Coming to Consensus: A Delphi Study to Identify the Personal Finance Core Concepts and Competencies for Undergraduate College Students

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Introduction

College is the first chance for many young adults to make significant financial decisions on their own (Shim, Serido, & Xiao, 2009). The financial behaviors and attitudes that students may acquire during their tenure at college depend not only on knowledge, skills, and behaviors developed through earlier socialization by family, peers, and school, but also, to a large extent, on what they observe, learn, and exercise while at college - away from home and their parents.

A concern among researchers, educators, and policymakers is that, in general, college students may not have acceptable levels of financial knowledge and skills, nor do they demonstrate appropriate financial behaviors that exemplify positive financial decision-making to live within their means and relatively debt-free. This concern is based on prior research on college students' financial management (Allen & Kinchen, 2009; Avard, Manton, English, & Walker, 2005; Chen & Volpe, 1998; Grable & Joo, 2006; Hayhoe, Leach, Allen, & Edwards, 2005; Jones, 2005; Lyons, 2003; Lyons, 2004b; Mandell, 2008; Manton, English, Avard, & Walker, 2006; Markovich & DeVaney, 1997; Norvilitis & Santa Maria, 2002; Pinto & Mansfield, 2006; Sallie Mae, 2009).

While there have been numerous studies regarding college students' financial literacy and debt issues, only minimal emphasis has been placed on the identification of core competencies that are essential for college students to have during their tenure in school. There seems to be no consensus as to what college students need to know or do to demonstrate acceptable personal finance knowledge, skills, and behavior. The objective of this study was to identify the specific personal finance knowledge, skills, and actions/behaviors that are important for all undergraduate college students.

Financially, college students may experience a transformation from dependence to independence and most students engage in new financial experiences. Many have already acquired at least one credit card before entering college (Hayhoe et al., 2005; Lyons, 2004b; Nellie Mae, 2005; Sallie Mae, 2009; Susswein, 1995). But it is at the postsecondary level where they are likely to begin using credit more often in the form of credit cards and student loans, paying for health and auto insurance, and making larger recurring purchases such as food, clothing, and rent. In addition, many college students are likely to work part- or full-time to earn money which may be used to cover living or school expenses or to repay debt. Money is often necessary for students to participate in educational and social activities, acquire material goods, and attend events in order to obtain desired peer approval and group affiliation (Wang & Xiao, 2009).

Students may acquire financial experience by the time they graduate from college, but many also acquire debt as well. Due to the high price of college, the total amount of financial assistance provided to students has more than tripled since the early 1990s, and most of the increase can be attributed to student loans (Pinto & Mansfield, 2006). On average, two out of every three college undergraduates incur some form of conventional education debt (e.g., federal student loans), seek private loans, and/or turn to credit cards to finance their education (Pinto & Mansfield, 2006). Two-thirds (67%) of students graduating from four-year colleges and universities in 2011 had student loan debt with an average amount of $26,600 (The Project on Student Debt, 2012). On average, students with some form of debt owe $27,029 in student loans and $12,742 in other debt, namely credit card debt (Accounting Principals, 2012). Median credit card debt grew from $946 in 2004 to $1,645 in 2008 (Sallie Mae, 2009). One-fifth (21%) of undergraduates had credit card balances between $3,000 and $7,000, which was also an increase (16%) from 2004 (Sallie Mae, 2009). Many students use credit cards to pay for direct education expenses. Ninety-two percent of undergraduate students who hold credit cards charged textbooks,

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how much debt they actually carry. A 2012 study (Andruska, Hogarth, Fletcher, Forbes, & Wohlgemuth) found that 12% of students were "loan confused" – they reported no student loan debt when, in fact, they had student loans. About 42% were "debt confused." These were students who underestimated the amount of student debt they actually owed.

It is important, however, to acknowledge that not all undergraduate college students carry high levels of debt or any debt at all. Lyons (2004b) found that the majority of college students use their credit cards responsibly and do not accumulate large amounts of debt. For many students, there is the likelihood that their parents assume some or all of the responsibility to pay back student education loans and perhaps their monthly credit card bills.

Having debt is not necessarily a negative position for undergraduate college students. According to Becker (1975), education and training are the most important investments in human capital. The human capital model suggests that individuals bear the costs of human capital expenditures (education expenses, forgone earnings) in the near term in order to reap the benefits of increased earnings, job satisfaction, and a greater appreciation of nonmarket activities and interests in the future (Ehrenberg & Smith, 2003). As such, undergraduate college students may be more willing to incur debt, in the forms of student education loans and/or credit cards, while in college, as an investment in their futures after leaving college. Their expectation may be that earnings from jobs after college may be enough to pay back the debt in an affordable manner.

In addition, industry experts and even educators have encouraged college students to establish credit histories and build credit scores as young adults. Employers, insurance companies, apartment leasing agents, and cell phone companies use credit histories and credit scores to determine students' ability to pay (College Board, 2011; Vohwinkle, 2011).

College students will engage in various financial transactions out of necessity (NEFE, 2010). For example, many students will need bank accounts and may opt to learn to use them through self-education, social learning opportunities, or simply from trial and error (NEFE, 2010). Numerous researchers have argued that acquiring good financial management knowledge and skills stands as one of the most important developmental tasks during this life transition for young adults (see, for example, Avard et al., 2005; Chen & Volpe, 1998; Lyons, 2004b; Manton et al., 2006; Nellie Mae, 2001). As a result, students who learn financial knowledge and practice sound financial behaviors during their college years may be more likely to build a foundation for lifelong financial well-being after leaving school.

The purpose of this study was to identify specific personal finance core concepts and competencies necessary for college students to manage their money in a manner that poses fewer opportunities for debt and greater opportunities for financial security. Two questions were specifically addressed:

1) What are the specific personal finance *concepts* that are important for all undergraduate college students, in general?
2) What are the specific personal finance *competencies* that are necessary for all college students, in general?

A core competency, as used in this study, is defined as *specific financial knowledge*, a *financial skill*, or a *behavior in personal finance*. As part of its 2010 National Strategy, the Financial Literacy and Education Commission (Commission) (FLEC, 2010) determined that it is necessary to identify financial education core competencies. According to the Commission, "development of core competencies is a fundamental step in establishing a clear understanding about what individuals should know and the basic concepts program providers should cover" (U.S. Department of the Treasury, 2010, p. 52596). The Commission (FLEC, 2010) proposed five financial education core *concepts*: (a) earning, (b) spending, (c) saving, (d) borrowing, and (e) protection against risk. Within each of those areas were more specific core *competencies*, as indicated by the Commission, including knowledge and action/behavior (see Appendix A).

