Abstract: Generations of young people, including the current generation, have endured parental admonitions about how difficult their parents had it when they were young, and how young people just don’t appreciate the value of a dollar or the meaning of a work ethic. But has there actually been a fundamental shift in how people handle their personal finances? Trends suggest that the current crop of parents, at least, have cause to worry both about their own and their children’s financial futures. Parents, teachers, school districts, boards and departments of education, and our entire nation must come to terms with the fact that, just as with literacy generally, students cannot afford to wait until middle or high school to begin learning about financial literacy. Until a set of financial literacy standards are adopted nationally, stakeholders of our educational system need to glean teachable moments of financial literacy from existing curricula in all subject areas. At the youngest grade levels, doing so will entail concentrating on the baseline concepts that form the foundation for the personal financial decisions children and, ultimately, adults must be prepared to make about building and managing wealth.
Learning Your Monetary ABCs: 
The Link between Emergent Literacy and Early Childhood Financial Literacy

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Generations of young people, including the current generation, have endured parental admonitions about how difficult their parents had it when they were young, and how young people just don’t appreciate the value of a dollar or the meaning of a work ethic. But has there actually been a fundamental shift in how people handle their personal finances? Trends suggest that the current crop of parents, at least, have cause to worry both about their own and their children’s financial futures:

- Research shows that credit card debt in America has almost tripled since 1989 and increased 31 percent since 2000. Americans now owe some $800 billion in credit card debt. In addition, owing largely to job instability and medical costs, personal bankruptcies rose from 616,000 in 1989 to approaching 2 million in 2004.¹
- The number of Americans filing for bankruptcy jumped 30 percent in 2005 to the highest on record as debtors rushed to file petitions before new restrictions took effect, according to the Administrative Office of the U.S. Courts. Personal bankruptcies filed in the federal courts totaled 2,078,415 in 2005, up from 1,597,462 petitions filed in 2004.²
- In a 2004 survey, the median reported value of all household retirement savings was only $51,000. 48% of Americans are concerned that they have not saved enough for retirement.³
- Teens were projected to spend $159 billion in 2005. Although teens’ overall spending registered a 6% decline from 2004 to 2005, most 12- to 19-year-olds reported spending just as much of their own money in 2005 as they did the previous year. Nearly half (47%) believe they’ll spend more in 2006 than they did in 2005.⁴

From decreased savings to increased credit card debt, from tapping into retirement savings for current consumption to increasing numbers of personal bankruptcy filings, our nation is on a path of personal indebtedness that has the potential to affect not only our individual quality of life, but the fiscal health and

security of our nation. What has changed over the last generation? In our ownership society, people face increased pressures at younger ages to address asset allocation and retirement security issues pertaining to Social Security, 401Ks, and the precipitous decline in employer-provided defined benefit plans. Additionally, easily accessible consumer credit, the movement towards a cashless society, and increasingly sophisticated marketing techniques have combined to form a “perfect storm” of personal financial illiteracy, helping to drive up spending and debt while suppressing saving. What can be done to reverse the trend?

Networks Financial Institute (NFI), a Lilly Endowment funded initiative of Indiana State University, views financial literacy as an important component of literacy itself. The National Foundation for Educational Research defines financial literacy as, “The ability to make informed judgments and to take effective decisions regarding the use and management of money.”5 The framework of literacy is supported by a discrete skill set in which individuals must develop proficiency so that they function comfortably and well in our society. Grover Whitehurst and Christopher Lonigan allude to “changing conceptualizations of what constitutes literacy . . . recent years have seen the concept of literacy extended to any situation in which an individual negotiates the environment through the use of a symbolic system.”6 By this definition of literacy, the relationship of individuals to their money is most certainly part of the rubric of literacy.

As the burgeoning body of publication on early literacy indicates, it is widely recognized that literacy, as the foundation for virtually all other subject areas, needs to be taught from the very earliest ages; this focus on early childhood literacy is known as emergent literacy.

