Federal Trade Commission (2017) identity theft occurs when someone uses a person's personally identifying information, like their name, Social Security number, or credit card number, without their permission, to commit fraud or other crimes.

Over fifteen million Americans had their identities stolen in 2016 (Pascual, Marchini, & Miller, 2017). Identity thieves may rent an apartment, obtain a credit card, or establish a telephone account in a person's name. The victim may not find out about the theft until they review their credit report or a credit card statement and notice charges they did not make or if a debt collector contacts them.

Although some identity theft victims can resolve their problems quickly, many others spend hundreds of dollars and weeks repairing damage to their good name and credit record. Consumers victimized by identity theft may lose out on job opportunities, or be denied loans for education, housing or cars because of negative information on their credit reports. They may even be arrested for crimes they did not commit.

Identity thieves use a variety of methods to obtain a person's personal information including rummaging through trash looking for bills or other paper with a person's personal information on it, stealing credit or debit card numbers by using a special storage device when processing a person's card, pretending to be financial institutions or companies and send spam or pop-up messages to get a person to reveal their personal information, and numerous other methods of identity theft.

After they have a person's personal information, identity thieves may open new credit card accounts in a person's name. Identity thieves may change the billing address on the victim's credit card so that the victim no longer receives the credit card bills. The identity thieves will run up charges on the victim's account. Identity thieves may open a new phone or wireless account in a victim's name, or run up charges on the existing account. Identity thieves may use a victim's name to get utility services (electricity, heating, cable TV).

Filing a police report, checking their credit reports, notifying creditors, and disputing any unauthorized transactions are some of the steps a victim needs to take immediately. Understanding how identify theft occurs and awareness of these means to combat identify theft is an effective weapon against many varieties identity theft. It is critical for students to learn this aspect of financial literacy.

2.9.3 Dissemination of Credit Scores, Credit Reports, and Identify Theft Awareness Information

Student Affairs, Residence Life, Student Financials, local lenders, and local police can provide undergraduate students with training and information on credit scores, credit reports and identity theft. Student Affairs and Residence Life offices encourage Resident Assistants, Fraternity and

Sorority Organizations, and other Student Groups to offer seminars and lectures throughout the academic year, and information about credit and identity theft and protecting themselves are useful skills for undergraduates to learn. Training undergraduate students on information scams and protecting electronic and personal information are important life skills which will serve the undergraduate students throughout their adult lives.

2.10 A PARTNERSHIP BETWEEN PARENTS, THE PARENT LIAISON, FINANCIAL AID, AND STUDENT HEALTH

Literature informs us that students turn to their parents for guidance and support, and they consider their parents as their best advisers (Roarty, 2007). Parents can be a positive element in higher education when they understand the student experience and are aware of the resources available on campus, understand and support the institution's goals for student development and learning, and know when to step in to help their student and when to empower their student to take responsibility. Parents can play a valuable role in their student's success when they understand and reinforce the IHE's messages given to students (Savage, 2009).

There is nothing shameful about taking on educational debt in order to obtain a degree, as long as sound financial choices are made (Ross, 2014). Students need to understand that there is no stigma and they can reach out for help from the Parent Liaison, Financial Aid, and Student Health. If they believe that their finances will not allow them to continue, or if they will need to work excessive hours in order to try and financially make it while sacrificing their academics, they need to reach out and self-advocate. Over one-third of all students who begin at the IHE drop out to try and correct their financial situation before going back to the IHE, and of that number four in ten never make it back, resulting in their being a person who does not have a degree but is required to repay educational loans (Butrymowicz & Kolodner, 2017). Teaching undergraduate students self-advocacy in the face of financial difficulty is another life skill on which parents and IHE departments can partner and help the student persist in their academic program.

2.11 OUTCOME DRIVEN CURRICULUM

As initially presented I offered the following definition of a financially literate IHE undergraduate student:

A financially literate IHE undergraduate student understands the implications of budgeting, credit, interest rates, the impact of each of these on their personal financial well-being, and behaves in a manner aligned with that understanding.

Financially literate undergraduate students have the ability to critically think, evaluate, and make appropriate decisions. They have learned the skills and tools that enable them to successfully comprehend and incorporate financial literacy concepts empowering them to make intelligent choices about their personal finances that have long-term implications throughout their undergraduate program and long after their graduation, including an in depth understanding of their personal finances, planning for repayment of their student loans, and planning for their financial futures. In order to become a financially literate undergraduate student they need a curriculum that will provide what they require.

An IHE outcome driven curriculum is defined by what undergraduate students should learn by the completion of their program. In his book, *A Guide for Writing Student Learning Outcomes Institutional Assessment*, Brophy (2011) discussed recency, relevance, and rigor.

> Recency has to do with the degree to which the outcome reflects current knowledge and practice in the discipline. Relevance is the degree to which the outcome relates logically and significantly to the discipline. Rigor has to do with the degree of academic precision and thoroughness that the outcome requires to be met successfully. (Brophy, 2011, p. 3)

Recency, relevance, and rigor must be used as guideposts when and IHE develops financial literacy programs and curriculum.

IHE undergraduate student financial literacy curriculum needs to be accessible, needs to meet them where they are, address their requirements, and be actionable by the student. Distinctive approaches to further student financial literacy are found in the literature. One outcome driven method is commonly referred to as a flipped classroom but merely utilizes familiar tools to allow students to learn most effectively and support the course learning objectives (Linder, 2017). This compares with so-called proficiency-based education, also referred to as competency-based, outcome-based, or mastery-based education, which requires undergraduate students to show that they have mastered specific skills and knowledge before they can continue to progress in the subject (Feinberg, 2018). Each of these types of learning requires the student to begin to develop critical thinking, strategic planning, problem solving, and time management skills (Day et al., 2004).

IHE exemplars use the core curriculum topics of an IHE undergraduate financials literacy program to great effect. A focus on critical thinking, priority management, budgeting, debt service, banking, credit, cards, debt accumulation, credit scores, credit reports, and identify theft are key core elements for any program. Incorporating such a program and beginning a shift in institutional culture across the IHE is a challenge, but is vital for the success of the IHE undergraduate financials literacy program (Fusch, 2016b). Collaboration efforts across the IHE break down barriers and silos, links resources, creates a network to support student learning, builds and enhances collegial infrastructure that will facilitate institution-wide planning and assessment activities (Bonfiglio et al., 2006)

It is necessary to develop an undergraduate curriculum that will provide the IHE undergraduate student with the life skills, including financial literacy, that will meet the specific needs of future employers (Neureuther & Neill, 2009). Incorporated within the IHE undergraduate financial literacy curriculum need to be exercises that will develop the student's abilities to think critically, communicate effectively, collaborate well, and technologically literate (Drake, 1998; Skills, 2009). Well balanced content from different sources and reference to current peer reviewed journals and reputable publications (Haolader, Ali, & Foysol, 2015) will provide information that the student can use.

Critical thinking and priority management will help students to think more precisely about the problem, critique and evaluate beyond the initial stated issue, narrow their focus, and then go beyond basic facts to identify the true problem (Christopher & Tienken, 2016). Until the true problem is understood an effective solution cannot be found, designed, and implemented.

IHEs need to incorporate the development of electronic portfolios into their curriculum, and inclusion of examples of undergraduate student financial literacy learning will help to develop and showcase the student's competency and preparedness for post-graduation professional employment (Alanson & Robles, 2016; Hart Research Associates, 2016).

A consistent and repeated message about staying within the student's chosen academic program path is important, and can be elaborated upon within the IHE financial literacy efforts. Extra time and credits are very costly for students. Estimates and actual costs vary, because of different tuition and aid policies at various institutions, but additional time impacts the student financially with the direct additional costs of tuition, fees, books room and board, and the other expenses the student may have. Additional time also impacts the student with indirect opportunity costs of delaying their entry into the job market with wages that reflect the IHE degree (Shulock & Koester, 2014)

To help a student learn critical thinking and priority management skills financial literacy issues can be presented in a manner to promote responsible citizenship and social awareness. A consideration of financial issues from a historical perspective and the impact of governmental policy initiatives require the student to base their understanding on their own experience. Discussion of the ramifications of financial issues and government policy in an in class exercise can help build their oral communication and self-advocacy skills (Crain & Ragan, 2012).

The ability to acquire and evaluate information is essential to enable students to develop the skills to function as lifelong learners. The learning of critical thinking and priority management skills will set the stage for an undergraduate IHE student to successfully complete their education and will serve them into life beyond graduation. Incorporating financial literacy and problem solving into an undergraduate student's daily experiences will allow the student to develop self advocacy as almost an unconscious reaction (Flores, 2014; Xiao et al., 2014). In order for the IHE undergraduate student to learn financial literacy information it needs to be accessible.

2.12 DISSEMINATION OF KNOWLEDGE

As previously mentioned, there are a number of ways to disseminate financial literacy information to undergraduate students, including incorporation into curriculum, peer mentoring, in-person interviews, surveys, one-on-one discussions, small and large group presentations, freshman orientation lectures, first semester courses, blogs, online resources including web pages, Facebook, Moodle or Blackboard, financial literacy texted information, and on-campus video messages. IHE instruction in finance literacy topics is not the single factor that will cure IHE undergraduate student financial illiteracy. It should be considered as one of the components in the development of responsible behavior (Crain, 2013).

Current undergraduate students have grown up in a digital age. They are familiar with digital devices and use them in their daily lives. Three out of four students reported that digital devices help them learn more effectively, and nine in ten want to be able to use cellular phones to assist in their academics (Staff, 2017). Using face-to-face interactions combined with online and technological activities has been called blended learning. Young adults, having grown up with digital technology, are more adept in learning in a self-directed environment, where the in-class portion of the learning is enhanced by delivery of course content in an online environment. In designing an outcome driven curriculum, practitioners have to remember to meet undergraduate students where they are and guide their journey to where you would like them to go.

Developing a financial literacy program relies on the availability of resources including internal or external funding, time, space, staffing, and level of staff expertise. Four program models have been observed in higher education institutions: 1) financial education/counseling centers, 2) peer-to-peer programs, 3) programs delivered by financial professionals, and 4) distance learning programs which utilize interactive online programs, classroom-based programs, game-based education, event-based programs, and individual counseling (Alban et al., 2014).

2.12.1 Financial Education/Counseling Resources

Financial Education/Counseling resources can be effective in providing instruction on financial literacy subjects of specific interest to IHE undergraduate students. The instruction can be focused on developing an understanding on how to put financial literacy theory into practice. Financial literacy information can be disseminated in small or large group settings, or in an one-on-one environment. One-on-One counseling is helpful to the student by provided specific information to that student on their personal financial situation, and protects their privacy and conforms to the requirements of the U.S. Department of Education *Family Education Rights and Privacy Act* (FERPA).

Integrated learning programs are developed by using appropriate learning theories, approaches to learning strategies, and published research results. Undergraduate student learning applied to real-life circumstances can be effective in helping the student comprehend and incorporate the lesson. Student interactions with peers, acting as well as observing the interactions of fellow students engaged in realistic problem solving can promote true learning about financial literacy issues presented in a relevant context. Student are able to learn the material more thoroughly and retain it longer if it is placed in a relevant context that can be applied immediately.

Students can develop self-advocating skills by evaluating their motivation, develop strategic planning, time management skills, and build peer networks for emotional and learning support. Student can practice small group communication skills, prepare classroom presentations and discussions, and as a part of their financial literacy course conduct the presentation and lead the discussion on the financial topic. Learning these life skills and overcoming nervousness and fear of public speaking in a safe controlled environment of the IHE will prepare them for when they need to perform such action as part of their post-graduation employment, when their employer will expect them to be able to promote and advocate for the business's position in a particular matter (Arendale & Minnesota University, 2015).

2.12.2 Peer-to Peer Programs

Peer-to-Peer programs are programs in which student employees or volunteers provide services to their fellow students. Peer-to-Peer programs typically offer one-on-one financial counseling, group counseling, and group presentations. For Peer-to-Peer programs to be successful, it is important that peer counselors are properly trained and have gained the needed expertise to provide appropriate and competent information. Peer counselors may be required to attend a certification course, complete key classes, interview for the position, and agree to attend required periodic training on financial literacy topics.

Peer-to-Peer programs allow personal communication and provides a one-on-one environment and allows the Peer and the undergraduate student to modify the financial literacy education to meet the student's needs. Peer-to-Peer communication may also reduce the anxiety and stress related to the undergraduate's academic and financial experiences (Trombitas, 2012). This can be very effective for the undergraduate student, but the undergraduate student and the student mentor require oversight by IHE staff to ensure that appropriate financial literacy information is provided (Alban et al., 2014; Durband et al., 2013). An in-depth review of each of the top 50 IHE Financial Literacy program websites (Brown, 2017) noted that many of the programs incorporate Peer-to Peer programs and mentoring as very successful methods of disseminating financial literacy information. Imitation is the best form of flattery, and if a Financial Literacy program is to emulate characteristics of the exemplary financial literacy program they should strongly consider incorporating Peer-to-Peer Mentoring programs (Crain, 2013).

2.12.3 Financial Professional Delivered Programs

Programs delivered by Financial Professionals will provide financial literacy information to larger groups, may be more cost effective, may reach a larger audience, but at the sacrifice of the interpersonal connection and relationships build in small group or one-on-one discussions. IHEs can coordinate with local financial institutions, banks, certified financial planners, and other financial planners from within the community to provide training on financial literacy to the undergraduate students, typically in a larger group environment or via a lecture. Challenges include finding off campus partners who share the vision of the IHE and support the IHEs mission, partners who have the depth of knowledge to provide pertinent information to the undergraduate students, and finding partners who are not seeking self-aggrandizement and are not just seeking to promote their own services (Durband et al., 2013).

2.12.4 Distance Learning

Using multimedia and creating lessons where the student needs to apply the challenge to their own personal situation can be very effective in teaching financial literacy and helping the student incorporate the information and make it their own, but a lack of human interaction can be a drawback.

Distance learning may be more effective for non-traditional students as they are older, may have familial and employment responsibilities, and could positively affect their persistence and attitude, and conversely distance learning may have an isolating effect and from that negatively impact retention. A wholly online environment may not be the best choice. A hybrid of online resources, financial professionals, peer-to-peer, integrated learning, and financial education/counseling centers may be the best approach (Danns, n.d.; Gecowets, 2017).

Many of the following dissemination methods were incorporated into the University of Pittsburgh's Financial Literacy program. Lessons learned from evaluating exemplary financial literacy programs and reviewing government and private financial literacy sources will help the IHE develop and implement a strong financial literacy program. Beginning with a champion, preferable in the upper echelon of the executive IHE management the IHE financial literacy program team can create small group, large group, and one-on-one programs, develop certification programs and peer mentoring programs, develop online resources independently or with the help of national programs such as iGrad or CashCourse, can contact the departments of each school's Academic Dean, Financial Aid, Student Financials, (Bursar), Wellness/Health Center, Student Affairs, Academic Advising, Veteran's Services, Sororities & Fraternities, Student Groups, the IHE Newspaper, the IHE electronic media distribution office, Ombudsman, Admissions, Career Services, Parent Liaison, University Advancement (fundraising) and local community organizations to inform them of the IHE Financial Literacy development efforts to avoid being the best kept secret resource on campus.