In its request for comments on the proposed set of core competencies, the Commission did not suggest any time frame in the life cycle when individuals should be considered competent in each of the suggested areas, such as upon graduation, before marriage, or by retirement. It is unlikely that all individuals will acquire all of these competencies at once; indeed, life situations may make one or more of the competencies a priority at different life stages. Although it is important for all individuals to acquire competency in key personal finance knowledge and skills, it may be more likely that they will acquire them closer to the time when faced with specific financial tasks or challenges.

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As such, timing may play a major role in when college students invest in acquiring certain core competencies. According to Mandell (2006), advocates of "just-in-time" financial management education believe that education should concentrate on topics that are of immediate importance to participants. He argued that "just-in-time education" is useful for adults who are about to make important financial decisions, particularly education delivered at the point of sale or obtained by highly-motivated consumers. It is in the moments just before a key financial decision is made when a person's decision-making behavior is most easily modified (Alexander, Marple, & Jones, 2011).

Because of their age, most educators would consider undergraduate college students to be young adults. As such, it is appropriate to consider the adult learning theory of andragogy for this study. In andragogy, it can be assumed that learners identify the content to be learned as the knowledge or skills they need for themselves, their work, or the world around them, or to solve problems (Mackeracher, 2004). Mackeracher further explained that "learning is something done *by* the learner rather than something done *to* or *for* the learner" (p. 5).

As implied by the "just-in-time" concept, college students may be more likely to make financial decisions and experience specific financial tasks and challenges based on their current situation, such as year in college, or acquisition and/or management of student loans. Further, they may not be willing to learn about specific personal finance concepts and competencies until they have determined there is a need for them.

The results of this study are expected to provide administrators, educators, researchers, and policymakers with a better perspective on the needs of undergraduate college students and assist them in the development of necessary content of personal finance education offerings at the college level. This perspective also may help many of them identify new opportunities for personal finance education programs and services.

Literature Review

Much of the prior research about college students with respect to personal finance and financial issues has focused on students' financial knowledge and literacy levels, money management and other financial behaviors, and credit card or student loan debt.

Financial literacy is a term introduced to illustrate the ability of individuals to navigate financial matters (Huston, 2010). There have been numerous definitions of financial literacy given by researchers, educators, and policymakers over the years (see, for example, Beverly & Burkhalter, 2005; Hilgert, Hogarth, & Beverly, 2003; Lusardi & Tufano, 2009; Mandell, 2007), yet there is no universally accepted meaning (Huston, 2010; Remund, 2010). For example, financial literacy has been inconsistently defined "as (a) a specific form of knowledge, (b) the ability or skills to apply that knowledge, (c) perceived knowledge, (d) good financial behavior, and even (e) financial experiences" (Hung, Parker, & Yoong, 2009, p. 5). The President's Advisory Council on Financial Literacy (PACFL, 2008) defined financial literacy as "the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being" (p. 35). Hung et al. (2009), in arguing that additional concepts should be added to the Council's definition, contended that "financial knowledge, skills, and behavior, as well as their mutual relationships, should all be considered in the concept of financial literacy" (p. 11). As such, their definition of financial literacy is "knowledge of basic economic and financial concepts, as well as the ability to use that knowledge and other financial skills to manage financial resources effectively for a lifetime of financial well-being" (p. 12). Huston (2010) suggested that financial literacy is "a component of human capital that can be used in financial activities to increase expected lifetime utility" from "behaviors that enhance financial well-being" (p. 307). She defined it as a measurement of an individual's ability to understand and use personal finance-related information.

Financial knowledge is the most common component and is integral to financial literacy (Huston, 2010; Remund, 2010). Huston (2010) identified it as a stock of knowledge acquired through education and/or experience specifically related to essential personal finance concepts and products. In his discussion of operational definitions of financial literacy, Remund (2010) reported that the four most common content areas are budgeting, saving, borrowing, and investing. Therefore, one might consider that personal financial knowledge would include an understanding of these four personal finance concepts.

Financial behaviors are those behaviors or outcomes related to various personal finance topics. Xiao (2008) argued that individuals should demonstrate appropriate financial behaviors in cash

management, credit and debt management, planning for various life cycle events (such as college, marriage, retirement planning, and estate planning), and consumerism. However, Huston (2010) countered that individuals who are financially literate (i.e., have financial knowledge and the ability to apply that knowledge) may not demonstrate predicted behaviors or increases in financial well-being because of other influences (e.g., cultural/familial, economic conditions, time preferences, behavioral biases, etc.). Some researchers would argue that there seems to be a relationship between financial knowledge and financial behaviors, although much is still to be determined about the exact relationship between the two constructs (Hilgert et al., 2003; Mandell & Klein, 2009; Robb, 2012; Robb & Sharpe, 2009).

A review of the literature found no prior studies which identified or established personal finance specific core concepts or core competencies for college students. There are numerous studies which measured students' knowledge of financial concepts which were pre-determined by the researchers. In these studies, students had the highest levels of knowledge in the content areas of overall financial management (Chen & Volpe, 1998; Danes & Hira, 1987); income (Mandell, 2008); and insurance (Markovich and DeVaney, 1997).

More recent studies which measured college students' financial knowledge found that students do not have acceptable levels, and are even failing financial literacy tests (Charles Schwab & Co., 2011; Shim, Serido, & Xiao, 2009). Danes and Hira (1987) argued that college students often know general facts about money management topics yet they lack more specific knowledge about each topic.

The overall conclusion of studies which examined college students' knowledge of credit revealed that many college students lack acceptable knowledge of credit (Braunsberger, Lucas, & Roach, 2005; Charles Schwab & Co., 2011; Dale & Bevill, 2007; Warwick & Mansfield, 2000). Students' lack of awareness of interest rates was the most prevalent finding in several of the studies (Dale & Bevill, 2007; Warwick & Mansfield, 2000). College students were more likely to have greater general knowledge about credit rather than specific details about credit (Jones, 2005; Warwick & Mansfield, 2000). Joo, Grable, and Bagwell (2003) found that students used credit for everyday expenses; yet, only one-half of students were aware of associated costs (e.g., Annual Percentage Rate, late fee, annual fee, cash advance fee).

Studies which examined college students' financial behaviors seemed to be in consensus that the majority of students did not demonstrate positive financial behaviors. Some of the most notable findings included students' failure to save for emergency uses (Markovich & DeVaney, 1997); failure to save at all (Allen & Kinchen, 2009; Xiao et al., 2007), shopping for a financial institution based on needs other than financial (Allen & Kinchen, 2009; Markovich & DeVaney, 1997); and failure to reconcile accounts or follow a budget (Allen & Kinchen, 2009). However, the findings of these studies were not always negative. Students were able to comprehend auto and life insurance specifics (Markovich & DeVaney, 1997); and performed desirable cash management behaviors (Xiao et al., 2007).