Currently, emergent literacy has superseded the concept of reading readiness in early childhood education. Emergent literacy is encouraged by the developmental theory of Lev S. Vygotsky and indicates that children do not learn to read immediately after they are believed to be ready. Instead, the process of learning to read develops and drags out loosely over an extended duration as children accumulate knowledge of and experience with the spoken and written language.7

Ritchie et al also contend that there is no clear distinction between reading and non-reading in the emergent literacy phase but that the transition from being a

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non-reader to a reader happens on a developmental continuum.8 Following this premise, NFI contends that the core concepts that undergird financial literacy, including goal setting, intertemporal choice,9 philanthropic giving, earning, saving and spending, also need to be emphasized and supported from the very earliest grades, if students are to transition into financially literate consumers. Consumer education and training for children in the U.S. can be traced back to the 1930s but has been most often applied to secondary educational settings.10 Addressing financial literacy in the classroom and as early as kindergarten through second grade lays the groundwork for more advanced studies of financial literacy that typically appear in the later years of K12 education, through the subjects of economics, business education, family and consumer sciences, and mathematics. Research in emergent literacy shows that “[c]hildren need to learn mainstay concepts . . . from which more complex and elaborated understandings and motivations arise.”11 For example, young readers begin with mainstay concepts and skills such as grasp of the alphabetic principle and then move at a later date to “phonological awareness [and] alphabet letter knowledge.” They begin with a nascent understanding of text structures and genres, and “a strong desire to know” and then later move in to “the functions of written language, a sense of meaning making from texts, [and] vocabulary.”12

NFI’s research demonstrates that financial literacy is rarely being taught to K through 5 students in the Indiana schools and is infrequently taught to grades 6 through 12 students.13 NFI’s survey of Indiana teachers reveals their discomfort with their own personal financial literacy knowledge, and nationally, among parents with children 5 years of age or older, only 26% feel well prepared to teach their children about basic personal finances.14 Eighty percent of parents believe that schools provide classes on money management and budgeting to

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9 Intertemporal choice is the study of the relative value people assign to two or more payoffs at different points in time. Intertemporal choice was introduced by John Rae in 1834 in the “Sociological Theory of Capital.” Eugen von Böhm-Bawerk (1889) and Irving Fisher (1930) elaborated on the model. http://en.wikipedia.org/wiki/Intertemporal_choice. Intertemporal choice is different from the concept of delayed gratification. Deferred or delayed gratification is the ability of people to wait for things they want but does not take into consideration comparative value of now vs. later, or the notion of payoff as a benefit of waiting. http://en.wikipedia.org/wiki/Delayed_gratification.
12 Roskos et al 55.
13 NFI’s survey results document, entitled “Financial Literacy Indiana Activities Inventory,” is available on NFI’s website at http://www.networksfinancialinstitute.org/pdfs/profiles/NFI-01_Inventory.pdf. K-5 teachers are the least likely across all grade levels, types of schools (public or private) and regions of Indiana to teach financial literacy. They are also the least likely to deem financial literacy education important.
their students.\textsuperscript{15} These findings suggest that financial literacy education is generally not provided in the home or in schools and, in the limited settings in which it is mandated by state academic standards, it is mandated only on the high school level. Only seven states, up from four in 2002, made personal finance a requirement for high school graduation in 2004, and only nine states require testing in personal finance.\textsuperscript{16}

Unfortunately, then, and in direct contrast to the lessons provided by emergent literacy research of the value of early intervention, a financial literacy “buck” is being passed from parents to teachers and back to parents again. Parents assume that schools are teaching financial literacy, but schools, by and large, are not teaching it. Teachers, like parents, don’t feel comfortable teaching it.\textsuperscript{17} For example, while Indiana teachers cite their own knowledge level as an impediment to teaching financial literacy; they additionally mention both lack of teaching materials and lack of professional development opportunities as impediments to classroom delivery of financial literacy education.\textsuperscript{18} Consequently, students are graduating from high school with poor financial literacy skills. Meanwhile, advertisers and marketers are well aware that even young children are ripe targets for “high pressure sales tactics,” with advertisers using Saturday morning cartoon time to “target consumers as young as three years old,” cultivating their spending habits so effectively that “[t]oday’s teens spend approximately $172 billion a year and are the most affluent generation in history.”\textsuperscript{19}

While economics education is mandated, it is not the case that students are already receiving the requisite amount of financial literacy education. In 49 out 50 states, economics education is mandatory. However, insofar as economics is a social science concerned with the production, distribution and consumption of goods and services, including financial services, it is not the same thing as financial literacy. Most students take economics, yet most students fail financial literacy tests. Based on the Jump$tart Coalition for Personal Financial Literacy national survey of high school seniors, America’s teenagers as a group in 2006 score a failing grade in basic financial literacy knowledge.\textsuperscript{20} In 2005, NFI conducted a survey (parallel to that of the Jump$tart Coalition national survey) to generate an in-state baseline of information about Indiana high schools seniors and their level of financial management skills and education. In 2006, 62% of high school seniors, nationally,


\textsuperscript{17} John Clow, director, Leatherstocking Center for Economic Education, states, “Unfortunately, many teachers feel intimidated by this topic, and this prevents them from teaching personal finance. Teachers need to realize that they don’t have to know everything and that it’s okay to learn along with the kids.” See “Now More Than Ever: The Need for Financial Literacy,” \textit{Keying In: The Newsletter of the National Business Education Association} 13 (2003): 1-6. 3.