Researching and contacting other IHEs that have financial literacy programs to discuss how they established their programs and discussing what worked and what didn't can be very helpful in developing and enhancing the IHEs program. IHE financial literacy programs do not need to be built form the ground up. By discussing and emulating best practices the IHE can mirror some of the components of the exemplar's financial literacy program and develop other aligned with the needs of their student population. Reaching out to local elected officials is an additional means to gather and share information about an IHEs financial literacy program and content.

Distribution of information can be performed by means of flyers, posters, and messages on strategically placed electronic display monitors throughout campus. Contacting faculty, staff and administrators to open and continue a dialog on how the application of financial literacy concepts can help their students persist and complete their academic programs. Encouraging student-faculty contact, cooperation among students, promoting active learning providing prompt feedback, communicating high expectations and timely response on assignments including those that have a financial literacy context can further enhance the student-faculty relationship (Chickering & Gramson, 1999). IHEs can be creative by promoting activities during the April National Financial Literacy Month such as raffles, community involvement, and reaching out to local high schools (Members et al., 2011). Financial Aid can educate students in depth about the different types of grants, scholarships, student loans, Federal Work Study and other forms of financial aid (Coker, Glynn, & Kent Cooke Foundation, 2017).

IHE undergraduate students need to be supported as they learn new material, engage in trial and error; practice new skills and receive prompt feedback, and have models of practice (Rust, 2009). Financial education has to be recognized and promoted as a lifelong pursuit. As

IHE undergraduate students enter the workforce post-graduation they need to pursue financial capability education and make well-framed financial choices (President's Advisory Council on Financial Capability, 2013). Once the financial literacy information has been disseminated the IHE needs to make a determination of how well the information was received and incorporated by the undergraduate student.

2.13 LEARNING OUTCOMES ASSESSMENT

There are a number of different ways to assess the outcome of an IHE undergraduate financial literacy program or effort. To access the impact of the program following the dissemination follow-up surveys can be used. If the students were interviewed prior to the program and following the curriculum a researcher can better determine if by taking the financial literacy program there was an effect on the learning outcome. Ongoing assessments can me made while the students are within their program. One of the Exemplar best practices was requiring taking and passing a financial literacy quiz prior to gaining permission to register for the following semester, which can provide a good indication if the student is learning the expected financial literacy material and is on track. The Alumni department can assist in following up with prior graduates to see how they have implemented the financial literacy skills they learned in their undergraduate program, and develop an ongoing dialog with alumni to provide form ongoing assessment of the financial literacy program. Alumni demonstration of lifelong learning emphasizes the programs validity and effectiveness (Bloxham & Boyd, 2007).

Another method is to use focus groups comprised of IHE undergraduate students. Drawbacks can be a limitation in the number of participants the IHE can accommodate and the data obtained may be difficult to measure. Focus groups may reveal insights on values participants hold toward money and the sample group's attitude about money and financial literacy. The results of focus group discussions may guide the researcher toward using a different set of tools like a survey which could provide more information about the issue (Alban et al., 2014).

Online surveys provide the researcher with the ability to access larger sample sizes, and have the potential of providing a good deal of information that can be evaluated to determine the success of a financial literacy program or an approach in delivering financial literacy information. The challenges of this particular strategy are creating and promoting the survey in such a way so as to encourage participation so that the researcher can obtain a sufficient response rate to the survey to provide useful feedback information (Tharayil, 2015).

A means to assess learning outcomes from a financial literacy course can be a research paper that considers a financial topic from multiple perspectives (Crain & Ragan, 2012). The quality of the resulting research paper can help in the assessment of the dissemination of the subject information.

Assessments of financial literacy at the beginning, the end, and again several months after the financial literacy course can be useful in assessing the effectiveness of the training and subsequent data can provide support that completing a financial literacy course may result in long-term positive changes in financial skills and abilities (Chen & Wiederspan, 2014; Swing & Coogan, 2010). Limitations to assessment may be due to a limited sample size. The results may not be extrapolated to a larger population, but will provide support for the hypothesis that completing a financial literacy course will result in positive changes in financial literacy skills and abilities. Attrition from the sample population, lack of a control group, incomplete answers to assessment tools may result in a reduction in the sample size. The IHE may not have a sufficient population to create control and study groups which would affect assessing the effectiveness of the financial literacy program (Federal Deposit Insurance Corporation, 2007; Mckenzie, 2009).

For an assessment activity the IHE need to develop a clear statement of what the students are expected to learn. The faculty member or instructor teaches the financial literacy material that will be assessed. Evaluation can be done using more than one form of evidence, such as quizzes, papers, exams, class participation, and oral reports.

In developing the assessment activity clarity of assignment and testing along clearly with the learning goals.

A lack of clarity can be demonstrated by a humorous short story. In one mathematics course the syllabus clearly stated that the professor allowed students to bring a 3 by 5 card written with formulas they deemed necessary for the final exam. The professor was surprised when one student arrived carrying a posterboard. When confronted the student calmly showed the professor that the posterboard was 3 x 5 cardstock, but the measurement was in feet. The syllabus did not specify inches, and the professor has to acquiesce that the student was correct.

To test the effectiveness of the assessment method a beta test with colleagues and students can be conducted to examine if the actual results scored the results fairly and consistently, or if the assessment method needed to be adjusted (Suskie, 2004).

Assessing a financial literacy program's effectiveness can be conducted using standardized tests, locally produced tests and test items, portfolios, final projects, capstone experiences and evaluating the success of the program by comparing the actual outcomes with the expected results (Middaugh, 2010).

Regardless of the method chosen to assess the outcome of a financial literacy effort, IHEs intending to create an exemplary IHE undergraduate student financial literacy program need to be innovative and creative in its development and in measuring its value and using such data for ongoing improvement.

2.14 CONCLUDING OBSERVATIONS

Innovative IHEs that commit to creating an immersive environmental and organizational culture change can begin to overcome their institution's undergraduate student financial illiteracy, students' inability to critically think, evaluate, and make decisions, and improve retention and completion rates of their undergraduate student population.

Evaluating best practices, investigating the subjects that undergraduate students need to incorporate and methods of information dissemination, and prudent use of departmental resources will enable the IHE to create, develop, and sustain an exemplary financial literacy program tailored for their own undergraduate students.

In expanding on the initial research questions in italics each IHE will need to strategically plan to answer the following questions for their institution:

1. What subjects [knowledge] do *our* IHE undergraduate students need to learn to become more financially literate?
2. What are the core characteristics of a learning outcomes-based curriculum *that our IHE needs to implement for our students*?

To build a supporting curriculum of IHE undergraduate financial literacy including critical thinking, priority management, problem solving, budgeting, banking, interest rates, and other subjects required by the specific needs of the IHE's undergraduate students the IHE will need to create and develop a culture change. An IHE team should include members of each stakeholder group (students, faculty, staff, administrators, executives). The team can gather information, assess what is needed, how to provide it, and the means needed to measure results. The team can make recommendations for financial literacy program implementation and work to obtain concurrence for initiation of the financial literacy program. Once the program is launched, ongoing evaluation of student retention and completion rates will enable the implementation team to review lessons learned, evaluate the existing program outcomes, and adjust the program as needed to provide for ongoing improvement of the financial literacy program and the financial literacy of the IHE's undergraduate student population.

This literature review reports what has been done and recorded in the literature. Although convinced by the results of the literature review, by interviewing IHE administrators, professionals, and colleagues whose insight and deliberation I respect and trust I could verify if their experience is consistent with what was discovered in the literature review to validate my findings.

3.0 RESEARCH METHODS

3.1 THE RESEARCH GOAL

This thesis is designed to present a prototype practitioner's guide to student financial literacy; a tool designed to help IHE program administrators understand what undergraduate student financial literacy is, what impact financial illiteracy has on the undergraduate student and the institution, what measures can be taken to establish an exemplary financial literacy program, how to assess the impact of the financial literacy program, and what the literature and interviews with academic professionals reveal about this problem.

The literature review reports what has been done and recorded in the literature. This thesis is a practitioner's guide, and as such, needs to reflect what is currently occurring at IHEs, while identifying room for improvement. The literature is informative and comprehensive, but by its nature records the past. In order to develop an informed guide, information was sought about current practices from IHE professionals with experience in developing and delivering student literacy programs, which was a sample of convenience (Mertens, 2005, p. 322). The individuals chosen were readily available and colleagues of mine who had gained experience with financial literacy programs over many years.

I elected to develop a semi-structured interview guide for use in conversations with a target audience of approximately 10-12 IHE professionals. The rationale for this method arises from concerns that a rigid or highly structured interview with predetermined questions may have limited the quality of the response by not permitting interviewees an opportunity to expand upon their observations. On the other hand, an unstructured interview goes to the other extreme and may stray from the information intended for collection. A qualitative semi-structure interview was deemed to be appropriate, as this thesis' research questions provided a framework from which interview questions could be expanded and create interview questions that allowed the interviewee to elaborate on the question and provide additional information that could be compared to the result of the problem of practice literature review. Targeted qualitative semi structured interviews to supplement the literature review results will be conducted with IHE administrators and professionals who have been colleagues for many years and whose insight and deliberation I respect and trust.

3.2 THE CHARACTERISTICS OF PERFORMING A PROBLEM OF PRACTICE LITERATURE REVIEW

3.2.1 Problem of Practice

The literature review was conducted as a comprehensive, substantive Problem of Practice. A Problem of Practice is the instructional or systemic issue that requires a solution. An instructional or systemic issue is a problem that involves the interaction of various stakeholders: including students, educators, researchers, and communal, educational, and governmental organizations. The Problem of Practice must be directly observable, not just theoretical. If the Problem of Practice is observable then it exists, and can be acted upon to be improved over time.

The planning for improvement may help to define the Problem of Practice, but the in-depth study of the particular problem may guide the educator towards the problem's solution. Solving a Problem of Practice should be high-leverage, actionable, and result in a significant improvement in student learning (Simpson, 2005; University of Arkansas, n.d.).

Framing this research as a Problem of Practice allowed me to identify the identification of relationships between practice and application and to expand understanding of the significance of the problem of financial illiteracy for IHE undergraduate students (Randolph, 2009). By focusing on specific literature, conducting research using an interdisciplinary perspective, and reviewing sources for specific patterns, the dissertation in practice permits suggestions for improvement (Teitel, 2014) and offer opportunities for further research and applications of financial literacy (Pogrow, 2017). Reviewing exemplary financial literacy efforts gleaned from the top fifty financial literacy IHEs in the United States have helped to inform the results of this research (Alban, 2012; Brown, 2017; Rust, 2009). Framing the dissertation as a dissertation in practice allows the researcher to present a framework for IHE practitioners to use as they develop a financial literacy handbook and work on financial literacy cultural change at their individual institutions. Targeted semi-structured interviews were created to enhance and validate the finding of the literature review.

3.3 DATA COLLECTION

3.3.1 Targeted Qualitative Semi-Structured Interviews

Targeted qualitative semi structured interviews to supplement the literature review results will be conducted with IHE administrators and professionals who have been colleagues for many years and whose insight and deliberation I respect and trust. The Email of Transmittal is in Appendix A and the qualitative semi-structured interview questions appear later in this chapter. While speaking to each interviewee via a telephone conversation I will take handwritten notes on the answers to each question and will ask permission of each interviewee for the option of recording the conversation so that information will not be missed in transcribing each interviewee's experience with undergraduate student financial literacy, what behaviors and characteristics a financially literate student exhibits, what financial literacy information should students entering and graduating the Institution of Higher Education (IHE) should know and be able to put into practice, and what financial literacy concepts do student struggle with.

Further inquiries will be made as to the interviewee's experience with undergraduate financial literacy content, methods, disseminating and delivery of information. The interviewee will be asked about means of assessment to ensure successful sharing of information with the students and how the assessment is reported.

I will attempt to solicit stories of the interviewee's experience with financial literacy efforts and examples of financial literacy success and failure, in order to validate the findings and results of the literature review. The interview questions are drawn and expanded from the research questions that guided the literature review. The interview protocol has been approved by the Institutional Review Board of the University of Pittsburgh.

3.3.1.1 Interview Guide

Section 1: I'm interested in your experience with undergraduate student financial literacy:

1. What behaviors and characteristics does a financially literate student exhibit?
    a. What financial literacy information should students entering the Institution of Higher Education (IHE) already know and be able to put into practice?
    b. What financial literacy information should graduating students have experienced and placed into practice?
2. What financial literacy concepts do students struggle with the most to implement into practice?

Section 2: I'm interested in your understanding and experience with undergraduate student financial literacy content and the means to share information:

3. What are the delivery mechanisms (handouts, lectures, etc.) that you and your IHE have used to share financial literacy information?
4. How should the success of disseminating this information be measured and reported?
    a. How do you know if you have successfully shared financial literacy information with your students?
    b. How do you measure that?
    c. How do you report the results?
5. Can you give me an example of or tell me a time when your financial literacy efforts were successful?

6. Can you give me an example of or tell me a time when your financial literacy efforts failed?
7. Has your institution followed up with alumni who were exposed to your financial literacy program?
    a. When your institution followed up with alumni what was discovered?
    b. Has your institution changed your financial literacy program based upon what has been learned?
8. Knowing what you know now what would you do differently in your financial literacy program?
9. Is there anything else that we haven't talked about that you would like to share about undergraduate student financial literacy?
10. Do you have a recommendation of another person I should talk to?
11. Do you want to see my notes of this interview?

3.3.2 Participant Selection

This small group of IHE administrators and professionals have known and worked with me for over two decades. Each has experience at their IHE or organization in the development, dissemination, and evaluation of financial literacy information and he respects their insight and deliberation. This group of IHE administrators and professionals to be interviewed include bursars, associate deans, proprietary school deans, a proprietary school director of state licensing regulatory affairs & compliance, a director of admissions (private college), a community college president, financial aid administrators, student financial services executive administrators, a vice president of enrollment (private university), a vice president of national online financial literacy resource & programs, a public university financial literacy administrator, a technical college dean, a director of university collections, an entrepreneurial institute administrator, and a vice president of business operations. I will email 18 to 20 individuals to interview, and will interview no less than eight if unable to interview all of them.

3.4 DATA ANALYSIS

I will take handwritten notes during my telephone interview with each interviewee. Following the interview, I will go back and review my notes and any recorded conversations and elaborate factually without embellishment on the notes while the conversation is still fresh. Starting with initial coding, I will begin breaking down the qualitative data and reviewing for similarities and differences. Initial Coding will allow me to remain open to all possible directions the data may take without being limited by preconceived notions or categories (Saldaña, 2012). Secondly, thematic analysis will be used to look for themes and patterns across the data and those themes will be recorded. The data obtained from the qualitative interviews will be compared and contrasted with the results of the literature review to vet and validate the research results that will provide the basis for the practitioner's guide.