A majority of college students already possess at least one credit card (Hayhoe, 2002; Jones, 2005; Lyons, 2003; Munro & Hirt, 1998; Sallie Mae, 2009; TERI/IHEP, 1998). Several studies on students' usage of credit showed that a majority generally had positive credit behavior. Students used credit cards responsibly and did not accumulate large amounts of credit card debt (Lyons, 2003; TERI/IHEP, 1998), either paid off their bill at the end of the month (Lyons, 2003; Sallie Mae, 2009; TERI/IHEP, 1998) or paid the minimum amount due (Sallie Mae, 2009; TERI/IHEP, 1998), and paid their own credit card bills (TERI/IHEP, 1998).

Still, other studies indicated that college students do demonstrate some less positive credit behaviors including revolving balances more frequently (Munro & Hirt,1998) and a greater likelihood to borrow even more if they already had credit card debt (Hayhoe, 2002; Jones, 2005; Lyons, 2003).

Numerous studies about the financial literacy issues of college students included recommendations by researchers about basic financial concepts as well as specific knowledge and skills needed by students. These included insurance (Avard et al., 2005; Danes & Hira, 1987); overall financial management (Allen & Kinchen, 2009; Cude et al., 2006; Cummins, Haskell, & Jenkins, 2009; Danes & Hira, 1987); investing (Allen & Kinchen, 2009; Avard et al., 2005); credit (Allen & Kinchen, 2009; Danes & Hira, 1987; Dale & Bevill, 2007; Hoffman, McKenzie & Paris, 2008; Joo et al., 2003; Lyons, 2004a, 2004c; Nellie Mae, 2005; Norvilitis & Santa Maria, 2002); spending and earning (Nellie Mae, 2005); saving (Xiao et al, 2007) and taxes (Avard et al., 2005).

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Methodology

The Delphi technique was the method used in this study to develop group consensus of essential personal finance concepts and competencies for undergraduate college students. This method uses a combination of qualitative and quantitative research methods to build consensus among a group of individuals who have been previously identified as experts in a particular field or industry. It is based on a structured process to collect and synthesize knowledge from a group of experts by means of questionnaires, is accompanied by controlled opinion feedback, and tends to be used in evaluation when significant expertise exists on the subject (European Commission, 2009). The Delphi method is primarily used to facilitate the formation of a group judgment (European Commission, 2009).

Participants in a Delphi study are referred to as panelists or panel members (Clayton, 1997; Davis & Alexander, 2009; Scott, Washer, & Wright, 2006). The panel members for this study were solicited from a list of individuals, compiled by the researchers who met one or more selected criteria established by the researchers. These criteria were: (a) possessed knowledge and expertise in college students' financial literacy issues; and/or (b) had taught personal financial education to college students. In addition, panel members had to have the capacity and willingness to participate, sufficient time to participate in the study, and possess effective communication skills (Skulmoski, Hartman & Krahn, 2007).

Eighty individuals were identified as potential panel members. Forty-eight of these potential panelists were college professors, while the remaining 32 were administrators at either profit (7) or not-for-profit agencies (25). Many of the potential panel members authored articles on financial knowledge, financial behavior, and financial literacy of college students and are cited within this study. A panel of 21 experts was assembled, utilizing results of a survey designed to elicit demographic information about the panel members to determine their areas of expertise with respect to personal finance education, research, and experience working with college students.

Data collection regarding the personal finance concepts and competencies took place via an online survey concentrated on ranking the importance of personal finance concepts and competencies for undergraduate college students as determined by panel members. There were three "rounds" of the survey, each building on the previous round to reach consensus. Using a six-point rating scale, panel members rated personal finance concepts and personal finance competencies on their importance to their assigned group of undergraduate college students. Panel members were asked to rate the concepts and competencies as "Most Important (1)," "Very Important (2)," "Somewhat Important (3)," "A Little Important (4)," or "Not Important at All (5)." If panel members were not sure of the importance of the competency or concept, they could indicate that by marking "Don't Know (6)."

The original list of competencies used in these rounds of surveys came from a list of proposed personal finance concepts, knowledge, and actions/behavior compiled by the first author from several sources, including concepts and competencies proposed by the Financial Literacy and Education Commission (FLEC, 2010) and prior studies which used specific financial knowledge and behaviors in surveys of college students (Chen & Volpe, 2002; Hilgert, et al., 2003; NEFE, 2008; Richel, 2006; Wilhelm & Chao, 2005; and Xiao et al., 2009). Additional concepts and competencies were added based on input from the researcher and dissertation committee members.

In Round One of this research study, panel members were asked to rank 13 specific personal finance concepts (Borrowing, Budgeting, Consumer Protection, Credit Management, Debt Management, Employee Benefits/Income, Financial Planning, Financial Services, Insurance, Investing, Saving, Student Financial Aid, and Taxes) and 226 competencies that included financial knowledge and skills and financial behaviors for undergraduate college students. In Rounds Two and Three, panel members were asked to pare down the list of responses from the previous rounds by re-evaluating their responses from the previous rounds (Rounds One and Two).

Concepts and competencies which were identified as having gained consensus in the previous round were removed for future consideration by panel members. However, those concepts and competencies were identified to the panel as having consensus along with their mean rankings in their respective personal finance concept categories prior to identifying competencies which still needed to be ranked by panel members. For each remaining concept and competency, panelists were given the range of all panel members' responses between the first and third quartiles from the previous round as well as their own responses to help them in their decision-making process for the current survey round.

In Round One, panel members also were encouraged to suggest additional personal finance concepts and competencies that were not part of the original list. Additional space was provided at the

end of each personal finance concept section for panel members to offer additional competencies. All of the 21 panel members were sent the first round questionnaire.

The second round questionnaire was developed based on the results of the surveys from the first round. For the Round Two survey, there were 200 personal finance competencies and 11 personal finance concepts. Thirty-one new competencies were added to this survey as suggested by panel members from the first round. The questionnaires were sent only to panel members who responded in Round One. Nineteen panel members were sent the second round questionnaire. Responses were tallied from all surveys completed and compiled for inclusion in the third round. Competencies that gained consensus were ranked by mean within their respective personal finance concept.

For the Round Three survey sent to panel members, there were 180 personal finance competencies and seven personal finance concepts. The eighteen panel members who completed the second round survey were sent the third round questionnaire. Responses were tallied from all surveys completed and compiled for final data analysis. Competencies that gained consensus were ranked by mean within their respective personal finance concept.

Statistical Analysis

Data analysis for each of the three rounds was done using descriptive statistics. Descriptive statistics included mean, median, standard deviation, first and third quartiles, and the interquartile range (IQR). The competencies in each personal finance concept then were ranked in descending order of relevance based on means. The mean was chosen as the primary measurement for comparison of rating scores because it is a more accurate and efficient estimate of the population mean than other measures of central tendency (Davis & Alexander, 2009). The second criterion chosen to interpret the results of the study was the interquartile range (IQR), a useful measure of variability, which is equal to the difference between the third and first quartiles. The IQR is an alternative to the standard deviation – because it uses the middle 50% of responses, it is less affected by outliers or extreme values than the standard deviation (Interquartile Range, n.d.; Measures of Dispersion, n.d.).