\textsuperscript{18} For more information, see “Financial Literacy Indiana Activities Inventory” on NFI’s website at \url{http://www.networksfinancialinstitute.org/NFI-Reports-more.asp#Policy2}.

\textsuperscript{19} “Now More Than Ever” 2.

failed the exam while in Indiana in 2005, 62% of high school seniors failed the financial literacy exam,\textsuperscript{21} despite the fact that economics is a required course for Indiana high school seniors. Understanding the science of market dynamics and the flow of capital clearly does not equate to mastering financial literacy’s core concepts of goal setting, intertemporal choice, earning, spending, saving and giving. Financial literacy directly affects individual quality of life and is a personal characteristic about how an individual relates to markets, while economics focuses on the functioning of markets and market activity.

The result of the collective failure to educate K12 students about financial literacy is shown in a January 2006 study by the American Institutes for Research (AIR) for the Pew Charitable Trusts. The connection between literacy, numeracy and financial literacy skills is sharply drawn in this study entitled “The Literacy of America's College Students.” It emphasizes,

Every adult needs a range of literacy skills to achieve his or her personal goals, pursue a successful career, and play an active role as a citizen. High levels of literacy also enable individuals to keep pace with changing educational expectations and technologies and support the aspirations of their families.\textsuperscript{22}

The AIR study measures prose, document and quantitative literacy skills of nearly 2,000 students in their final year at selected 2- and 4-year public and private colleges and universities across the US. The study defines quantitative literacy in terms of the ability to perform computations such as balancing checkbooks, calculating tips and completing order forms. While these students’ skills in all measured areas of literacy outperform the general adult population, quantitative literacy is the area of greatest difficulty for them. Thirty percent of 2-year institution students and twenty percent of 4-year institution students score at only the basic level of quantitative literacy, defined as having the ability to compare ticket prices or calculate the cost of a sandwich and salad from a menu.\textsuperscript{23} This study underscores the potential lifelong repercussions of failing to educate elementary, middle and high school students on issues of personal financial management.

Since many teachers are equally concerned about the importance of early numeracy and emergent literacy,\textsuperscript{24} financial literacy is a topic that allows teachers to address both skill sets at once. If educators and parents wait for later grades and then expect students to warm to financial literacy instruction,

\textsuperscript{24} Dickinson 26.
they are in essence introducing students to Shakespeare and algebra before they know how to read, add and subtract. Dr. Reid Lyon of the National Institutes of Health argues that educational interventions beginning after the third grade come too late and that “a 12-year-old child will need between four and five times more ‘intervention time’ than it would take to provide that same child with opportunities to acquire pre-literacy skills at an early age.”

Argues Stewart Cohen,

Many believe that true consumer awareness should await children’s transition to adulthood. [This] pattern of educational emphasis disregards several important issues in consumer education. Children need contemporary consumer education at each developmental stage. Such education must reflect children’s increasingly early participation in consumer affairs and the fact that their level of participation changes over time.

The assertion that there is a moment in time when students are at the proper stage of development to receive financial literacy instruction is reminiscent of outdated notions of reading-readiness, which maintained that teachers could look for a series of characteristics evident in children, a critical mass of which would indicate that a child was primed to learn to read. Educators now understand that “literacy development begins long before children start formal instruction” and that “children are doing cognitive work in literacy development from birth through 6 and that quality instruction makes a vital contribution in these years to children’s success.” Applying these insights to financial literacy would indicate that earlier interventions lay an important foundation for children’s ongoing receptivity to learning personal financial skills and challenges the notion that there is a correct moment much later in the formal education process when it is appropriate to finally introduce financial literacy concepts.