3.5 FRAMING THE PRACTITIONER'S GUIDE

The results of the findings from the literature review, the findings from the interviews, current practice in use, and my personal experience will offer the foundation upon which to frame, help validate, and provide vetted information to establish the development of the Practitioner's Guide to Financial Literacy. Key financial issues will be included and integrated with the aforementioned results provide information on the design of a learning outcome driven financial literacy curriculum, curriculum characteristics, information dissemination, what measures can be taken to establish an exemplary financial literacy program, and methods to assess IHE financial literacy programs.

4.0 RESEARCH FINDINGS

This study is designed to present a prototype practitioner's guide to student financial literacy. In order to develop an informed guide, information was sought about current practices from IHE professionals with experience in developing and delivering student literacy programs. I used a sample of convenience because of my professional networks (Mertens, 2005) and developed a targeted semi-structured interview guide for use in interviews of approximately 10-12 IHE professionals.

In this chapter, I share the findings from both the research conducted during the literature review in Chapter 2 as well as from interviews with 16 highly informed professionals in higher education.

Comments and observations made by the interviewees are included in the findings. The participants are current IHE administrators and professionals who have been close colleagues of mine for many years and whose insights and deliberation I respect and trust.

Of the 20 administrators contacted, 16 were available and willing to participate. In order to ensure confidentiality, the Letter of Transmittal had an explanation that any inclusion of the interview notes would be recorded anonymously and only identified by a random number generated from Research Randomizer (https://www.randomizer.org). 16 numbers were selected from a generated list of 100 numbers. Between the data analysis and reporting stages, a realization that using a random code to report interviewees' beliefs (e.g. "1775 stated…") would be confusing to the reader, a Random Name Generator (http://random-name-generator.info) was used to select 16 names from a generated list of 100 names to provide the interviewees with random pseudonyms. Figure 2 provides each interviewee's random number and pseudonym assignment, titles, and years of experience. Each colleague interviewed was assigned a random code to mask their actual identity, and the code corresponds with their associated titles, years of experience, and their resulting interview comments. The pseudonyms were applied after all of the comments were recorded.

Interviewees	Random Code	Random Pseudonym	Position Titles	Years Experience (Conservative)
1	1775	Ellsworth	Dean of Admissions and Financial Aid; Private College	20
2	1924	Temple	Director Student Financial Services, Bursar, Financial Aid, Operations	30
3	3980	Daniel	Assistant Dean, Career Counselor, Educator, Non profit & Proprietary	20
4	4766	Maurice	School Director, Dean, Associate Dean, Licensure & Compliance	30
5	32324	Virgil	Educator, Entrepreneur, Student Affairs	15
6	32355	Shanell	Vice President Enrollment, Financial Aid	20
7	32524	Jimmy	Vice President, Bursar, Student Financials, Financial Literacy Author	30
8	32606	Maryjo	Financial Aid, Undergraduate Faculty	20
9	64932	Margaretta	Vice President National financial literacy online resource and programs	25
10	65184	Joseph	Financial Literacy Counselor, Student Financials (Bursar)	15
11	66885	Nyla	Director Collections, Financial Aid	30
12	67377	Joshua	Vice President Business Operations	20
13	86260	Jewel	Director Student Financial Services, Bursar, Financial Literacy Author	30
14	86722	Carissa	Administrator Admissions, Financial Aid	30
15	91492	Marcelene	Administrator Admissions, Financial Aid	25
16	94048	Adriana	Community College President	30
			Total Years of Experience	390

Figure 2. *Interviewed IHE Administrators and Professionals*

Collectively, this group of academic administrators and professionals working as practitioners have many years of experience in financial literacy at their institutions. Table 5 describes the professional experiences of the interview participants.

Table 5. *IHE Administrators' and Professionals' Experience*

Name	**Type of Institutional Experience**	**Admissions Experience**	**Financial Aid Experience**	**Student Financials (Bursar) Experience**	**Career Services Experience**	**Financial Literacy Program Development, Administration, and Presentation Experience**
Adriana	Community College	Yes	Yes	Yes	Yes	Yes
Carissa	Public-Not for Profit, Proprietary	Yes	Yes	No	No	Yes
Daniel	Public-Not for Profit, Proprietary	Yes	Yes	Yes	Yes	Yes
Ellsworth	Private-For Profit	Yes	Yes	No	Yes	Yes
Jewel	Public-State Related	Yes	Yes	Yes	Yes	Yes
Jimmy	Public-State Related	Yes	Yes	Yes	Yes	Yes
Joseph	Public-Not for Profit	No	Yes	Yes	Yes	Yes
Joshua	Public-Not for Profit	No	No	No	Yes	Yes
Marcelene	Public-Not for Profit	Yes	Yes	No	No	Yes
Margaretta	Private-For Profit	No	No	No	Yes	Yes
MaryJo	Public-Not for Profit	Yes	Yes	No	Yes	Yes
Maurice	Public-Not for Profit, Proprietary	Yes	Yes	Yes	Yes	Yes
Nyla	Public-Not for Profit	No	Yes	Yes	Yes	Yes
Shanell	Public-Not for Profit	Yes	Yes	Yes	Yes	Yes
Temple	Public-State Related	Yes	Yes	Yes	Yes	Yes
Virgil	Public-State Related, Public-Not for Profit	Yes	No	No	Yes	Yes

All 16 participants have financial literacy program development, administration, and presentation experience. One has experience working in a community college, 10 have experience working for not-for-profit IHEs, two have experience working for private, for-profit IHEs, four have experience working for state-related IHEs (IHE's budget includes some state funding), and three have experience working for proprietary education IHEs. Their combined years of active work with financial literacy program development, administration, and presentations along with a varied mix of departmental and institutional experiences provides a wealth of knowledge upon which to draw (Durband et al., 2013).

I worked with these practitioners from across the country as my colleagues and I developed the financial literacy program at the University of Pittsburgh. This firsthand experience guided my interest and passion in addressing the need for financial literacy education for IHE undergraduate students, which continues to this day.

As mentioned in Chapter 3, evaluation of the interview responses began with initial coding, breaking down the qualitative data and reviewing for similarities and differences to attempt to group similar responses together (Saldaña, 2012). Conducting double and multiple coding allowed further reduction of data and also evaluation if particular codes (italicized) encompassed more than one code. For example, Daniel, and Shanell had responses that related to the code, *Lack of Life Skills*, while Maurice and Temple had codes that related to *Self Advocacy* & *Accepting Responsibility.* Evaluating the coding allowed for the use of thematic analysis to look for themes and patterns across the data. Using the themes and patterns across the data I began elaborating generalizations and consistencies between the interviewee's responses and identified commonalities and differences from each of the interviews and the literature review to be reported (Mertens, 2005). Using the research questions as a template, I began with investigating what students needed to know to be financially literate.

4.1 WHAT SUBJECTS [KNOWLEDGE] DO IHE UNDERGRADUATE STUDENTS NEED TO LEARN TO BECOME MORE FINANCIALLY LITERATE?

Each section discussing the subjects that IHE undergraduate students need to learn to become financially literate begins with a table of selected Interviewee responses that relate their insight and experience. Following each table I will discuss and elaborate on the interview results, my own experience, and pertinent findings from the literature review.

4.1.1 Critical Thinking and Priority Management

Research Question: What subjects [knowledge] do IHE undergraduate students need to learn to become more financially literate?

Codes Used: Critical Thinking, Clarity needed Financial Aid Process, Debt load, Debt repayment, Funding sources, Funding clarity needed, Grants & scholarships, Priority Management, Problem Solving, Lack financial literacy, Lack Life Skills, Self advocacy-accepting responsibility, Student loans.

Table 6. *Critical Thinking & Priority Management*

Name	**Research Question: What subjects [knowledge] do IHE undergraduate students need to learn to become more financially literate?**
Subject	**Critical Thinking & Priority Management**
	Responses
Adrianna	Inconsistency of financial literacy Some understand the fluctuations in the stock market Others cannot write a check Don't know loans from grants Wide disparity All over the map-cannot make assumptions about their financial knowledge Need to develop life skills
Carissa	Students struggle with everything Develop life skills
Daniel	Students are taking more money taken than needed For a struggling student loan is quick dollar fix with long term consequences Students need to learn that these financial behaviors set precedence of what you do and how you behave in your life Students need to understand what the consequences are, difficult to transmit the message. Bad financial behavior buying cars, clothes, living beyond their means Need to develop life skills
Ellsworth	Students and parents need to understand where money is coming from. Too many parents and student trust that somehow everything $$$ will work out without their taking an active role. Need to develop life skills
Jewel	Students most students common traits Need to have thoughtful decisions Don't decide on a whim Student will be prepared in decision Critical thinking is vital Interact with young adults Do a benefit an analysis of decision Rolls over to all aspects of life Life skills
Jimmy	They need everything- fin lit knowledge. So much information to take in as freshman, overload, paralysis Students need to understand Money basics, Budget basics Develop Life Skills
Joseph	Students and parents do not understand most financial topics Students need to be advised as to the real cost of living Off campus, Study abroad Students lacking understanding of budgeting, financial aid, loans, problem solving.

Table 6 continued

	Need to develop life skills
Joshua	Most students coming without any financial literacy at all Need to develop life skills
Marcelene	Most students and parents not prepared Some student know how to save, most do not lack of common sense Planning tools Develop life skills
Margaretta	Financial trial and error can be very costly for an individual to learn that way Even for the students who have an understanding of financial literacy making poor decisions Life Skills
MaryJo	Students have an attitude of just do it and don't; worry, they can deal with it later Need to develop life skills
Maurice	Students do not understand the impact of dropping out Students are just given money; don't work for allowance, not taught responsibility, entitled, privileged Student s receive new cell phone, newest gadgets even if don't need Students do not understand how to plan, lack of strategic planning and thinking Develop Life Skills
Nyla	Students need to understand Wants versus needs Students have No sense of what they need financially to attend the IHE Learned behavior from parents, too many People living on the edge of a financial precipice Students have Entitlement, need to understand they can't have everything Need to develop life skills
Shanell	Need to develop life skills Students treat student loans as funny money. Not real to them and no understanding of the real consequences Students come in with no Consumer understanding of . Needs versus wants. They Need to get the latest cell phone, Internet, cable Students come in with no knowledge or information Students come in with no consumer math skills Students need to obtain an Age appropriate understanding of realistic versus Unrealistic expectations, Student loan borrowing, Students need to obtain an understanding of Investments versus no investments, Good debt versus bad debt
Temple	Students and family only thinking about payments one term at a time, not considering books and other expenses Students exhibit unnecessary financial behavior Over borrowing students run out of money quickly Life skills needed Student have no awareness of how they are spending their $$$ They are using $$ for lifestyle in college as they lived with their parents, buying Expensive cars, Suites of furniture for their dorm rooms Students have unrealistic expectations Students coming with vans loaded with stuff Students have a great sense of entitlement, do not take ownership, do not believe their finances are their responsibility

Table 6 continued

Virgil	The sooner the parents and students make a financial plan, not a debt plan, the easier financing college and life will become for most students. Need to develop life skills

Financial literacy requires the ability to critically think, evaluate, and make appropriate decisions. Financially literate undergraduate students have the tools that enable them to successfully comprehend and incorporate financial literacy concepts and understand the implications of budgeting, credit, and interest rates, and the impact of each of these on their financial well-being. This knowledge empowers them to make intelligent choices about their personal finances that have long-term implications throughout their undergraduate program and long after their graduation, including an in-depth understanding of their personal finances, planning for repayment of their student loans, and planning for their financial futures (Sullivan, 2016).

Best practice includes the ability to acquire and evaluate information. This ability is essential to enable students to develop the skills to function as lifelong learners. In conjunction, the undergraduate student needs to develop critical thinking and priority management life skills that incorporate the financial literacy, strategic planning and problem-solving skills that will serve them throughout their academic program and beyond. In our discussions the interviewees told me about their direct experiences with many undergraduate students' financial illiteracy and inability to articulate what questions they had, even if it was to state they didn't know what to ask.

The interviewees expressed their views on undergraduate students' lack of key life skills and their assessment was uniform: IHE undergraduate students as a whole are woefully underprepared to understand, assess and utilize critical thinking, priority management, and financial literacy. Students may be financially literate as assessed by entrance examinations or by passing a high school course but they can still make poor decisions (Margaretta). The cause has been laid at the feet of the parents, the public education system, societal norms and expectations including a sense of entitlement (Maurice, Nyla, Temple). Any of these may be contributing factors but does not answer or provide potential solutions to the questions. Laying blame as to what was or how things should be is a waste of time and energy; the focus has to be towards what needs to be done. Learning to critically evaluate and establish well researched and thought out priorities are life skills that undergraduate students need to incorporate into their everyday lives as they will set precedence on how the student behaves throughout their life. Taking action and being proactive in learning vital life skills and not assuming everything will just work out (Ellsworth, MaryJo) are important skills to help the student learn to take action and self-advocate. Students need to develop a true sense of personal responsibility and realistic expectations that it is up to their action as to how they can be successful (Jimmy, Shanell, Temple) . They should learn to expect that no one will hand out or give them anything, that they will have to make the effort to earn what they want. Students, along with their parents, need to set priorities, understand the differences between needs versus wants, investigate and research what they want to accomplish, and create a realistic, time constrained, achievable plan to reach their goals (Jewell, Virgil).

Effectively rethinking the problem of IHE undergraduate student financial illiteracy lead to the realization that by beginning with teaching critical thinking and priority management the closely related financial literacy problem could be addressed (Wedell-Wedellsborg. 2017). If a problem is carefully evaluated it can be discovered that by solving a related problem the stated problem can be solved as well. The interviewees and I agree about the importance of critical thinking and priority management, and over the years have talked with them about the subject and establishing methods to help students learn to obtain these skills. In conducting my literature review I noticed a pattern that many of the sources were hitting around the target, but not quite hitting the bull's eye. The University of Pittsburgh instituted the **Outside the Classroom Curriculum**, and each Exemplar and other IHEs across the country are establishing programs in order to develop important life skills into their undergraduate students. Critical thinking and priority management are integral to learning financial literacy and other needed life skills.

Obtaining key life skills in critical thinking and priority management will help the IHE undergraduate student not only to make good choices but will empower the student to state what they want to accomplish within a particular timeframe and to take that task on. Critical thinking and priority management skills will be invaluable when the IHE undergraduate creates a financial budget to manage their income, expenses, and debt payments. Managing income, expenses, and debt payments are core knowledge that undergraduate students needs. We begin the discussion with a table of selected response from the interviewees followed by an elaboration on the interview results, my own experience, and pertinent findings from the literature review.