In each round of results, consensus by panel members was determined in one of two ways, both of which included the interquartile range (IQR). In the first technique, concepts and competencies with an IQR = 0 indicated very high consensus and were given the designation of "automatic consensus." Concepts and competencies with an IQR greater than 0 but less than 1 were designated as having automatic consensus in the second and third rounds only.

In the second technique to determine consensus, concepts and competencies that had an IQR = 1 (or less than 1 in the first round) were analyzed further by examining the percentage of panel members who agreed with the median response. If a majority of panel members agreed with the median, then it was determined that the panel members had reached consensus of an acceptable level ("acceptable consensus").

In either case, if a concept or competency did gain consensus, it was then relocated to a different part of the questionnaire that identified concepts and competencies in consensus. If there was no majority of responses that matched the median response, the concept or competency was then resubmitted for consideration by panel members in either Round Two or Round Three.

For example, in Round Two of the survey, the IQR for the Credit Management personal finance competency of "Explain the difference between the principal and interest with regard to monthly payments" was "1" and the median response was "2". A review of panel members' responses indicated that 10 out of 19 individuals (53%) gave responses of "2." Therefore, it was determined that there was acceptable consensus by the panel on that specific competency. However, for the Credit Management personal finance competency of "Given a specific credit card balance, interest rate, and minimum payment allowed, calculate time to pay off the balance" which also had an IQR of "1" and a median response of "2", only six out of 19 panel members (32%) agreed with the median. The determination was made that there was not consensus among panel members and the competency was resubmitted for consideration in Round Three.

As indicated above, several panel members did not participate in all three rounds, and thus, their names were removed from further consideration and contact by the researcher. Originally, there were 21 individuals who agreed to serve on the panel. By the end of the third round, 17 panel members remained. Appendix B provides descriptive statistics about the final panel.

An interesting finding in reviewing changes from the original panel of 21 members to the final panel of 17 members was that members who stayed on the panel throughout the entire study were those

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who tended to have a greater number of years of experience in their profession. The assumption could be made that those particular panel members understood the importance of participating in the complete study and were willing to share their expertise.

Results

There were 13 personal finance concepts and 256 personal finance competencies originally under consideration for consensus for undergraduate college students. Of those, seven personal finance concepts and 140 personal finance competencies gained consensus by panel members. There were six personal finance concepts and 116 personal finance competencies under consideration that did not gain consensus for undergraduate college students. In addition to identifying all concepts and competencies which gained consensus by panel members, the mean rankings of each were identified. The mean rankings of those concepts and competencies which did not achieve consensus also were identified.

Table 1 is a complete listing of all personal finance competencies and concepts that were under consideration by the panel members. The number of competencies which gained consensus out of the total count for each concept is posted in parentheses. Those competencies which achieved consensus are identified with a check mark symbol. The top five competencies in consensus (by mean ranking) in each personal finance concept are highlighted in gray. The designation “new” indicates that competency was suggested by a panelist in Round One.

Table 1

Personal Finance Concepts and Competencies and Mean Rankings for Undergraduate College Students (√ = Consensus)

Personal Finance Competency	**Status of Consensus** (√ = Consensus)	**Mean**
Borrowing (22/34)		
Identify sources of credit	√	2.2
Differentiate between different types of credit	√	1.9
Identify the criteria used to assess qualifications for credit	√	1.8
Compare and contrast types of loans to finance a car	√	2.4
Compare and contrast types of loans to finance college expenses	√	1.6
Explain the use of credit reports in credit applications	√	1.5
Explain the use of credit scores in credit applications	√	1.8
Complete a credit application	√	2.8
Compare interest rates		1.7
Compute total cost over the life of a loan		1.6
Create a plan to repay the debt on a major purchase		1.7
Describe when and why it may be wise to refinance a loan	√	2.5
Explain why the use of credit cards is borrowing		1.9
Describe the different types of credit cards	√	2.4
Explain how to compare terms of credit card offers	√	1.5
Explain lines of credit		2.7
Explain payday loans		2.9
Explain Rule of 72		2.9
Compare and contrast secured loans and unsecured loans	√	2.0
Explain an amortization schedule	√	2.7
Compare and contrast types of mortgages to finance a house	√	2.6
Explain a mortgage and its component parts	√	2.9
Explain down payment requirements in relation to private mortgage insurance	√	2.8
Explain home buyer mortgage assistance programs for first-time home buyers		3.3

Explain home buyer mortgage assistance programs for military personnel	√	3.6
Explain borrower's rights in purchasing a home	√	3.1
Identify resources (published, online, and human) to refer to for help in borrowing	√	2.4
Explain debt-to-income ratio (*new*)	√	1.8
Identify the right credit for a particular situation (*new*)	√	2.3
Describe the costs and benefits of borrowing (*new*)	√	1.6
Describe the costs and benefits of borrowing from family and friends (*new*)		2.6
Describe the Truth-in-Lending Act (*new*)		3.3
Explain predatory lending (*new*)		2.5
Describe policies implemented to protect consumers from predatory lending (*new*)		3.1
Budgeting (14/21)		
Define terms commonly used in budgeting	√	2.6
Explain how one's income and spending and saving choices determine one's standard of living	√	1.8
Explain the difference between fixed and variable expenses	√	1.8
Explain the difference between needs and wants	√	2.0
Compare and contrast disposable income and discretionary income	√	2.4
Construct a budget	√	1.6
Demonstrate the ability to keep clear personal finance records	√	2.2
Explain how a budget can be used to obtain future goals	√	1.8
Describe the function of an emergency fund in money management	√	1.6
Explain how budgeting can help avoid bankruptcy	√	2.9
Define assets and explain asset growth	√	2.3
Explain the concept of asset liquidity	√	2.5
Compare and contrast assets and debts		2.5
Explain how assets and debts can be used responsibly		2.3
Compare various forms of payment including cash, check and electronic transactions for ease of use, privacy, safety and efficiency	√	1.9
Define and calculate time value of money	√	1.6
Identify resources (published, online, and human) to refer to for help in budgeting		2.5
Explain how to track expenses (*new*)		2.1
Explain how to follow a budget and make necessary adjustments over time (*new*)		2.1
Describe financial statements and ratios to use as references in creating a budget (*new*)		2.2
Identify ways to stay within a budget (*new*)		2.1
Consumer Protection (6/14)		
Explain consumer rights and responsibilities		2.4
Define terms used in consumer protection	√	2.6
Describe policies that protect consumers from fraud	√	2.5
Describe policies implemented to protect consumers from identity theft	√	2.2
Describe policies that protect consumers from deception	√	2.5
Describe the roles of local, state, and federal governments in consumer protection		2.7
Explain the Consumer Bill of Rights		3.2
Describe how and why prices charged may vary from prices advertised on products		2.9

Describe common marketing techniques used to influence or manipulate consumer buying		2.1
Explain purchase and marketing techniques to stimulate impulse buying	√	2.3
Identify resources (published, online and human) to refer to for help in consumer protection		2.4
Explain identity theft and how to avoid becoming a victim of identity theft (*new*)		1.9
Describe common marketing fraudulent and deceptive practices targeted to young adults (*new*)		2.1
Describe agencies that serve in the role of consumer protector or consumer advocate (*new*)	√	2.8
Credit Management (20/30)		
Define common terms used in relation to credit	√	2.4
Differentiate between debit and credit cards	√	1.7
Define credit limits and explain how they are set	√	2.4
Calculate the real cost of credit	√	1.5
Define and calculate finance charges	√	2.1
Describe how to use APR to compare loan terms	√	1.7
Describe how to use APR to estimate the dollar cost of using credit	√	2.2
Analyze a credit report	√	1.4
Define the concept of an individual credit history	√	2.3
Define the concept of an individual credit score		1.6
Explain the significance of a credit history	√	1.9
Explain the significance of a credit score	√	1.8
Explain the relationship between the creditor's risk and interest rates	√	2.2
Explain the difference between the principal and interest with regard to monthly payment	√	1.8
Given a specific credit card balance, interest rate, and minimum payment allowed, calculate time to pay off the debt		1.8
Identify risks and protections associated with credit cards	√	2.5
Explain techniques to manage a credit card		2.1
Describe techniques to manage more than one credit card		2.4
Explain the consequences of living beyond one's means		1.8
Explain the consequences of not paying a credit card balance in full	√	1.6
Describe the consequences of not making required credit payments on time	√	1.5
Explain credit card rewards programs		3.5
Explain identity theft and its potential impact on credit	√	2.0
Describe the Credit CARD Act		2.8
Explain how to get help to understand contract fine print before signing a credit application		2.4
Identify resources (published, online, and human) to refer to for help in credit management		2.2
Identify situations that require reviews of credit reports (*new*)	√	2.1
Explain the components of credit scores (*new*)	√	1.8
Explain what credit scores are used for (*new*)		1.8
Explain how to improve credit scores (*new*)	√	2.1
Debt Management (9/18)		
Define terms used in debt management	√	3.1
Identify the necessary steps to take if one cannot repay a debt on time	√	1.9
Explain strategies to pay down debt	√	1.7

Explain the effects of debt on credit reports and credit scores	√	1.7
Explain the role of lenders in debt collection		2.7
Explain loan consolidation	√	2.4
Explain debt management plans		2.8
Explain the role of debt collection agencies	√	2.7
Explain the role of financial counseling agencies		2.6
Explain the role of debt settlement companies	√	3.0
Explain the role of financial education programs used as part of debt management	√	2.8
Explain the effects of collections and judgments against an individual		1.9
Explain consumers' rights in debt disputes		2.4
Explain the effect of debt on personal lives and those of family members		2.1
Identify the different types of bankruptcy, and the advantages, disadvantages and consequences of each	√	2.5
Explain the role of government, financial institutions and other organizations in bankruptcy		3.1
Identify resources (published, online, and human) to refer to for help in debt management		2.5
Explain the differences between for-profit and not-for-profit debt management businesses (*new*)		2.8
Employee Benefits/Income (9/19)		
Define terms commonly used in relation to income	√	2.9
Compare and compute regular wages and overtime wages		2.8
Explain the difference between gross pay and net pay		1.8
Demonstrate the ability to verify calculations for a payroll check		2.6
Define direct deposit and list its advantages and disadvantages	√	2.4
Describe an employee's legal rights and responsibilities		2.7
Assess factors such as salary, fringe benefits, moving costs, and future potential, when weighing the value of a job offer	√	1.5
Define terms commonly used in relation to employee benefits	√	2.6
Describe why employee benefits can be considered as part of income	√	2.4
Explain the role of employee benefits and employer benefit plans in individual financial planning	√	2.0
Describe Social Security		2.1
Describe an individual's role in funding Social Security		2.6
Describe the process to request a summary from the Social Security Administration to verify contributions		3.2
Explain defined contribution plans	√	1.6
Explain 401(k)/403(b)	√	1.5
Explain the purpose and procedures to complete the W-4 Form (claiming exemptions)		2.1
Identify resources (published, online, and human) to refer to for help in income		2.6
Identify resources (published, online, and human) to refer to for help in employee benefits		2.6
Explain the difference between salary and total compensation (income plus benefits) (*new*)	√	2.0
Financial Planning (10/17)		
Define terms commonly used in financial planning		2.8
Explain the importance of long-term financial planning		1.9
Develop financial goals and construct a financial plan based on one's	√	1.9

lifestyle expectations and career choices		
Describe how a family can work together to accomplish group goals and avoid financial conflicts	√	2.1
Explain the difference between personal and employee retirement plans	√	2.2
Explain steps to plan for an unanticipated decline or end to income	√	2.2
Explain the effects economic conditions can have on saving, spending, and investment decisions		2.0
Define the types of financial advisors	√	2.8
Define the role of a financial advisor	√	2.6
Describe the types of fee structures offered by financial advisors		3.0
Construct a personal balance sheet	√	1.7
Identify technology resources available for financial decision-making	√	2.8
Demonstrate the effective use of online financial planning services	√	3.0
Describe the risks of using technology for financial planning	√	3.1
Identify resources (published, online, and human) to refer to for help in financial planning		2.7
Describe how to choose a financial planner (*new*)		2.2
Describe Medicare, Medicaid, unemployment insurance, and other safety net programs (*new*)		2.4
Financial Services (7/14)		
Define terms commonly used in financial services	√	2.8
Compare and contrast banks, credit unions, savings and loan institutions, brokerage firms, insurance firms, asset management firms, and other types of financial institutions	√	2.2
Identify the products and services offered by different types of financial institutions	√	2.6
Explain how financial institutions make money by providing services to consumers and businesses		2.5
Demonstrate basic skills for use of a checking account, including withdrawals and deposits, debits, and reconciling statements		1.9
Demonstrate basic skills for use of a savings account, including withdrawals and deposits, and reconciling monthly statements		1.9
Explain debit and ATM cards	√	2.1
Identify risks and protections associated with debit and ATM cards	√	2.1
Demonstrate the ability to check for errors on bank statements		2.3
Identify the types of fees charged for financial services	√	2.1
Describe deposit insurance		2.6
Explain simple and compound interest	√	1.5
Identify resources (published, online, and human) to refer to for help in financial services		2.7
Explain the consequences of utilizing fringe banking services (*new*)		2.8
Insurance (17/23)		
Define terms commonly used in relation to insurance	√	2.7
Explain risk and how insurance can mitigate losses due to risk	√	1.8
Explain vehicle insurance	√	1.7
Explain property insurance	√	2.5
Explain health insurance	√	1.6
Explain disability insurance	√	2.1
Explain life insurance	√	2.4
Define criteria to select a policy that best fits a need	√	1.9
Explain the impact deductibles have on premiums and the consumer's	√	1.5