4.1.2 Budgeting and Debt Service

Table 7**.** *Budgeting/Debt Service*

Name	**Research Question: What subjects [knowledge] do IHE undergraduate students need to learn to become more financially literate?**
Subject	**Budgeting/Debt Service**
	Responses
Adriana	In high school they don't have to handle money or deal with real expenses Difficult transition from high school to college Garnish paycheck to repay obligations
Carissa	Parents are looking at one term only, not for the academic year or all four years. Explain cost is times 4 years, not just one year or one semester Changed way loans work- student must choose accept/deny/reduce
Daniel	Students need to know how to pay for school, personal life, they are in a pickle EFC
Ellsworth	Most students and families do not understand the financial aid and loan process. Clarity is needed on financial aid awards, not only so students and parents understand what one IHE is offering, but to make comparisons. Sophomores expect aid packages to parallel their freshman aid packages, too many cases where aid is less than freshman year Study abroad- is financial aid portable? Will it move to pay for study abroad? Can be an expensive mistake if it doesn't. FA forms in addition to FAFSA are very complex Need to create a focus on more grant support versus loans. Financial Aid and money are out of context and beyond the student's experience If there is a shortfall Financial Aid pushes the family to get loans to cover $$$ gap. High need forced to get loans to cover the gap/shortfall.
Jimmy	Students need to understand Financial aid processes and loan borrowing processes
Joshua	Make an effort to Determine How many meal passes for semester, most students either run out or have too many by end of term, both costs $$$
Margaretta	Students need to learn the time value of $$$ Students need to learn about Emergency savings, Basic budgeting, Debt-indirect from budget, Id theft, Credit reports
Nyla	Students have Lack of emergency funds, need to understand why it is so important
Shanell	Clarity needed Financial Aid Process
Temple	Majority of students do not fill out their entrance counseling, its done by the parents
Virgil	Most people are not disciplined and organized to maintain and manage a personal budget, or sustain a monthly/annual budget unless they have the right tools to implement Acceptable levels of debt

Choices that undergraduate students need to make are: establishing and managing a budget, setting financial goals, and regularly saving money. These are at the core of establishing financial literacy for students (Durband et al., 2013). Understanding how to strategically plan expenses and how available funds will be used to pay expenses links the previously mentioned life skills to budgeting and debt service. Undergraduate students need to learn about creating a budget, identifying their needs versus their wants, spending, saving for emergencies, planning for unanticipated expenses, in short, resource management (Nguyen Barry & Dannenberg, 2016).

Included in budgeting is an understanding of how to manage payments of debts, and, for many IHE undergraduate students, student loans are a component of their financial aid package. Debt service refers to the funds required for repayment of interest and principal on a debt for a particular period (Kantrowitz, 2015). If a student is obtaining a student loan, the borrower needs to calculate the annual debt service required for the loan (Little, 2014).

The interviewees noted that clarity is needed in the IHE financial aid process and students need to be provided with an understanding of the types of student loans, the differences between the types of loans, information about grants and scholarships, the Free Application For Federal Student Aid (FAFSA), the importance of developing an understanding of interest rates on loans and the Expected Family Contribution (EFC), and developing an understanding of debt service and what action is required in debt repayment. Providing undergraduate students with an understanding of budgeting, how to plan for expenses and savings, and what acceptable levels of debt and repayment of that debt are essential.

Temple noted that many parents, undoubtedly intended on helping their students, complete the loan entrance counseling for the student, which is actually a great disservice. Students need to accept the responsibility and understand the implications of signing for a student loan, which is a legal contract (Woo, Bentz, Lew, Velez, & Smith, 2017). There are long-term implications for payment, and consequences for nonpayment of the loan, including default and further legal action (Darolia, 2016).

Adrianna related that at the community college if a former student had an outstanding balance due to nonpayment the law backed by the United States Department of Education and the state of Maine (www.maine.gov) allowed the individual's federal and state tax refunds to be subject to garnishment to repay the monies owed. Ellsworth cautioned undergraduate students that an understanding of loans and their IHE financial aid processes are key, as often the amount of financial aid a student receives varies each year so that the student may need to pay more out of pocket for each year following their freshman year. Ellsworth also noted that students who intend to enroll in a study abroad program need to determine well in advance if their IHE financial aid is portable, which means it will pay towards the charged at the abroad IHE. If the aid is not portable the cost of the study abroad semester could be exorbitant (Kantrowitz, 2015).

I agree and view that budgeting and debt service require an understanding of resource allocation and strategic planning, which aligns with the foundation of any financial literacy course. Being able to determine what available resources exist, when they will be available and for how long, when each resource will be exhausted, and if by careful planning the goal to be reached can be accomplished within the required time frame and with available resources then the budget is valid. If not, then a reevaluation of the budget and debt repayment needs to be made.

Understanding what to do with managing funds, whether it is spending, saving, direct deposit of refunds and paychecks, or transferring funds to pay for the study abroad semester requires an understanding of banking. What the interviewees shared regarding banking and IHE undergraduate students introduces the next section.

4.1.3 Banking

Table 8. *Banking*

Name	**Research Question: What subjects [knowledge] do IHE undergraduate students need to learn to become more financially literate?**
Subject	**Banking**
	Responses
Joshua	Met with local bank, the number of overdrafts increasing Students don't pay attention to their bank account for all to pay bills. They see money and spend it not knowing/realizing that it is already designated for e-pay later in month.
Marcelene	Loan indebtedness Budgeting Saving vehicles Need to change focus to graduating with the lowest possible amounts of loan
Margaretta	Students not actively managing their funds, running out of money, Having to take semesters off which may become permanent
MaryJo	Students are concerned about their debt levels, what they will have to do when they graduate. Student needs to understand how they will pay their bills and have enough funds to live. Students understand very little about federal loans Students have low financial literacy, parents are doing all of the work or most of the work, FAFSA, loan entrance counseling. Few freshmen come into financial aid to get information
Nyla	Students need to understand types of Loans and grants, Subsidized versus unsubsidized
Shanell	Students come in with no banking experience, no checking account experience Students need to obtain an understanding Monthly payments Students need to obtain an understanding of loans, consequences, they don't have it and need understanding desperately
Temple	Students don't understand implications of borrowing There exists massive over borrowing
Virgil	Student needs to understand basic loan agreement

IHE undergraduate students can establish a checking, savings, or combination bank account at an accessible bank local to their institution. Students may want to allow their parents access to their bank account to help advise them in order to learn how to manage their money. The undergraduate student needs to determine their banking account requirements, understand the fees and costs for the banking services, mechanisms for depositing and withdrawing money, using debit cards, understanding the cost and benefits of overdraft protection, electronic bill paying, and develop an understanding about interest rates (Joshua, Margaretta, MaryJo, Shanell). Partnering with the bank and advice from their parents can help the IHE undergraduate develop a better understanding of financial literacy.

Students and their parents should inquire if the IHE and the banking institution have an established contract agreement. Such contract agreements that are financially lucrative to both the lender and the IHE and the IHE needs to ensure that any agreement with a lender is openly disclosed (Chu, 2008). The IHE obtains money to open an agreement with the lender, and based on the number or percentage of IHE students that open IHE sponsored bank accounts with that lender, the IHE can earn additional funds (Bauman, 2017).

Joshua and I concur with the literature findings that working with a bank and the previously mentioned IHE departments can help them develop financial literacy in establishing budgets and managing their income and expenses by means of using bank accounts. Joshua also noted that in discussion with local banks the number of account overdrafts was increasing for students who attended Joshua's IHE. Bank fees for overdrafts can add up quickly and an undergraduate obtaining basic life skills in managing their bank accounts can help them learn key financial literacy skills (Urban, Schmeiser, Collins, & Brown, 2015).

Understanding banking and banking tools and services is very important in this modern age. When conducting one-on-one financial literacy advising sessions I often talked to students who did not actively manage their bank accounts and often were assessed overdraft fees, which can add up quickly. One student had a $30.00 gas bill and did not have sufficient funds in the bank when the electronic payment was processed because they were not monitoring their account balance and tracking their expenditures. The bank, and the gas company both assessed non-sufficient funds fees. The student was able to speak to the bank and gas company and after paying the gas bill obtained a onetime waiver of both fees, but if the student had not taken action they could have owed nearly $100.00 for the $30.00 gas bill.

Shanell noted that although many undergraduate students may lack financial literacy and life skills, they do know how to make purchases with credit cards. Monitoring bank accounts and monitoring expenditures either using the bank account or credit cards is very important for IHE undergraduate students to learn. Daniel, Jimmy, and Maurice also shared their thoughts about credit cards, and the accumulation of debt in the next section.

4.1.4 Credit Card and Debt Accumulation

Table 9. *Credit Card and Debt Accumulation*

Name	**Research Question: What subjects [knowledge] do IHE undergraduate students need to learn to become more financially literate?**
Subject	**Credit Card and Debt Accumulation**
	Responses
Daniel	Students Need information up front and need to understand Schools must limit loans to only what the costs are, no more Student loans cannot be discharged in bankruptcy Student loan debt will impact buying house, etc. Student debts and School loans becoming as much as a mortgage It is crucial to payback student loans Students have to pay loans back with interest, needs to understand consequences
Jimmy	Students need to understand When to get credit card, Understanding how a credit card works Students need to understand When to get loans Students need to understand How much in loan debt is appropriate Students need to obtain, read, and understand their Personal loan summary obtain read and understand
Maurice	Students need to understand basic loan information and interest rates Students need to understand what are the different types of loans and what happens if you don't pay them back?
Shanell	Student do have credit card spending experience.

In addition to making purchases using credit cards, IHE undergraduate students need to learn about paying the balance monthly, remaining out of credit debt, and understanding credit card fees, interest rates, and hidden charges (Kristof, 2011).

As with banking, the Bursar/Student Financials office and their local bank can provide the undergraduate student with financial literacy training and information on credit cards (Letkiewicz & Fox, 2014).

Daniel, Jimmy, and Maurice iterated that learning financial literacy and using credit cards responsibly are important life skills for each IHE undergraduate student to learn. An understanding of banking, responsible credit card use, and repayment of student loan and credit card debt are financial literacy and life skills that are critical for each student to develop. Developing a solid foundation of critical thinking, priority management and financial literacy will enable the young adult to use life skills as they select financing options, including student loans, to attend the IHE, and their future goals which may include starting their career, purchasing a home, and starting a family.

In talking with students and parents I would ask if they knew what a credit card was. Usually no one had an answer other than "it allows us to make purchases." That is true, but a credit card is a tool, and like any other tool if used correctly it will perform its function, and if incorrectly may cause harm or injury. A credit card is a useful means to make purchases without carrying around a lot of money, when combined with paying off the balance in full every month. If a student carries a credit card balance it becomes a high interest loan, and quickly can become a burden rather than a convenience (Smith, T, 2011).

Information and knowledge are powerful. Ignorance of important financial concepts can negatively impact a young adult's credit worthiness and ability to obtain credit (Looney, 2018). Credit card debt is used by the Fair Isaac Corporation to calculate their proprietary FICO credit score, which lenders will use to determine if they will allow a person to obtain a loan (Aprea et al., 2016; CreditRepair.com, n.d.). As four interviewees elaborate I the next section, an understanding of credit scores, credit reports, and identity theft awareness is important, as I can attest and explain from my own personal experience.

4.1.5 Credit Scores, Credit Reports, and Identify Theft Awareness

Table 10. *Credit Scores, Credit Reports, and Identity Theft Awareness*

Name	**Research Question: What subjects [knowledge] do IHE undergraduate students need to learn to become more financially literate?**
Subject	**Credit Scores, Credit Reports, and Identity Theft Awareness**
	Responses
MaryJo	Students need to learn obtaining Credit-student don't understand Students graduate with the lowest possible amount of debt.
Maurice	Self Advocacy Students need to develop independence and self-advocacy Students graduate with the lowest possible amount of debt.
Temple	Self-Advocacy-Students don't' know how to self advocate If questioned will hand the phone over so mom and dad can answer Prevent bad things from happening Students graduate with the lowest possible amount of debt.
Margaretta	Students need to learn about Emergency savings, Basic budgeting, Debt-indirect from budget, Id theft, Credit reports

Understanding establishing credit, credit scores, annual credit reports and FICO scores is vital for the student to understand the ramifications of obtaining loans and other forms of credit and the implication of various interest rates and the effect on monthly repayment amounts, annual repayment amounts, and total repayment amounts on their loans. A thorough understanding of credit reports and credit scores will help the student to understand the impact of their credit report and score will have on their ability to obtain credit, to make major purchases such as buying a car and a home, and on their long range financial liquidity. A consumer's credit score can have a significant impact on the type of loan they can obtain and the interest rate that they will receive. AnnualCreditReport.com is the only source authorized by United States Federal law to allow consumers to access a yearly free credit report from the three credit reporting agencies; Equifax, Experian, and TransUnion (Claxton, 2008).

MaryJo, Maurice, and Temple stated that parents and students need to thoughtfully consider and focus on graduating with the lowest possible amount of debt. Understanding how credit scores impact an undergraduate student's ability to obtain a loan and what impact the interest rates will have on the total amount owed over the life of the loan repayment is important. The longer time period and the higher interest rate a loan has the more money the borrower will need to pay to pay off the loan.

When meeting with students and their parents in group or in private sessions I would often refer to a credit score as a student's GPA (Grade Point Average) for life, explaining that the better the credit score, the better terms and conditions the borrower can receive when they obtain a loan (Archuleta, Dale, & Spann, 2013). An understanding of what components make up a credit score, how a credit report is created and what information it shows, and how credit scores and credit reports impact everything from buying a car, renting an apartment, obtaining student loans, purchasing a home, and even being hired for a job is important information for the IHE undergraduate student. Margaretta pointed out that the lack of knowledge about finances, including credit, opens undergraduate students to the threat of identity theft.

4.1.6 Identity Theft

Identity theft is a growing problem in the United States. A lack of financial literacy and ignorance can be an invitation for and leave an IHE undergraduate student open to become a victim of identity theft. Even if the student is financially literate and managing their budget carefully, they can be targeted by identity thieves.

The process of clearing their name and credit history can cost hundreds of dollars and take the student many weeks to accomplish. Over fifteen million Americans had their identities stolen in 2016 (Pascual et al., 2017). Students victimized by identity theft may be denied loans for education, housing or cars because of the negative information on their credit reports.

Identity theft and undergraduate students' lack of financial literacy is a key vulnerability for identity theft (Durband, Britt, & Travnichek, 2012). Only by arming themselves with critical thinking, strategic planning, and financial literacy life skills can IHE undergraduate students mitigate and minimize the chance that they will leave themselves vulnerable (Jump$tart Coalition, 2007). Obtaining these life skills can be addressed in an IHE's learning outcomes-based curriculum.

I can attest from firsthand experience the difficulty of dealing with identity theft and clearing my own name and credit history several years ago. After many years educating students in financial literacy including identity theft being well versed and knowing what steps needed to be completed did not mitigate the difficulty and four months it took to clear my name and credit history.