loss		
Describe the types of insurance an employer might provide as a benefit	√	2.2
Explain the value of health insurance as an employee benefit	√	1.7
Define and compare six areas of vehicle coverage		2.9
Define asset valuation and how it applies to insurance coverage	√	2.7
Describe the process to file an insurance claim		2.8
Explain factors affecting the cost of insurance		2.5
Explain how insurance needs change throughout life	√	2.2
Explain how insurance is used to leverage financial risk	√	3.0
Design a personal risk management plan that includes insurance coverage	√	2.4
Explain the role of the "Law of Large Numbers" in risk management	√	2.8
Explain subrogation		3.5
Identify resources (published, online, and human) to refer to for help in insurance		2.8
Explain extended warranties and other product/event specific insurance coverage (*new*)		2.6
Explain the role of government in the regulation of insurance (*new*)	√	3.2
Investing (11/19)		
Define terms commonly used in investing	√	2.5
Compare and contrast stocks, mutual funds, bonds, and other types of investment instruments	√	1.6
Compare rates of return for different investment options	√	1.9
List criteria to consider to choose when to invest in short- or long-term investments		2.2
Explain dollar cost-averaging		2.4
Identify investment-related risks	√	1.7
Describe the purpose of research on a company to determine the value as an investment	√	3.0
Analyze an investment portfolio		2.7
Explain appreciation (capital gains) and depreciation (capital loss)	√	1.7
Explain dividends		2.4
Compare and contrast traditional and Roth Individual Retirement Accounts (IRAs)	√	2.4
Explain the role of brokers		2.7
Demonstrate the proper techniques to manage investments, including online	√	2.6
Explain how global events can affect investments	√	2.6
Explain how trends can impact investment decisions		2.6
Identify resources (published, online, and human) to refer to for help in investing		2.7
Explain potential wealth accumulation from long-term investing (*new*)	√	2.5
Describe the long-term impact of compounding interest (*new*)	√	1.4
Explain why different investments have different tax consequences (*new*)		2.2
Saving (5/12)		
Define terms commonly used in saving		2.6
Compare and contrast saving instruments	√	1.9
Compare instruments for short- and long-term saving	√	1.8
Evaluate saving strategies to provide for short-term financial needs		1.7
Evaluate saving strategies to provide for long-term financial needs		1.8
Demonstrate techniques to manage savings, including online		2.2

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Explain why it is important to reduce spending and increase saving		2.0
Explain why it is important to save money for an emergency fund	√	1.5
Describe the effects of inflation on savings and personal income	√	1.8
Project a savings plan to accommodate family growth		2.1
Identify resources (published, online, and human) to refer to for help in saving		2.6
Explain the risk of inflation on savings products (*new*)	√	1.8
Student Financial Aid (6/19)		
Define terms commonly used in relation to student financial aid	√	2.6
Compare and contrast various forms of financial aid including loans, grants, work-study programs, and veterans' programs		2.1
Compare and contrast various types of student education loans including federal loans, parent loans, and private loans	√	1.6
Compare and contrast various types of need-based financial aid, including loans, grants, work-study programs, and veterans' programs		2.0
Calculate education costs at various colleges and plan how to finance them (scholarships, grant, work, etc.)		2.3
Complete a FAFSA form	√	2.4
Explain eligibility requirement for various student loan programs		2.6
Describe a promissory note		2.5
Explain sources of student financial aid		1.8
Explain student loan consolidation	√	1.9
Describe and apply correct procedures to apply online for scholarships		2.7
Describe and apply correct procedures to apply online for student financial aid		2.6
Describe the consequences of defaulting on student loans	√	1.6
Define deferment and forbearance	√	2.1
Describe loan entrance counseling		3.0
Explain the process for loan repayment		2.0
Compare and contrast the various repayment programs for federal student education loans		2.3
Describe how to match the student loan amount to an individual's anticipated salary		1.9
Identify resources (published, online, and human) to refer to for help in student financial aid		2.7
Taxes (6/16)		
Define common terms related to consumer taxes	√	2.4
Identify different types of taxes that consumers commonly pay	√	2.0
Describe the role of government in levying taxes on individuals and businesses	√	2.6
Define and give examples of progressive, regressive, and proportional taxes	√	1.8
Explain the concept of income tax brackets		1.7
Differentiate among income derived from wages, rents, interest, dividends and capital gains		2.5
Define and explain taxable and non-taxable compensation		2.4
Define deductions and credits and explain their different effects on tax liabilities	√	2.1
Identify expenses that are tax-deductible		2.4
Describe the impact of returns from saving and investing on personal tax liability		2.4

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Identify tax documents (such as a W-2) needed to prepare a tax return		1.8
Given basic information, prepare a 1040EZ		2.1
Identify the types of professional help available at tax time. List advantages, disadvantages and circumstances under which to use each	√	2.4
Describe refund anticipation loans and identify their costs		2.3
Identify resources (published, online, and human) to refer to for help in student financial aid		2.8
Describe the consequences of not paying taxes (*new*)		2.1
Personal Finance Concepts (7/13)		
Borrowing (Acquiring money with an obligation to pay)	√	1.4
Budgeting (Creating a plan for future income and expenditures)	√	1.5
Consumer Protection (Knowledge of policies and rights to protect consumers)	√	2.7
Credit Management (Managing existing credit accounts)		1.6
Debt Management (Managing or reducing debt)		1.8
Employee Benefits/Income (Indirect and direct compensation)		2.4
Financial Planning (Assessing assets and resources, and implementing plans to achieve monetary goals)		2.1
Financial Services (Financial institutions and the services they provide)	√	2.6
Insurance (Providing financial protection against harm or loss)	√	1.8
Investing (Putting money in instruments for potential profitable returns)		2.2
Saving (Accumulation of money for future use)	√	1.4
Student Financial Aid (Funding to help pay for educational expenses)	√	1.7
Taxes (Levies charged by government agencies)		1.7

Note. The top five competencies in consensus by mean ranking in each personal finance concept are highlighted in gray.

A review of the results from all three rounds of the survey for undergraduate college students identified some significant details that are important to highlight and prompt further discussion. These are reported by personal finance concept.

Borrowing. Most of the competencies with the highest mean ranking ("Most Important") were those that have to do with students acquiring credit.

Budgeting. There was no consensus by panel members on the competency regarding students' ability to identify resources (published, online, and human) to refer to for help in budgeting. Lack of consensus for this competency was unexpected based on the previous research cited in the literature review which called for students to acquire budgeting skills.