Self-advocacy is an important life skill and the Interviewees and I all agree that this is another life skill that IHE undergraduate students need to learn, understand, develop, and incorporate. Self advocating and standing up for themselves is not innate, but it can be a learned and nurtured skill, and in tackling identity theft or any other problem will serve the student well to be able to self-advocate and make their position heard. Self-advocacy was a skill that I needed to implement frequently during managing and clearing his accounts as a victim of Identity Theft.

Acquiring and incorporating the knowledge that IHE undergraduate students need to learn to become financially literate and able to self advocate will give the IHE undergraduate student the tools to successfully complete their education and serve them into life beyond graduation. Students will be able to acquire the knowledge they need by means of a learning outcome-based curriculum.

4.2 WHAT ARE THE CORE CHARACTERISTICS OF A LEARNING OUTCOMES-BASED CURRICULUM?

4.2.1 Outcomes-driven Curriculum

An IHE outcome driven curriculum is defined by what undergraduate students should learn by the completion of their program. Reflecting current knowledge and practice in the discipline (recency), relating the outcome to the discipline (relevance), and meeting the outcome successfully with academic precision and thoroughness (rigor) are essential to the IHE developing financial literacy programs and curriculum (Brophy, 2011). Recency, relevance, and rigor must be used as guideposts when and IHE develops financial literacy programs and curriculum.

IHE undergraduate students need accessible financial literacy curriculum, which meets them at the level of understanding they are currently at and if they take action will help them develop key life skills including financial literacy.

Delivering curriculum in a flipped classroom utilizing tools that allow the student to learn effectively while supporting learning objectives (Linder, 2017) is one approach of outcome driven curriculum delivery.

Developing proficiency in financial literacy and demonstrating mastery of specific skills and knowledge before progressing onward in the curriculum is another means of providing an outcome-based curriculum (Feinberg, 2018). Both of these require the student to develop critical thinking, strategic planning, problem solving, and time management skills (Day et al., 2004).

In evaluating the IHE exemplars I found they focus on disseminating critical thinking, priority management, budgeting, debt service, banking, credit, cards, debt accumulation, credit scores, credit reports, and identify theft in disseminating information in their financial literacy programs. Critical thinking and priority management allow undergraduate students to critique and evaluate beyond the initial stated issue, narrow their focus, and then go beyond basic facts to identify the true problem (Christopher, 2016). Developing these thought processes in the student allows them to learn to understand the real problem and find, design, and implement an effective solution.

IHE exemplars also demonstrate the importance of shifting institutional culture and breaking down barriers in order to successfully develop and incorporate an IHE undergraduate student financial literacy program (Fusch, 2016b). Aligning resources, breaking down barriers and eliminating silos will help to create a supportive culture that facilitates institutional planning and assessment activities (Bonfiglio et al., 2006).

MaryJo, Carissa, and Margaretta advocate creating the culture change at the IHE (Day et al., 2004). This culture change requires the effort to be championed from the top down, beginning with the IHE leadership. The focus has been on recruitment, or as Carissa described, putting "butts in the seats." Developing a new culture will emphasize the importance of learning life skills including financial literacy to students, administrators, staff, and faculty. Incorporating the culture change will help to enhance student retention and encourage supportive academic program completion at the IHE.

It is instructive to learn that Oakton Community College near Chicago was losing an average of five students every day (Smith, 2018) and developed a unique solution to address the problem at their IHE. Creating a culture change whereby each faculty and staff member reached out to at least one student five times per semester has increased the community college's graduation rates by four percent since 2015. That simple change had a positive impact on retention and completion.

Developing an effective undergraduate curriculum that will provide the IHE undergraduate with critical life skills, Maurice advised, including strategic planning and financial literacy, will help to meet the needs of future employers (Neureuther & Neill, 2009).

Incorporated within the IHE undergraduate financial literacy curriculum need to be exercises that will develop the student's abilities to think critically, communicate effectively, collaborate well, and technologically literate (Drake, 1998; Skills, 2009). Well-balanced content from different sources and reference to current peer reviewed journals and reputable publications (Haolader et al., 2015) will provide information that the student can use.

The interviewees are proponents of undergraduate students using online resources, understanding the terminology, and developing electronic portfolios to showcase the student's competency and preparedness for future employment (Alanson & Robles, 2016; Hart Research Associates, 2016).

They also emphasize the importance of undergraduate students learning critical thinking and priority management skills. Evaluating the ramifications of financial issues and government policy and debating in an in class exercise or as a member of an IHE student organization can help build their oral communication and self-advocacy skills (Crain & Ragan, 2012).

Elements of an IHE outcome driven curriculum are defined by what undergraduate students should learn by the completion of their program. The outcome needs to reflect current knowledge and practice in the discipline, relate logically and significantly to the discipline., and be academically precise and thorough in order for the outcome requirements (Brophy, 2011, p. 3).

In order for the IHE undergraduate student to learn financial literacy information it needs to be accessible, meet them where they are, address what they need to learn, and require action by the student.

4.2.2 Dissemination of Knowledge

Methods to impart and disseminate financial literacy information to undergraduate students include incorporation into curriculum, peer mentoring, in-person interviews, surveys, one-on-one discussions, small and large group presentations, freshman orientation lectures, first semester courses, blogs, online resources including web pages, Facebook, Moodle or Blackboard, financial literacy texted information, and on-campus video messages (Pelletier, 2012). By focusing on developing a new perspective on institutional culture, breaking down barriers, eliminating silos, and improving communication within the institution IHE, the exemplars successfully developed and incorporated undergraduate student financial literacy programs (Gardner, 2016).

In order to establish a dialog, share information, break down barriers, and encourage collaboration between the Career Services, Academic Advising, and Financial Aid departments at the University of Pittsburgh I approached each department administrator to discuss the following example. An undergraduate student plans to attend the University of Pittsburgh's main campus and pursue a Bachelor's degree in Electrical Engineering. Following graduation, the student wants to move to Dallas, Texas to begin their career. This life-skilled and financially literate student began researching applicable information for their education and career path and arranged to meet with IHE departments to validate what they discovered. The student met with Career Services and evaluated the United States Office of Personnel Management (www.opm.gov) website and other available Career Services departmental resources to determine what the expected salaries and costs of living are for an electrical engineer beginning their career in Dallas, Texas. By speaking with Academic Advising, this student mapped out their academic program to create a path that they will be able to successfully navigate and complete their program in four years. The student next met with Financial Aid to determine what aid package they can expect to receive each year during their program. Some assumptions had to be made at each stage of this process, but by making conservative, well-informed decisions this student has a very good idea as to how much student loan debt they can incur and be able to successfully manage to repay as they begin their career. By using critical thinking and priority management skills, this student developed a timeline for academic program completion, a well-designed budget, and a manageable plan for debt repayment.

An added benefit for the student is that they became informed of the services that each of these departments offered at the beginning of their academic program. For example, Career Services advises the undergraduate students about employment compensation, health benefits, and other employment benefits. Career Services encourages undergraduate students to attend on-campus interviews, career fairs, use online job resources, methods to research companies, methods to network, locate internships, create effective resumes, cover letters, and complete online applications. Additionally, Career Services aids the undergraduate student in preparing for a job interview, assessing employment offers, comparing and calculating costs of living in locations that the student hopes to work, and analyzing other employment benefits, such as investing and retirement (which is beyond the scope of this thesis).

The literature reported four program models used by IHEs (Alban et al., 2014) which were mentioned by the IHE Exemplars and by the interviewed IHE administrators and professionals. Program models have been developed by experiment and trial and error, as financial literacy is a young field of inquiry. IHE development of financial literacy programs requires the allocation of resources including funding, staffing, and time. IHE financial literacy programs may be managed by the Financial Aid, Student Financial/Bursar, Student Affairs, Student Health or other departments based on the need of that IHE's undergraduate students and availability of resources.

4.2.3 Financial Education/Counseling Resources

Financial Education/Counseling resources can be effective in providing instruction on financial literacy subjects of specific interest to IHE undergraduate students. The instruction can be focused on developing an understanding on how to put financial literacy theory into practice. Financial literacy information can be disseminated in small or large group settings or in a one-on-one environment. One-on-one counseling is helpful to the student by provided specific information to that student on their personal financial situation, and protects their privacy and conforms to the requirements of the U.S. Department of Education *Family Education Rights and Privacy Act* (FERPA) (Arendale & Minnesota Univ., 2015; Savage, n.d.).

The exemplars all offer small and large group discussions, seminars, and workshops on a variety of subjects. Meeting with student groups, conducting learning sessions in the dormitories, and promoting workshops are an effective means of delivering financial literacy information can be made to be fun and entertaining as well.

At the University of Pittsburgh, I delivered a series of well attended workshops with the titles "My financial GPA for life: What is it and how can I keep a 4.0?," "Being smart with my money-how people become rich!," "Finances after graduation; Now What?," "How can I make sure I can buy what I want when I want it?," and "Out of the dorm; making real life $$$ decisions." These interactive, student-driven, conversational workshops helped me better understand undergraduate student concerns and reinforced his commitment to address the IHE financial illiteracy problem.

The IHE professional and administrator interviewees emphasized the importance of financial education, counseling resources, and delivering financial literacy information throughout the undergraduate program. They encourage large group settings for disseminating information on how to apply for FAFSA or qualifying for federal aid, the impact of taking longer to complete the undergraduate academic program, and how to research and evaluate realistic salary expectations following graduation, each with emphasis on speaking to the Financial Aid, Academic Advising, and Career Services departments to assist in obtaining further information.

The interviewees discussed disseminating financial literacy within the United States' April Financial Literacy Month (Dodaro, 2011) and other IHE special events, having the Director of Financial Aid explain an overview of the financial aid process, holding financial wellness fairs, and in conjunction with Career Services and the support of faculty, alumni, students and parents conduct a career symposium where undergraduate students can learn information about what to consider when seeking employment. In addition, IHEs can creatively promote activities external to the IHE campus during the April National Financial Literacy Month incorporating community involvement and reaching out to local high schools (Members et al., 2011).

Shanell, Joseph, Joshua, Jewel, Carissa, and Daniel advocated for mandatory freshman programs and classes, which are also supported by many of the exemplars. One-off programs are insufficient and ongoing life skills and financial literacy programming throughout the undergraduate students academic journey has the greatest chance of being effective in teaching the student the skills they will need (Kinzie, 2011).

Developing life skills was strongly supported by all the interviewees. Using an integrated learning program approach, applying appropriate learning theories, learning strategies, published research results, and using these tools to apply student learning to real-life circumstances can be effective in helping the student comprehend and incorporate the information. Learning about financial literacy issues in a relevant context can be supported by the student's interactions with their peers and engaging in realistic problem solving.

Daniel, Ellsworth, Maryjo, Maurice, Nyla, Temple, Virgil, and Jewel reiterated the critical importance of the IHE undergraduates learning self-advocacy as a part of obtaining life skills. Students can develop their self-advocacy skills by developing strategic planning and time management skills, and by building peer relationships for emotional and learning support. Practicing small group communication skills, preparing classroom presentations and discussions, and conducting presentations and leading financial topic discussions will prepare them for post-graduation employment, when their employer will expect them to be able to promote and advocate for the business's position in a particular matter (Arendale & Minnesota University, 2015). Developing these skills in a peer setting buttresses the support for Peer-to-Peer programming, with which the interviewees, the exemplars, and my own experience concur.

4.2.4 Peer-to-Peer Programs

Peer-to-peer programs are programs in which student employees or volunteers provide services to their fellow students, and typically offer one-on-one financial counseling, group counseling, and group presentations. Peer counselors need to be properly trained and have gained the needed expertise to provide appropriate and competent information. Peer counselors may be required to attend a certification course, complete key classes, interview for the position, and agree to attend required periodic training on financial literacy topics.

Many of the top 50 IHE financial literacy programs (Brown, 2017) incorporate and advocate peer-to peer programs and mentoring as one very successful method of disseminating financial literacy information.

Peer-to-peer programs allow personal communication and provides a one-on-one environment and allows the peer and the undergraduate student to modify the financial literacy education to meet the student's needs. Peer-to-peer communication may also reduce the anxiety and stress related to the undergraduate's academic and financial experiences (Trombitas, 2012). This can be very effective for the undergraduate student, but the undergraduate student and the student mentor require oversight by IHE staff to ensure that appropriate financial literacy information is provided (Alban et al., 2014; Durband et al., 2013).

Carissa, Joseph, Marcelene, Margaretta, Nyla, and Virgil discussed peer-to-peer programming combined with working with the parent liaison and partnering with parents to develop integrated support for the student. Creating a dialog between the student, parents, peer mentors, and the parent liaison can provide another means to relate and disseminate timely financial literacy information to the student while strengthening interpersonal connections and relationships.

My colleagues and I initiated development of the peer-to-peer program at the University of Pittsburgh. Reaching out to the Pitt News columnist about an article written in the Spring 2012 semester and three of the columnist's interested friends from the student council they discussed the need for financial literacy at the institution. All four students volunteered to become peer mentors, and our team developed an in-house certification process for the students while investigating appropriate nationally recognized certification programs that could be accessible for the peer mentors.

Learning about these services early in their academic program can be an incentive for the undergraduate student to consider and use critical thinking and strategic management as they plan out their activities and involvement in their daily lives. IHE undergraduate students seeking additional information may seek out professional financial-delivered programs.

4.2.5 Professional, Financial-Delivered Programs

Delivering financial literacy information to larger groups by financial professionals may be more cost effective and reach a larger audience. IHEs can coordinate with local financial institutions, banks, certified financial planners, and other financial planners from within the community to provide training on financial literacy to the undergraduate students in a large group environment. IHEs need to find off campus partners who share the institution's vision, mission, and have the depth of knowledge to provide appropriate information to the undergraduate students, and are not just seeking to promote their own services (Durband et al., 2013).

The exemplars, Jewel, Jimmy, Joseph, Margaretta, Nyla, Temple, and I support this outreach combined with talking with alumni and parents of alumni, who can share their experiences with financial literacy at the IHE and provide validation and support for the IHE's life skills programming (Sullivan, 2016). Developing programming that allows the IHE to reach out into the community, talk with local high schools, social service and other community organizations helps to promote the financial literacy initiative of the IHE and can support student extracurricular involvement in local community affairs, which will further help the student to learn life skills.

4.2.6 Distance Learning

Lessons that use multimedia and online delivery can be very effective in teaching financial literacy and helping the student learn life skills, but a lack of human interaction can be a drawback. A hybrid of online resources, financial professionals, peer-to-peer, integrated learning, and financial education/counseling centers may be the best approach (Danns, n.d.; Gecowetw, 2017).

The interviewees and my firsthand experience with lessons learned from evaluating exemplary financial literacy programs and reviewing government and private financial literacy sources supported the IHE development and implementation of strong financial literacy programs. Supported by an institutional champion, the IHE financial literacy program assessment and implementation teams can create small & large group programs, one-on-one programs, certification programs, peer mentoring programs, develop online resources independently or with the help of national programs such as iGrad or CashCourse, contact the departments of each IHE school's Academic Dean, Financial Aid, Student Financials, (Bursar), wellness/health center, Student Affairs, Academic Advising, Veteran's Services, sororities and fraternities, student groups, the IHE newspaper, the IHE electronic media distribution office, Ombudsman, Admissions, Career Services, parent liaison, University Advancement (fundraising) and local community organizations to inform them of the IHE financial literacy development efforts to create a campus wide integrated program.

Researching and contacting other IHEs that have financial literacy programs to discuss how they established their programs and discussing what worked and what did not can be very helpful in developing and enhancing the IHE's program. IHE financial literacy programs do not need to be built form the ground up. By discussing and emulating best practices the IHE can mirror some of the components of the exemplar's financial literacy program and develop other components aligned with the needs of their student population. Reaching out to local community organizations, high schools, and elected officials is an additional means share information about an IHEs financial literacy program and content.

Financial literacy information distribution can be supported by means of flyers, posters, and messages on strategically placed electronic display monitors throughout campus. Financial literacy program personnel can discuss with faculty, staff and administrators on how the application of financial literacy concepts can help students persist and complete their academic programs. Encouraging student-faculty contact, cooperation among students, promoting active learning providing prompt feedback, communicating high expectations and timely response on assignments including those that have a financial literacy context can further enhance the student-faculty relationship (Chickering & Gramson, 1999). Financial Aid can educate students in depth about the different types of grants, scholarships, student loans, federal work study and other forms of financial aid (Coker et al., 2017).

4.2.7 Incentivizing

Incentivizing can be a powerful tool to use in promoting a financial literacy program at the IHE and encouraging student participation. Making the financial literacy course mandatory and requiring passing a quiz prior to registering for the next semester are two methods that exemplars use successfully. Offering financial incentives for financial literacy participation, such as obtaining grants to replace a portion of the student loan the student receives, financially awarding persistence and completion for each semester or throughout the academic program with funds to replace student loans, and other incentives for early completion of the academic program are all found to be effective by the IHE exemplars (Friedman, 2017) .

Incentivizing peer mentors by offering grant funding and providing financial literacy certification free of charge is effective. The student's financial literacy certification is portable and can be added to their resume as another positive element showing involvement and participation at the IHE (Day et al., 2004; McCormick, 2015; The Executive Office of the President, 2014). Western Governors University, an IHE using competency-based instruction, has been very successful in using peer mentoring in guiding students through their academic programs and focusing on goals. Mentors help the IHE undergraduate student focus on small goals, which combine to create larger goals, which in turn combine towards fulfilling their academic and future goals (Supiano, 2018). Mentors also are able to encourage and reinforce the importance of attending financial literacy programs and events.

How can an IHE entice students to show up for a financial literacy event? Feed them. That is generally a successful approach. University of Pittsburgh residence assistants in the dormitories are required to conduct a certain number of learning programs with their floor residents each semester. Bringing milk and cereal and creating a pajama party financial literacy discussion was one means to get undergraduate students to attend financial literacy discussions. Meeting the students at their convenience and on their terms works well. Not every program will be successful, but being innovative, providing value, and making it easy and timely for undergraduates usually will result in a good turnout.

During fall semester, freshman class presentations, my colleagues and I handed out candy, which incentivized participation, appreciated, and was helpful in keeping the students awake, especially following lunch. Early in our programming efforts we discovered how observant and engaged these young adults could be. We were handing out lollipops and were told (in humor) that a student did not appreciate what we were insinuating with the candy. When we asked what they meant they pointed out the brand of the lollipops: Dum Dums. We apologized with a laugh and promised we would find and hand out a more appropriate candy in the future, and we found an appropriate substitute: Smarties. After every class, we would email the instructor and ask for an evaluation from the students about our presentation. What was interesting to find out was this small bit of humor had a large impact. Each student heard and incorporated what financial literacy information we had presented in the class. The candy, meant as an incentive, became a trigger for the student to remember the financial literacy information, which is a good reminder for IHE program administrators that communicating with undergraduate students, either formally or informally, can lead to unexpected results.

IHE undergraduate students need to be supported as they learn new material, engage in trial and error; practice new skills and receive prompt feedback, and have models of practice (Rust, 2009). Successful IHE outcome driven curriculum implementation and performance guided by recency, relevance, and rigor used in the IHE outcome driven curriculum is assessed by how well the undergraduate student incorporates and uses financial literacy information.

4.3 ASSESSMENT

In order to determine how successfully a dissemination method transmitted the financial literacy information the IHE must use different forms of assessment based on the availability of resources and the information that the IHE hopes to obtain. To access the impact upon completion of the program follow-up surveys can be used, which is known as summative evaluations. If a pre-interview and post-interview of the students is used a researcher can determine if there was an effect on the expected learning outcome. Ongoing assessments, known as formative evaluations, can me made while the students are within their program and are useful if results are not as expected. Adjustments to the dissemination of information can be made mid-course in order to try to improve the outcome (Tobin, Mandernach, & Taylor, 2015). Margaretta adds that the assessment is designed to measure if a behavior change is a result of the financial literacy information received by the student.

One of the exemplar best practices and mirrored by the Interviewees is passing a required financial literacy quiz prior to obtaining permission to register for the following semester. This method can provide a good indication if the student is learning the expected financial literacy material and is on track (Claxton, 2008).

Interviewees and I agree that the Alumni department can assist in following up with prior graduates to see how they have implemented the financial literacy skills they learned in their undergraduate program, and develop an ongoing dialog with alumni to provide ongoing assessment of the financial literacy program. Alumni demonstration of lifelong learning emphasizes the programs validity and effectiveness (Bloxham & Boyd, 2007) and can help the undergraduate students to realize the importance of obtaining certain life skills while enrolled in their academic program.

Another method is to use focus groups comprised of IHE undergraduate students. Drawbacks can be a limitation in the number of participants the IHE can accommodate and the data obtained may be difficult to measure. Jimmy supports the use of Focus Groups, and Focus groups may reveal insights on values and attitude participants hold toward money and financial literacy. The results of focus group discussions may guide the researcher toward using a different set of tools like a survey which could glean more information about the issue (Alban et al., 2014)**.**

Nyla and Margaretta propose that online surveys provide the researcher with the ability to access larger sample sizes, and have the potential of providing a good deal of information that can be evaluated to determine the success of a financial literacy program or an approach in delivering financial literacy information. The challenges of this particular strategy are creating and promoting the survey in such a way so as to encourage participation so that the researcher can obtain a sufficient response rate to the survey to provide useful feedback information (Tharayil, 2015).

Once the data is collected and analyzed the actual results can be compared to expected results and researchers to recommend action. These actions could be to continue providing the financial literacy information as is currently being done, to change the delivery with expectation of improving the expected outcome, or to stop the particular method of dissemination. Another possible outcome could be to look at unexpected results and attempt to identify opportunity.

One such example of opportunity is the development of financial literacy smartphone applications for undergraduate students that work as financial management and planning tools (Walsh, K., 2017).

Nyla also notes an effective means to assess learning outcomes from a financial literacy course can be a research paper that considers a financial topic from multiple perspectives (Crain & Ragan, 2012). The quality of the resulting research paper can help in the assessment of the dissemination of the subject information, and determine if the desired outcomes were achieved.

I am is supportive of assessments of financial literacy at the beginning, the end, and again several months after the financial literacy course can be useful in assessing the effectiveness of the training and subsequent data can provide support that completing a financial literacy course may result in long-term positive changes in financial skills and abilities (Chen & Wiederspan, 2014; Swing & Coogan, 2010).

Regardless of the method chosen to assess the outcome of a financial literacy effort, IHEs intending to create an exemplary IHE undergraduate student financial literacy program need to be innovative and creative in its development and in measuring its value and using such data for ongoing improvement.

4.4 ADDITIONAL OBSERVATIONS MADE BY THE INTERVIEWEES

As part of the interview, I asked my colleagues the following question:

Is there anything else that we haven't talked about that you would like to share about undergraduate student financial literacy?

The interviewees each responded, and I included what he considered to be the most intriguing observations, as they could lead towards future study.

Carissa, Jimmy, and Joseph responded that financial literacy is now being referred to as financial wellness, as the term, literacy, led to the term, illiteracy, which has negative connotations (Derbigny, 2016). I concede to those observations, as for many years people I have spoken to made clear that they prefer the term spending plan versus budget, as budget has a negative connotation and causes anxiety. I argue that incurring unmanageable levels of debt will cause more anxiety than a simple word. After all, we should "Always use the proper name for things. Fear of a name increases fear of the thing itself" (Rowling, 1998). Further inquiry can be made into nomenclature used in describing and relating financial literacy concepts to determine if there is an impact culturally, demographically, or regionally.

Carissa, Jewel, Jimmy, and Margaretta concur with the exemplars and me that IHE's must embrace a culture change in order to succeed in implementing a exceptional and successful financial literacy program. The interviewees reported that many IHEs have behaved in a manner as if the institution had blinders on. The demographic decrease over the next decade in potential freshman students and the increasing student loan debt burden crisis are making the option of attending post-secondary education and realizing a return on their investment an increasingly difficult and unattainable choice for students and their families. By changing the institutional focus towards persistence, completion, and minimizing undergraduate student loan debt the IHE can realize the goal of developing and graduating students who have learned and incorporated important life skills including financial literacy. Further research on changes in IHE culture and the impact on financial literacy outcomes will be instructive.

All of the interviewees responded that financial literacy education should start much earlier, beginning in primary school and continuing on in secondary school. Not everyone goes on to attend an IHE, but all high school graduates in the United States should have received financial literacy education by the time they graduate high school. The National Center for Education Statistics reported that in 2015 69.2% of high school graduates enrolled in an IHE.

Marcelene posited that states should devise a mandatory requirement for passing a financial literacy program prior to earning the ability to graduate high school. Investigation and reporting research about this concept and evaluating research regarding primary and secondary school dissemination of financial literacy could be an interesting research effort and could provide a basis for potential change in education and governmental policy.

In the final interview, Temple reported that at his IHE the number of large cash payments has increased substantially as compared to prior years. A cash payment is referred to as any payment made with funds other than a student loan. The funds could have been sourced from a different type of loan, withdrawal from a retirement account, funds obtained by parents by placing a second (or multiple) mortgage on their home, credit cards, lines of credit, or other sources. An interesting point that the I noted is that none of these sources discussed are student loans. Student loans cannot be discharged in a bankruptcy proceeding, but each of the sources of funds that were reported are able to be discharged under a bankruptcy filing. I am not implying anything insidious, but this point is worth further consideration. Research into how students and their families are paying for and covering the current costs of attendance at the IHE would be instructive, and what impact the sourcing of funds has on the students and families could be an interesting research project.

4.5 RESEARCH FINDINGS AND THE PRACTIONER'S GUIDE

The findings from the comprehensive literature review, the semi-structured interviews, and evaluation of the exemplars provide the basis for the Practitioner's Guide. Those IHEs that establish a commitment to implement an organizational culture change can overcome their institution's undergraduate student financial illiteracy and lack of life skills. Evaluating best practices modeled by exemplary IHEs, investigating the subjects that undergraduate students need to incorporate, methods of information dissemination, and prudent use of departmental resources will enable the IHE to create, develop, and sustain an exemplary financial literacy program tailored for their own undergraduate students.

Each IHE will need to answer these questions:

1. What subjects [knowledge] do our IHE undergraduate students need to learn to become more financially literate?
2. What are the core characteristics of a learning outcomes-based curriculum that our IHE needs to implement for our students?

It would be presumptuous of me to attempt to dictate how the IHE should assess the effectiveness of their undergraduate student financial literacy program or to advise the methods and options program administrators should use to organize and deliver their IHE's financial literacy program. The IHE's faculty, staff, and administrators are the experts at their institution, and can assess and develop a program that fits the needs and requirements of their student population. The IHE's staff should begin by benchmarking exemplary financial literacy programs and contacting them to discover how these institutions assess the effectiveness and delivery methods of their IHE;s financial literacy program.

4.6 RESEARCH LIMITATIONS

There are thousands of IHEs in the United States according to information readily available on the National Center of Educational Statistics website nces.ed.gov. I could not review the websites and information about every individual IHE. I had to conduct a comprehensive literature review in order to identify key information that would be reported in this thesis.

Due to the enormous volume of material written about financial literacy, I needed to limit the scope of his research from the Great Recession of 2007-09 to the present. He additionally had to limit the literature review to sources that focused on United States Institution of Higher Education undergraduate students from the *ProQuest Dissertations & Theses* and *ERIC* databases. These measures were taken to make the development and writing of this thesis manageable.

I have been passionate about and has developed an in-depth, comprehensive financial literacy base of knowledge over many years and has worked with many exceptional and dedicated colleagues. With the careful guidance of my dissertation committee and by establishing strict criteria and protocols for research personal bias should have been mitigated, but I am human and as such view information through my own perspective.

4.7 WHAT I LEARNED, DISCOVERED, AND REDISCOVERED FROM THE LITERATURE REVIEW, THE EXEMPLARS, AND THE IHE ADMINISTRATORS AND PROFESSIONALS

This research has been a challenging and validating project for me, who learned, discovered, and rediscovered financial literacy related information in the Literature Review, from examination of the Exemplary financial literacy programs in the United States, and from highly informed and experienced IHE administrators and professionals who share a passion for undergraduate student financial literacy and who possess a wealth of knowledge that I was able to tap and benefit from.

I have determined that for an effective program of financial literacy for IHE undergraduate students IHEs must begin with disseminating critical thinking and priority management, and continuing with discussions of budgeting, debt service, banking, credit cards, debt accumulation, credit scores, credit reports, and identity theft. These subjects [knowledge], supported by the research findings, will establish a firm foundation for building a strong IHE undergraduate financial literacy program.

IHEs will need to develop and implement an outcome based curriculum and recency, relevance, and rigor must be used as guideposts when the IHE develops their own financial literacy programs and curriculum. I further concur with the Exemplars and Interviewees that undergraduate financial literacy programs should be mandatory and continue each semester throughout the student's academic program.

I have determined that instituting an institutional culture change is imperative in order for IHES to establish exemplary financial literacy programs that will develop critical life skills in their undergraduate students and to obtain the benefit to the IHE. The culture change at the IHE is crucial to address the lack of critical thinking, priority management and strategic planning skills that currently exists in much of the undergraduate student population. The effectiveness of the culture change will be dependent on the program implementation, but the financial, reputational, and social benefits gained by the IHE from increased undergraduate student persistence and completion of their academic programs can be substantial and help to positively impact the IHE's ability to continue to operate, improve services, and maintaining a vibrant community well into the future (Brophy, 2011).

Peer-to-Peer programs are essential in building a healthy and vibrant undergraduate financial literacy program. Reaching out, helping others, and creating community are important life skills for each student to learn, and help the student learn real life application of the knowledge and skills they are learning and developing.