Consumer Protection. All of the Consumer Protection competencies which gained consensus were ranked as "Very Important."

Credit Management. There was no consensus on students' ability to manage one or more credit cards or to understand the consequences of living beyond one's means. There was also no consensus on the competency regarding students' ability to identify resources (published, online, and human) to refer to for help in credit management.

Debt Management. Competencies in consensus that were identified as "Most Important" were those that enabled students to recognize and handle debt issues and to understand the effects of debt on credit. There was no consensus on competencies regarding students' understanding of agencies that could help them with debt issues through financial counseling or debt management plans.

Employee Benefits/Income. Two of the competencies in consensus ranked as "Most Important" related to students' abilities to explain programs that allow them to save money toward retirement (401(k)/403(b) and defined contribution plans).

Financial Planning. The competencies that gained consensus and were ranked as "Most Important" were those relating to students' abilities to construct their own personal balance sheets, set financial goals, and develop financial plans.

Financial Services. Panel members agreed that the "Most Important" competency was to explain simple and compound interest. There was no consensus about students' abilities to demonstrate basic

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skills for use of a checking account or a savings account, or for their ability to check for errors on bank statements.

Insurance. Competencies with consensus that received the ranking of "Most Important" included students' abilities to explain health insurance, vehicle insurance, and the value of health insurance as an employee benefit. Panel members also agreed that it was "Most Important'' for students to have specific knowledge about insurance in general, including deductibles, criteria to select an insurance policy, and how insurance can mitigate losses due to risk.

Investing. Panel members agreed that it was "Most Important" for students to distinguish between different types of investment instruments and to be able to compare rates of returns for the various instruments, as well as to identify the risks involved with investments, and explain appreciation and depreciation.

Saving. All competencies that gained consensus were ranked as "Most Important." These included explaining the importance of saving money in an emergency fund and comparing savings instruments.

Student Financial Aid. Panel members agreed that it was "Most Important" for students to compare various types of student education loans, as well as the consequences of defaulting on those loans, and to understand student loan consolidation. The fact that so few of the Student Financial Aid competencies achieved consensus may be due, in part, to parents being more responsible for covering their students' education costs and more involved with student financial aid than the students themselves. However, one panel member contended that current undergraduate college students are focused on repaying rather than obtaining student education loans.

Taxes. Panel members agreed that those competencies that were important to undergraduates included students' abilities to understand the various types of taxes assessed, deductions and credits, the role of government in assessing taxes, and identifying types of professional help available at tax time.

Personal Finance Concepts. Five personal finance concepts in consensus were ranked as "Most Important" for undergraduates: Borrowing, Budgeting, Saving, Student Financial Aid, and Insurance. Two of the concepts that did not gain consensus were related to undergraduates' abilities to manage credit and to manage debt.

Conclusions

The purpose of this study was to gain consensus among researchers, college educators, and financial aid officers using the Delphi method about the personal finance knowledge, skills, and actions/behaviors - core concepts and competencies - that are important for all undergraduate college students. Identification of those basic knowledge, skills, and behaviors that are essential may be important for students to help them manage their money in a manner that poses fewer opportunities for unmanageable debt and greater opportunities for financial security.

Findings of this study reflect the opinions, experience, and expertise of those who have regularly worked with students and/or have conducted research on the financial issues of college students. Based on previous research, some concepts and competencies were in line with those called for by researchers. However, there were some unanticipated results.

There are at least two potential reasons why panel members may not have been able to come to consensus on more of the competencies and concepts in the study. First, the size of the Delphi panel was large, and panel members were diverse in their experience and expertise. As such, it took longer for panel members to come to agreement on those competencies and concepts that reached consensus. A second reason may be due to the student group itself. Panel members were advised that they were ranking personal finance concepts and competencies for undergraduate college students with no additional specific information about age, class ranking, type of college attended, or other details. Because of the broad scope of this group, panel members may have been cautious in their identification of the most essential concepts and competencies for students.

Another possible explanation is respondent fatigue. It is possible that some panel members grew tired or bored and did not spend as much time ranking the concepts and competencies as they might have. Other reasons for so many competencies not gaining consensus include the possibility that panel members believed that undergraduate college students do not need these competencies while they are in college, or that they may have already have acquired those competencies.

In a study of this size, it is difficult to analyze each personal finance concept and competency and make assumptions about the reasoning behind why each gained (or did not gain) consensus. However,

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there is one competency that merits further discussion - "Identify resources (published, online, and human) to refer to for help in (personal finance concept)." This competency was placed at the end of each list of competencies under each personal finance concept for each of the three student groups. This competency gained consensus by panel members in only one (Borrowing) of the 13 personal finance concepts. It is unclear why this competency so frequently failed to gain consensus by panel members. The assumption could be made that panel members believe college students already know more about the personal finance concepts and seeking additional resources is not necessary. Another possibility could be that panel members may have interpreted the competency as the sharing of specific resources with students, many of which may become unavailable by the time students might use them rather than a more general knowledge that there are a multitude of useful resources.

Failure to reach consensus on a concept or competency does not mean that the concept or competency is not important for students to acquire. The panel members did not reach consensus on 116 of the personal finance competencies and six of the personal finance concepts. Of those, 20 competencies and three concepts were identified as "Most Important;" 82 competencies and three concepts were ranked as "Very Important;" and ten competencies were ranked as "Somewhat Important."

The fact that so many of these competencies were ranked lower than "Most Important" may be an indicator that there were still differences among the panel members about whether or not those competencies are essential for the broad group of undergraduate college students. There are several possible reasons for these variances. It is highly likely that members of the panel are not familiar with some of the competencies because they do not teach certain competencies as part of their course curriculum or do not work with students on those competencies. As such, panel members may have been more likely to rank those competencies as lower in importance.

Findings from this study could potentially have an impact on personal finance education programs currently in place, or on future programs still to be developed. The identification of personal finance core concepts and core competencies is the necessary step to design new (or redesign existing) personal finance curricula that most benefits undergraduate college students, during their tenure in higher education and afterwards. Educators should examine their curricula to determine if personal finance concepts and competencies identified in the study are similar to those in their curricula for undergraduate college students. Educators may want to consider addressing those personal finance concepts and competencies that are likely to be of more importance and interest to undergraduate college students, with an added emphasis on the decision-making process that goes along with making financial choices.

The results of this study should be an opportunity for policymakers and administrators at the high school level to review their curriculum standards for students in their states and school districts to determine if their standards are similar to the personal finance concepts and competencies identified for undergraduate college students. The inclusion of some or all of the personal finance concepts and/or competencies that gained consensus into high school personal finance curricula may better prepare students for college.

Limitations of the Study

Findings of this study are subject to several significant limitations. Semantics may have played a significant role during data collection. Panel members may have interpreted concepts and competencies differently than the researchers intended. Panel members also may have ranked competencies differently because they believed the competencies should have been listed under different personal finance concepts.