Using incentivizing to help develop Peer-to-Peer programming and for efforts towards student retention and completion are strongly encouraged (B. Supiano, 2018). Incentivizing can take many different forms and is up to the IHE financial literacy program administrators to determine what type the incentives should be and the best way to utilize them for their IHE's undergraduate student population.

I agree and am a proponent of financial literacy education starting much earlier, beginning in primary school and continuing on in secondary school. Teaching and ingraining life skills early with help the child develop skills and abilities that will help them in school and out as they grow from children through adolescence to adulthood.

The final chapter will provide the reader the foundation of the Practitioner's Guide to Financial Literacy. In the preceding chapters I defined and discussed the derivation of his definition of a financially literate undergraduate student. The findings from the literature review and subsequent interviews have modified his definition, which will be offered in Chapter 5.

5.0 A PRACTIONER'S GUIDE

The Practitioner's Guide to Student Financial Literacy is a suggested outline for use by IHE Administrators, Faculty and Staff for creation of an exemplary financial literacy program. Addressing the knowledge needed by IHE undergraduate students and the core characteristics of a learning outcomes-based curriculum this document provides a framework for IHEs to use as a model to develop their program and begin the process of an IHE culture change. This document is not a panacea but shares the information obtained from the literature, exemplary United States IHE financial literacy programs, and experienced IHE administrators and professionals with many years of financial literacy program implementation and development at a variety of different institutions from across the country.

A guide is a stand alone document that in part, provides guidance or information (Murray, J. A. H., 1971) pp.1224. A Practitioner's Guide to Student Financial Literacy can be designed to exist as a stand alone document, but as it is a part of this dissertation information found in the guide may be familiar from prior chapters. In Chapter 2, I provided the derivation of the definition of a financially literate IHE undergraduate student. What I discovered from the literature review and semi-structured interviews stimulated an evaluation and reconsideration of my original definition. An updated definition was created and I proffer it for the reader in the beginning of the guide.

5.1 PRACTITIONER’S GUIDE TO STUDENT FINANCIAL LITERACY

Many undergraduate students at Institutions of Higher Education (IHE) lack basic financial literacy knowledge and skills (Sabri, 2011). Designed for IHEs from those that have not yet begun establishing a financial literacy program to those who have a fully developed program they hope to improve, this prototype practitioner’s guide to student financial literacy is a tool intended to help IHE program administrators understand what undergraduate student financial literacy is, what impact financial illiteracy has on the undergraduate student and the institution, what measures can be taken to establish an exemplary financial literacy program, how to assess the impact of the financial literacy program, and what the literature and interviews with academic professionals reveal about this problem

This prototype guide begins with a definition of a financially literate IHE undergraduate student that was developed by my research of a comprehensive literature review, a review of exemplary IHE financial literacy programs, and interviews with experienced IHE administrators and professionals.

A financially literate IHE undergraduate student has developed critical thinking and priority management life skills; understands the implications of budgeting, debt service, credit, interest rates, credit reporting, and identity theft prevention; understands the impact of each of these on their personal financial well-being; and exhibits behavior in a manner aligned with that understanding.

If IHE faculty, staff, administrators, and executive management are committed to creating a culture change and implementing an exemplary financial literacy program at their institution they will need to strategically plan to answer the following questions for their institution:

1. What subjects [knowledge] do **our** IHE undergraduate students need to learn to become more financially literate?
2. What are the core characteristics of a learning outcomes-based curriculum that **our IHE** needs to implement for our students?

Dissemination and assessment of the IHE's financial literacy program has to be conducted by the faculty, staff, and administrators who are implementing their institution's program and have the authority to adjust and improve methods of dissemination and assessment to continually improve the desired outcomes of their program. They are the experts and will become well-acquainted with the knowledge and information that their undergraduate student population requires. In an ideal world, I could create a definitive list of specific resources that each IHE should use to create an exemplary financial literacy program. Because of the thousands of IHEs, the continually growing amount of financial literacy information, and the changing landscape of higher education, that list would quickly become obsolete. By benchmarking exemplary financial literacy programs, researching what new knowledge is becoming available, by comparing and evaluating what issues similar IHEs to one's own are addressing, and most importantly—by talking with their own undergraduate student population, IHEs will be able to determine what subjects [knowledge] their students need.

5.2 KEY POINTS TO CONSIDER

There are four key points for IHE administrators, faculty and staff to consider as they research, evaluate, design, and implement a financial literacy program for their IHE undergraduate students.

5.2.1 First: Talk to Your Students

Communication is vital. Talk to your IHE students to find out what life skills they want and what they need. These are intelligent young adults who need particular information to develop the life skills that will serve them throughout their academic program and beyond. Surveys, small and large group discussions, and other means of gathering information can be utilized, but the IHE faculty, staff, and administrators are the experts and as such will determine the best means to gather and evaluate information for their students.

5.2.2 Second: Start At The Top

The financial literacy life skills effort, called by whatever appellation your IHE chooses, needs to be supported by executive management and championed by members of each sub-group within the IHE. Faculty, staff, administrators, and students should all be involved in committees tasked with advocating and promoting the financial literacy effort, communicate with all stakeholders to build an understanding, and elicit buy-in of this worthy effort.

5.2.3 Third: Focus On The Goal

Remain focused on changing “We can’t!” to “How can we?” in the effort for the IHE to initiate the financial literacy program, to improve the program currently in development, or to enhance the existing program to strive to make the IHE financial literacy program effective and exemplary. Do not back down, and make the effort to constantly advocate for change. Developing an exemplary financial literacy program is in the best interest of the

IHE's undergraduate students and its success will benefit the IHE as a result. Strive to break down barriers, eliminate silos, enhance communication and create inter-campus dialog in order to promote the IHE financial literacy initiative.

5.2.4 Fourth: Learn From The Best

Benchmark and research exemplary programs from across the country and find IHEs of similar size and demographics. Reach out to these IHEs and others that have approaches of interest and talk with them. My experience, which is shared by each of the interviewees, is that other IHE financial literacy program personnel are more than willing to discuss their financial literacy program, how they developed it, what they have learned, resources they found useful, and will recommend other individuals or groups that your IHE should talk with. Establish and maintain ongoing dialogs with these new contacts, as they will continue to be valuable resources of information and insight that you can benefit from and share what your IHE discovered with others. This is not an isolated issue, and as such, the more is shared and communicated amongst the national IHE community the better opportunity for improvement of financial literacy for all of our undergraduate students.

While employed with the University of Pittsburgh's Student Financials (Bursars) office from 2005-2014, I was fortunate to have participated in what may be a unique approach in the United States realm of Higher Education (I am unaware of other IHEs doing something similar). The Student Financials departments of the University of Pittsburgh, Temple University, and Penn State University met annually to discuss common issues and opportunities experienced by each campus and those unique to their IHE. These meetings were productive, insightful, allowed each IHE to learn new and best practices employed by the other IHEs, discuss common challenges, and identity new opportunities for growth and improvement of services. Financial literacy efforts were a frequent topic of conversation and were of great value for our group to consider and implement in our own IHE's financial literacy program.

5.3 CORE SUBJECTS [KNOWLEDGE] REQUIRED BY IHE UNDERGRADUATE STUDENTS

Each of the following subjects are core to the development of an exemplary financial literacy program for an IHE undergraduate students. As each IHE evaluates and determines what their student population needs, they are encouraged to add additional subjects as determined by their evaluation of the needs of their own students. The first core subject to be discussed is critical thinking and priority management.

5.3.1 Critical Thinking and Priority Management

Exemplary IHE undergraduate financial literacy programs begin with critical thinking and priority management (Kezar & Yang, 2010; Thonney & Montgomery, 2014). These vital life skills are a foundation for building financially literate students. Learning these skills in a supportive environment will help students to begin to comprehend and incorporate financial literacy concepts into their daily lives. Empowering students with the tools to make intelligent choices about their personal finances will have long-term implications throughout their undergraduate program and long after their graduation, allowing the student to develop an in-depth understanding of their personal finances and to be equipped with the tools to plan for their future financial goals and repayment of their student loans (Sullivan, 2016).

Evaluation of the exemplars' (Alban, 2012; Hamory, 2018; Brown, 2017) best practices echoed the findings from the literature and the interviews. Learning the skills of critical thinking and priority management allows an undergraduate student the ability to acquire and evaluate information. These skills enable the student to recall or recognize facts, interpret those facts, use that information in a context that may differ from the experience where it was learned, evaluate the similarities and differences of the presented problem, develop a creative solution, and review the expected results to determine if the approach to solve the problem will be effective (Heer, 2012; Macpherson, 2004; McMahon & Thakore, 2006).

Being proactive, taking action, self-advocating, evaluating, and establishing well researched and considered priorities will instill in the IHE undergraduate student a genuine sense of personal responsibility and realistic expectations. With these developed life skills the undergraduate student will be empowered and capable of managing their personal finances, budgets, debts, credit cards, credit reports, and protect themselves from identity theft.

5.3.2 Budgeting and Debt Service

Learning to strategically plan their expenses, understanding how their available funds will be used to pay those expenses, and understanding the impact of payments on their debts will strengthen the undergraduate student's incorporation of the key life skills. By developing an understanding about financial aid, grants, scholarships, student loans and the funds required for repayment of interest and principal on debts the IHE undergraduate student can develop additional life skills that they will use throughout their lives. Demystifying financial processes and placing them in a context that the undergraduate student can understand and accept will mitigate any fear they might harbor about dealing with money and making financial choices (Dynarski & Scott-Clayton, 2013; Hoover, 2017).

Each IHE can create and disseminate information that provides clarity of the financial aid process and provides undergraduate students with an understanding of grants and scholarships, the types of and differences between student loans and interest rates, a clear breakdown communicating the requirements of the Free Application For Federal Student Aid (FAFSA), the Expected Family Contribution (EFC), debt service, and debt repayment. Providing undergraduate students with an understanding of budgeting, how to plan for expenses and savings, and what acceptable levels of debt and repayment of that debt are essential.

5.3.3 Banking

Budgeting and debt service life skills naturally dovetail with an understanding of banking. Developing knowledge about checking accounts, savings accounts, online banking processes and services, banking fees and costs, responsibly using a debit card, managing deposit and withdrawal of funds, and other offered bank services are skills that the undergraduate student will use frequently. Monitoring bank account activity will help the student understand and manage their financial resources, and allow them to schedule payments towards any credit card or other debts (Cackley, 2014; Lindsey-Taliefero, Kelly, Brent, & Price, 2011) and instill familiarity with and a habit of reviewing their account activity for appropriate credit card and other charges.

5.3.4 Credit Card and Debt Accumulation

Understanding and discussing the use of credit cards, the importance of paying the credit card account balance monthly, remaining free from or eliminating credit card debt, interest rates, fees, and hidden charges are life skills undergraduate students need to develop in this modern world (Dwiastanti, 2015; Morgan & Dechter, 2012).

Developing the skills to use credit cards as a means to not carry large amounts of cash, to have the ability to make a payment in an urgent or emergency situation, and to recognize that delayed gratification by denying oneself an impulsive purchase are all important life lessons. Educating undergraduate students on the potential pitfalls that can be encountered in obtaining a credit card, thoroughly reviewing and understanding the terms and conditions of the credit card agreements are extremely important, as they reveal what potential charges the student consumer can incur, as often hidden charges or changes interest rates are no readily obvious and are only found by reviewing the details of the credit card agreement. If these life lessons are learned and incorporated the undergraduate student is well on their way to becoming financially literate. Monitoring bank and credit accounts carefully not only helps the undergraduate student manage their funds, but also helps the student manage building their credit score and actively watch for potential identity theft.

5.3.5 Credit Scores, Credit Reports, and Identify Theft Awareness

Developing a thorough understanding of establishing credit, credit scores, annual credit reports and FICO scores is a life skill that will empower the student when they intend to obtain a loan or another type of credit. The young adult's credit score may have a significant impact on the type of loan they can obtain and the interest rate that they will receive. Credit inquiries are used by landlord and utility suppliers, and can impact the student's ability to rent an apartment, or a future purchase of a home.

Many employers are using credit inquiries as a part of the hiring process. Interviewing and hiring employees is a time consuming and expensive use of resources for the employer until the position is filled. Employers may be reluctant to hire someone with a poor credit history because that person, if struggling to pay their expenses, may not earn enough to pay their bills and stay long with the company, leaving to pursue a higher paying position and requiring the employer to begin the interviewing and hiring process over again. If the employment is for a company that handles finances a student could lose the opportunity to interview for a position. If a company is looking for someone to handle another's finances it does not bode well for the student if they cannot manage their own finances (Aprea et al., 2016; Letkiewicz, 2012; Mae, 2016; Poll, 2015; Sullivan, 2016). Incidences of identity theft, if not detected and corrected, may have devastating effects on an individual's credit report and credit score.

5.3.6 Identity Theft

Financially literate IHE undergraduate students understand the insidious nature of identity thieves and actively safeguard their personal and financial information. From carefully managing their social media accounts and limiting personal information shared on those sites, to monitoring their financial accounts carefully, and by protecting personal information that they may have on their personal electronic devices or on paper documents in their dorm room or apartment.

Using and posting social media while away from home or on vacation is an invitation to potential thieves that a student is not at home. Becoming comfortable in a dormitory room or the school library and not actively paying attention to their belongings may invite a crime of opportunity. Replacing a cell phone, computer, or other personal belongings can be expensive and inconvenient, and if passwords and financial information are accessible from the device it may be compromised which could result in more devastating consequences (Claxton, 2008; Lindsey-Taliefero et al., 2011; Red and Black Books, n.d.).

Developing and incorporating these life skills as addressed in the IHE's learning outcomes-based curriculum will empower IHE undergraduate students to minimize the chance that they will leave themselves vulnerable (JumpStart, 2015).

5.4 CORE CHARACTERISTICS OF A LEARNING OUTCOMES-BASED CURRICULUM

IHE faculty, staff and administrators creating a culture change and implementing an exemplary financial literacy program at their institution will use current financial literacy information and practice, and incorporate their own dissemination and assessment methods to meet their program goals (Davtyan, 2010; Brophy, 2011).

By meeting their students at the level of understanding they currently occupy, these practitioners will work with the IHE undergraduate students to teach them life skills including financial literacy and gain them access to applicable curriculum that will help the student learn and develop those skills.

Requiring IHE undergraduate students to develop proficiency and demonstrate mastery of specific financial literacy skills and knowledge before progressing onward in the curriculum, and having the student use specific tools to meet learning objectives are methods of outcome-driven curriculum delivery that can be used successfully by the IHE financial literacy program practitioners (Fusch, 2016a; Lectures, 2012; Linder, 2017).

5.5 EXEPTIONAL FINANCIAL LITERACY PROGRAMS

In April 2012 iGrad published a College Financial Literacy Compendium, which was a guide to the 23 best college financial literacy programs in the United States (Alban, 2012). In 2017 (Brown, 2017) and 2018 (Hamory, 2018), LendEdu compiled lists of the top 50 IHE financial literacy programs in the United States. Eleven IHEs were present in all three reports: Boston

College, Creighton University, Iowa State University, Menlo College, Sam Houston State University, Syracuse University, Texas Tech University, the University of Arizona, the University of North Texas, the University of South Carolina, and the University of Pittsburgh. IHEs looking to develop their financial literacy programs into an exemplary status should evaluate other exceptional IHE programs and incorporate best practice into their own programming.

As part of developing their learning outcome-based financial literacy programs, the exemplars share similar approaches. They started by listening to their students and gained an understanding of what they wanted and what the undergraduate students needed. With that information they were able to create programs tailored for their students.

The exemplars promote and support peer mentors. Peer mentors can bring an approach and perspective and due to those abilities relate to their fellow students in a way that older persons cannot. I realize when conducting financial literacy programming as it has been quite some time since I was less than 25 years old. Younger people think differently than older adults. Part of it can be attributed to growing up in a different era, whether a person identifies as a Baby Boomer, Generation X, or Millennial. Another is supported by and continues to be researched scientifically. Brain development for young adults does not complete until the age of 25 to 27, especially in the prefrontal lobe which is the area of the brain that assesses risky behavior, complex cognitive, emotional, and behavioral functioning (Comings, John, Garner, Barbara, & Smith, Cristine, 2002; Lampinen & Arnal, 2009). Young adults think differently than older adults, and that is perfectly normal and acceptable. As educators, practitioners, and professionals it is incumbent upon us to meet the young adult undergraduate student where they mentally are and facilitate and guide them to the educational outcome they need, In addition to large and small group discussions, the exemplars use one-on-one sessions to help an undergraduate student discuss their particular personal situation and answer their questions in confidence and in privacy. The exemplars promote community involvement and solicit student participation to work in the community which supports real life examples and places financial literacy in a different context. Instead of an abstract idea financial literacy is made to be real for the student, which reinforces the concepts and the learning objectives of the financial literacy curriculum.

By focusing on developing a new perspective on institutional culture, breaking down barriers, eliminating silos, and improving communication within the institution IHE, exemplars successfully develop and incorporate undergraduate student financial literacy programs (Gardner, 2016).

6.0 RECOMMENDATIONS FOR FURTHER RESEARCH

In recent years, there have been many suggestions of providing free education to undergraduate students to combat financial illiteracy. Funding sources have been proposed from the Federal Government, State Governments, local communities, and institutional aid (Coker et al., 2017; Pingel, 2014). I am neither a proponent of or an opponent of free IHE tuition if a feasible model is researched, evaluated, and vetted for use. The results of this research indicates that fee IHE tuition by itself, although a lovely gesture and a temporary fix, will not by itself solve the problem. By teaching critical life skills, including financial literacy, IHEs will empower undergraduate student young adults to gain the knowledge and skills to succeed personally, academically, and professionally.

In addition, policy research and changes could be implemented to ease the student loan burden on IHE undergraduate students. Repayment limits could be established for federally guaranteed student loans to help prevent people being in debt with no end in sight (Administrators & Draeger, 2013). Government subsidies could provide for a return to low tuition government funded IHEs with the caveat that young adults must perform mandatory service for a period of time prior to earning the right to attend those IHEs. Service could be in the military, Peace Corps, or in other jobs where they would work to benefit the public good. IHEs could evaluate their degree requirements, reduce and eliminate unnecessary courses, and combined resources to reduce the administrative overhead costs (Collinge, 2009). Research and studies on each of these subjects may provide further insight into mitigating and reducing financial illiteracy among young adults.

IHE Financial Aid Offices could incorporate semester-by-semester student loan evaluations, making sure the undergraduate student does not have excessive private loans and their total loan debt does not rise beyond a predetermined threshold (Chen & Wiederspan, 2014) that was established when they began their academic program and mapped out semester-by-semester expected student loan debt levels. A study evaluating the impact of such practices on retention and completion for undergraduate students could be instructive.

Studies could be conducted to assess the collaboration between faculty, staff, administrators, IHE departments, and measure how they serve the undergraduate students in development of strategic planning, problem solving, and financial literacy skills (Mcdonnell & Soricone, 2014).

As previously mentioned, to wordsmith the term, financial literacy, into financial wellness to make it sound more palatable may have been derived out of the current practice of "political correctness" in language. Further inquiry can be made into nomenclature used in describing and relating financial literacy concepts to determine if there is an impact culturally, demographically, or regionally (Hucul, 2015; Wiswall & Zafar, 2015).

Carissa, Jewel, Jimmy, and Margaretta concur with the exemplars and me that IHE's must embrace a culture change in order to succeed in implementing an exceptional and successful financial literacy program. The interviewees reported that many IHEs have behaved in a manner as if the institution had blinders on. The demographic decrease over the next decade in potential freshman students and the increasing student loan debt burden crisis are making the option of attending post-secondary education and realizing a return on their investment an increasingly difficult and unattainable choice for students and their families. By changing the institutional focus towards persistence, completion, and minimizing undergraduate student loan debt, the IHE can realize the goal of developing and graduating students who have learned and incorporated important life skills including financial literacy. Further research on changes in IHE culture and the impact on financial literacy outcomes would be instructive (Carnevale, Strohl, & Melton, 2011).

All of the interviewees responded that financial literacy education should start much earlier, beginning in primary school and continuing on in secondary school. Not everyone goes on to attend an IHE , but all high school graduates in the United States should have received financial literacy education by the time they graduate high school. The National Center for Education Statistics reports that in 2015 69.2% of high school graduates enrolled in an IHE. Marcelene posited that states should devise a mandatory requirement for passing a financial literacy program prior to earning the ability to graduate high school. Investigation and reporting research about this concept and evaluating research regarding primary and secondary school dissemination of financial literacy could be an interesting research effort and could provide a basis for potential change in education and governmental policy (Dowdell, Dwight, & Sikula, 2010).

In the final interview, Temple reported that at his IHE the number of large cash payments has increased substantially as compared to prior years. A cash payment is referred to as any payment made with funds other than a student loan. The funds could have been sourced from a different type of loan, withdrawal from a retirement account, funds obtained by parents by placing a second (or multiple) mortgage on their home, credit cards, lines of credit, or other sources. An interesting point that I noted is that none of these sources discussed are student loans. Student loans cannot be discharged in a bankruptcy proceeding, but each of the sources of funds that were reported are able to be discharged under a bankruptcy filing. I am not implying anything insidious but this point is worth further consideration. Research into how students and their families are paying for and covering the current costs of attendance at the IHE would be instructive, and what impact the sourcing of funds has on the students and families could be an interesting research project (Stokes & Wright, 2010).

A recent article describes the impact student loan debt is having on home purchases (Nova, 2018). Much has been said about the impact of student loan debt and the inability of former IHE students to purchase homes, cars, and establish the lives they anticipated after attending the IHE. Furthermore, the amount of debt load to and the length of the extended student loan repayment plans is anticipated to impact the young adults' ability to save money for their own children's IHE education and start setting aside funds towards retirement. An interesting and useful research study would be to explore these claims and determine the claim's veracity and what the reality of the situation is as compared to the reality of the situation and the projections of catastrophe.

6.1 COMMUNICATE WITH STEVE

I am very interested in continuing to pursue this line of inquiry and invites interested colleagues to contact me for future collaboration. If you have any questions or would like to further the discussion of IHE financial literacy please email me at stevenlcohenfinancialliteracy@gmail.com and I will respond as soon as feasible.

Thank you very much for having the interest and taking the time to read this dissertation.

Very respectfully,

Steve Cohen

APPENDIX A

EMAIL MESSAGE OF TRANSMITTAL

Email Message Subject: I would appreciate your help and insight in developing my Practitioner's Guide to Student Financial Literacy.

Email Message:

Dear <Colleague>,

I hope this email finds you well. I am writing to ask for your help and insight in completing my research.

I am completing my work on a Practitioner's Guide to Student Financial Literacy to fulfill the requirements for the degree of Doctor of Education (Ed.D) by the end of the Spring 2018 term. My work is designed to help Institutions of Higher Education (IHE) to enhance the financial literacy of their undergraduate students. This thesis will present a practitioner's guide to student financial literacy; a tool designed to help IHE program administrators understand what undergraduate student financial literacy is, what impact financial illiteracy has on the undergraduate student and the institution, what measures can be taken to establish an exemplary financial literacy program, how to assess the impact of the financial literacy program, and what the literature and interviews with academic professionals reveal about this problem.

As a friend and colleague I respect your insight and deliberation. I ask for your time to discuss your experiences and suggestions with financial literacy. I would like to schedule a phone interview with you at a mutually convenient time between now and Saturday March 10, 2018. Additionally, if a question arises that requires more information I ask that you grant me permission to conduct a follow up conversation with you. This interview has been approved by the Institutional Review Board of the University of Pittsburgh.

Please email me at slc32@pitt.edu or stevenl.cohen1@gmail.com with a valid phone number(s) to reach you and a few days and times that are convenient for you. Rest assured that our conversation will be kept in the strictest confidence and not included in the public record. Any inclusion of my interview notes in my dissertation will be recorded anonymously and only identified by a random number generated from Research Randomizer https://www.randomizer.org.

If you have any questions regarding the interview or this research project in general, please contact Steven L. Cohen at slc32@pitt.edu or stevenl.cohen1@gmail.com or contact his advisor Dr. Stewart Sutin at ssutin@pitt.edu.

If you have any questions concerning your rights as a research participant, please contact the IRB of the University of Pittsburgh at irb@pitt.edu. By completing this interview, you are indicating your consent to participate in the study.

Thank you very much for your help and consideration.

Sincerely,

Steve

Steven L. Cohen, Doctoral Candidate, University of Pittsburgh

Advisor: Dr. Stewart Sutin, Department of Department of Administrative and Policy Studies, School of Education, University of Pittsburgh.

APPENDIX B

IRB APPROVAL LETTER

University of Pittsburgh

Institutional Review Board

3500 Fifth Avenue
Pittsburgh, PA 15213
(412) 383-1480
(412) 383-1508 (fax)
http://www.irb.pitt.edu

Memorandum

To: Steven Cohen
From: IRB Office
Date: 1/2/2018
IRB#: PRO17120570
Subject: Practitioner's Guide to Student Financial Literacy

The above-referenced project has been reviewed by the Institutional Review Board. Based on the information provided, this project meets all the necessary criteria for an exemption, and is hereby designated as "exempt" under section

45 CFR 46.102(f)

Please note the following information:

- Investigators should consult with the IRB whenever questions arise about whether planned changes to an exempt study might alter the exempt status. Use the "**Send Comments to IRB Staff**" link displayed on study workspace to request a review to ensure it continues to meet the exempt category.
- It is important to close your study when finished by using the "**Study Completed**" link displayed on the study workspace.
- Exempt studies will be archived after 3 years unless you choose to extend the study. If your study is archived, you can continue conducting research activities as the IRB has made the determination that your project met one of the required exempt categories. The only caveat is that no changes can be made to the application. If a change is needed, you will need to submit a NEW Exempt application.

Please be advised that your research study may be audited periodically by the University of Pittsburgh Research Conduct and Compliance Office.

APPENDIX C

IHE FINANCIAL LITERACY RESOURCES

A) Undergraduate Financial Literacy Resources

1. United States Department of Education:

a. Financial Literacy

https://www.ed.gov/category/keyword/financialliteracy

b. Budgeting https://studentaid.ed.gov/sa/prepare-for-college/budgeting

c. StudentAid.gov https://studentaid.ed.gov/sa/resources

d. Completing the Free Application For Federal Student Aid (FAFSA)

https://studentaid.ed.gov/sa/fafsa

2. Federal Trade Commission www.ftc.gov

3. Federal Student Aid: an Office of the U.S. Department of Education:

Financial Aid Toolkit for Counselors https://financialaidtoolkit.ed.gov/tk/

4. U.S. Department of Education College Affordability and Transparency Center

https://collegecost.ed.gov

5. CashCourse.org National Endowment for Financial Education (NEFE).

6. Cheap$cholar.org http://cheapscholar.org
7. 360 Degrees of Financial Literacy https://www.360financialliteracy.org
8. iGrad https://www.igrad.com
9. FinAid! http://www.finaid.org
10. Scholarship America https://scholarshipamerica.org
11. LendEdu https://lendedu.com
12. edutopia https://www.edutopia.org
13. National Financial Educators Council
    https://www.financialeducatorscouncil.org/financial-literacy-students
14. College Budgeting: https://www.debt.org/students/college-budgeting-101
15. AnnualCreditReport.com https://www.annualcreditreport.com/index.action
16. Experian http://www.experian.com
17. Equifax https://www.equifax.com/personal/
18. TransUnion https://www.transunion.com
19. Kelley Blue Book (buying a car) https://www.kbb.com
20. Edmunds (buying a car) https://www.edmunds.com
21. HealthInsurance.org www.HealthInsurance.org
22. The Consumer Financial Protection Bureau www.consumerfinance.gov

B) Useful assessment resources

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C) Financial Literacy Standards

Federal Financial Literacy and Education Commission
http://www.mymoney.gov/mymoneyfive/Pages/mymoneyfive.aspx

Institute for Financial Literacy National Standards for Adult Education
https://financiallit.org/resources/national-standards/

National Financial Educator's Council (NFEC) Financial Literacy Standards:
http://www.financialeducatorscouncil.org/

APPENDIX D

IHE COMPLETION RATE INCREASE HYPOTHETICAL EXAMPLE

Year #	1	2	3	4	5	6	7	8	9	10	11	12	13
	100	86	73	60									
6 in 10 completion		100	86	73	60								
			100	86	73	60							
				100	86	73	60						
					100	86	73	60					
						100	86	73	60				
							100	86	73	60			
								100	86	73	60		
									100	86	73	60	
										100	86	73	60
											100	86	73
												100	86
													100
			Sum	319	319	319	319	319	319	319	319	319	319
$25,000 per student			Total	$7,975,000.00	$7,975,000.00	$7,975,000.00	$7,975,000.00	$7,975,000.00	$7,975,000.00	$7,975,000.00	$7,975,000.00	$7,975,000.00	$7,975,000.00
Ten Year Total Operating Budget				$79,750,000.00									
	100	90	80	70									
7 in 10 completion		100	90	80	70								
			100	90	80	70							
				100	90	80	70						
					100	90	80	70					
						100	90	80	70				
							100	90	80	70			
								100	90	80	70		
									100	90	80	70	
										100	90	80	70
											100	90	80
												100	90
													100
			Sum	340	340	340	340	340	340	340	340	340	340
$25,000 per student			Total	$8,500,000.00	$8,500,000.00	$8,500,000.00	$8,500,000.00	$8,500,000.00	$8,500,000.00	$8,500,000.00	$8,500,000.00	$8,500,000.00	$8,500,000.00
Ten Year Total Operating Budget				$85,000,000.00									
7 versus 6 in 10	Annual				$525,000.00								
	Over 10 year period				$5,250,000.00								

Figure 3. *IHE Completion Rate Increase Hypothetical Example*

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