Although efforts were made to identify panel members who had experience and expertise in financial literacy and/or personal finance education, it is likely that panel members had differing levels of knowledge about concepts and competencies. There is the likelihood that panel members may not have been able to separate their personal experience from their professional experience when ranking personal finance concepts and competencies. On the other hand, the researchers' own biases likely played a role in development of the list of personal finance concepts and competencies. Familiarity bias may have caused the researchers to identify concepts and competencies that they were more familiar with, and to be less inclusive of concepts and, particularly, competencies about which they had less knowledge.

Despite the best efforts of the researchers, there may have been other personal finance concepts and/or competencies that were omitted entirely. Also, the timing of the study may have prevented additional individuals from participating as panel members, as the surveys were conducted during the

summer months. The length of the questionnaires in all three rounds may have resulted in some panel members dropping out early in the study, reducing the size of the panel and losing valuable insight from those panel members. A final limitation of the study may have been the design of the questionnaires, particularly in Rounds Two and Three. Competencies and concepts that gained consensus were listed prior to those that still needed to be ranked. This may have confused some panel members, causing them to spend extra time reviewing those competencies and concepts that were in consensus.

Future Research

The results of this study are a stepping stone for continued research to identify those personal finance concepts and competencies that are essential for undergraduate college student groups. First, an examination of selected current undergraduate personal finance curricula using content analysis is an appropriate method to determine if the concepts and competencies identified from the study are similar to those currently being taught. A second process would entail the identification of personal finance education programs and materials that are appropriate for "best practices" - those programs that focus on the essential personal finance concepts and competencies for undergraduate college students and are successful in helping students become more financially literate.

An extension of this research would be to understand why certain personal finance concepts and competencies did not gain consensus, specifically Credit Management and Debt Management for undergraduate college students. These seem to be important concepts and it is unclear why panel members did not reach consensus on them.

Establishing new Delphi panels of other experts in the financial literacy of college students to participate in the same surveys regarding undergraduate college students should be considered to confirm the reliability of this study. Similar versions of the study to identify the essential personal finance concepts and competencies of other college student groups also should be considered, including minorities, immigrants, and those who are entering the military as college students or upon leaving college.

Finally, and most important, research efforts should address college students' perceived needs of personal finance concepts and competencies. It would be worthy to also examine the reflections of undergraduate college students who have recently graduated, as well as those who left college without graduating, to gain a perspective of self-identified personal finance requirements and experiences during their time in school. Utilizing the adult learning theory of andragogy, students who have left college may provide better benchmarks by identifying those specific financial knowledge, skills, and behaviors that enabled them or that they needed to successfully manage their finances while still in college.

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Appendix A

Financial Literacy and Education Commission Proposed Core Competencies

Core Concept	Knowledge	Action/Behavior
Earning	Gross versus net pay Benefits and taxes Education is important	Understand your paycheck. Learn about potential benefits and taxes. Invest in your future.
Spending	The difference between needs and wants	Develop a spending plan. Track spending habits. Live within your means. Understand the social and environmental impacts of your spending decisions.
Saving	Saved money grows Know about transactional accounts Know about financial assets (savings accounts, bonds, stocks, mutual funds) How to meet long-term goals and grow your wealth	Start saving early. Pay yourself first. Understand and establish a relationship with the financial system. Comparison shop. Balance risk and return. Save for retirement, child's education, and other needs. Plan for long-term goals. Track savings and monitor what you own.
Borrowing	If you borrow now, you pay back more later. The cost of borrowing is based on how risky the lender thinks you are (credit score).	Avoid high cost borrowing, plan, understand, and shop around. Understand how information in your credit score affects borrowing. Plan and meet your payment obligations. Track borrowing habits. Analyze renting versus owning a home.
Protecting	Act now to protect yourself from potential catastrophe later Identity theft/fraud/scams	Choose appropriate insurance. Build up an emergency fund. Shop around. Protect your identity. Avoid fraud and scams. Review your credit report.

Note. From U.S. Department of the Treasury, "Financial Education Core Competencies; Comment Request," *Federal Register, 75*(165), p. 52596 (August 26, 2010).

Appendix B

Descriptive Statistics for Final Undergraduate College Students Group Panel Members

Variable	n	%
Gender		
• Male	4	23.5%
• Female	13	76.5%
Education – Hold Advanced Degree		
• Master's	2	11.8%
• Doctorate	13	76.5%
• Professional	1	5.9%
• No	1	5.9%
Current Position		
• Faculty member at college or university	12	70.6%
• Staff member at government agency	1	5.9%
• Administrator, Program Director, Coordinator, or Department Head at for-profit organization	2	11.8%
• Administrator, Program Director, Coordinator, or Department Head at non-profit agency	1	5.9%
• Other	1	5.9%
Years of Experience in Profession		
• 1 – 5 Years	2	11.8%
• 6 – 7 Years	2	11.8%
• 8 - 10 Years	1	5.9%
• 11 – 15 Years	2	11.8%
• 16 – 20 Years	2	11.8%
• 21 Years +	8	47.0%
Currently Teach Personal Finance Education		
• Yes	6	35.3%
• No	11	64.7%
Have Taught Personal Finance Education in Past		
• Yes	9	52.9%
• No	8	47.1%
Currently Advise/Counsel about Personal Finance Education		
• Yes	2	11.8%
• No	15	88.2%
Have Advised/Counseled about Personal Finance Education in Past		
• Yes	7	41.2%
• No	10	58.8%
Conducted Research on Financial Knowledge		
• Yes	14	82.4%
• No	3	17.6%
Conducted Research about Financial Behaviors		
• Yes	12	70.6%
• No	5	29.4%
Conducted Research about Effectiveness of Personal Finance Education		
• Yes		
• No	10	58.8%
	7	41.2%
Currently Teach about Financial Aid		
• Yes	2	11.8%
• No	15	88.2%

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Have Taught about Financial Aid in Past		
• Yes	2	11.8%
• No	15	88.2%
Currently Advise/Counsel about Financial Aid		
• Yes	0	00.0%
• No	17	100.0%
Have Advised/Counseled about Financial Aid in Past		
• Yes	0	00.0%
• No	17	100.0%
Conducted Research about Student Financial Aid		
• Yes – part/all related to students' personal finance	12	70.6%
• Yes – none related to students' personal finance	4	23.5%
• No	1	5.9%
Currently Advise/Counsel First-Generation College Students		
• Yes	1	5.9%
• No	16	94.1%
Have Advised/Counseled First-Generation College Students in Past		
• Yes	3	17.6%
• No	14	82.4%
Currently Advise/Counsel First-Generation College Students about Personal Finance		
• Yes	0	00.0%
• No	17	100.0%
Have Advised/Counseled First-Generation College Students in Past about Personal Finance		
• Yes	2	11.8%
• No	15	88.2%

Note. (n = 17)