The argument to delay financial literacy education until middle or high school is oftentimes grounded in the fact that family and consumer science is not introduced prior to middle school, and economics and business education are usually taught at the high school level. However, mathematics and science are taught throughout K12, and mathematics particularly provides an ideal opportunity for exploring financial concepts. The National Council of Teachers of Mathematics (NCTM) standards document, Principles and Standards for School

26 Cohen 244.
28 Neuman and Dickinson 3.
Mathematics, sets out five goals for mathematical early childhood education, and money concepts can be used to teach all of these goals, including:

- valuing mathematics – money is a real-world concept that matters to students’ families;
- developing mathematical confidence – when students learn about handling money or buying items, they become more self-assured;
- problem solving – learning about the value of money and counting skills helps to build problem-solving skills;
- communicating mathematically – children can learn about monetary signs and symbols;
- reasoning mathematically – children learn how to ‘buy’ items and discuss cost values.29

Certainly, specific concepts that could be viewed as practical applications of financial literacy (e.g., buying or leasing a home or car, understanding a workplace retirement plan, understanding the fees behind different mutual fund products) are not relevant to elementary aged children. By extension, children entering first grade are not expected to read or understand the plays of William Shakespeare. Qualitative differences exist between how younger learners develop early understanding and how somewhat older students learn more complex content.30 Just as emergent literacy teachers begin with pre-literate skills such as sounding out phonemes or identifying individual letters, so teachers of early childhood financial literacy begin with baseline skills such as recognizing the physical properties of individual coins or sharing money-themed children’s books during story hours. As with emergent literacy instruction, early financial literacy learning and policy must achieve the following:

- Developmental appropriateness of benchmarks so that they are not merely “dumbed-down” versions of content designed for older students;
- Development of “underlying cognitive skills” within benchmarks;
- Learning that takes account of the “whole child” and integrates financial literacy and basic numeracy into many content areas, including math, science, and reading;
- Learning that is adult-guided, since younger learners lack the attention span, social skills, and abstract reasoning that older students possess.31

Megan Loef Franke describes how cognitive understanding of mathematics, like literacy, develops as young individuals make connections between isolated pieces of information and begin to weave them into “increasingly structured and cohesive networks.” Using money as a concept both for illustrating mathematical ideas and for thinking about mathematical ideas in multiple contexts is a practical way to help students build those connections.

Educator Karen Saul argues,

[T]eaching young children about money is a meaningful experience that relates to real life and can be integrated with many other constructivist learning activities. . . Children who learn about money develop the ability to investigate, predict, reason, and use a variety of methods to solve problems. Thus they begin to achieve mathematical power.33

Just as there are core concepts behind literacy that must be taught at the earliest possible ages (understanding the shapes of letters, or learning contextual clues in order to deduce the meanings of words), children must also have a foundation of core financial literacy concepts built before they begin to tackle more sophisticated activities. Pre-K and kindergarteners “can be introduced to ideas about money such as purchasing potential, coin names and value, and early counting skills. Primary-age children are increasingly capable of computations and making [financial] comparisons.”34 Storybooks can provide extensive information about money and consequently help to develop literacy and financial literacy simultaneously. Role-playing purchasing and earning, learning coins and playing counting games with them, learning monetary symbols and incorporating money symbols and coin images in art projects, and reading stories about money concepts all contribute to addressing aspects of goal setting, intertemporal choice, earning, saving, planning, and spending in a concrete fashion as soon as possible in a child’s development.35 The role of tangible play in early childhood education includes helping students to “remember on purpose” and focus their attention.36

As is the case with emergent literacy, children in poverty may be up to two years behind their more advantaged peers in counting skills and other aspects of foundational numeracy. Such early learning deficits may persist, effectively

33 Saul 17.
34 Saul 17.
35 Saul 18-19. This article lists some appropriate storybook titles dealing with money concepts for young children. For “books that provide high support for early numeracy development” see also Dickinson, Pat, “Promoting Early Literacy and Numeracy Through Quality Children’s Literature,” Canadian Children 27 (2002): 26-33. 28.
36 Roskos et al 58.
severing these at-risk students from full opportunity to later pursue mathematical, scientific or technical studies. Pre-K through second grade mathematical experiences are “highly predictive of later success in math, science and technology,” so students should be provided with basic support and allowed to catch up in the classroom setting. Financial literacy foci allow students to learn money concepts while addressing both their emergent literacy and numeracy.

Which is more pressing: mandated financial literacy standards, or the teaching of financial literacy to elementary aged children? Because financial literacy instruction is not explicitly required by most state or by federal academic standards, teachers therefore are not compelled to teach it. Where state academic standards do exist, they relegate financial literacy instruction to the later school years, despite the clear learning benefits demonstrated by early financial literacy intervention. NFI is developing Financial Literacy Competency Guidelines which will serve to define financial literacy for adults. NFI’s competencies, based on expert knowledge of financial literacy content and informed by K12 student learning abilities and academic progression, will provide a framework of skills that could serve as the basis for an eventual state-by-state, and even federal, set of mandated academic standards. NFI realizes that this systematic change will take considerable amounts of time, energy, and coalition building. It will, in fact, require a movement. For this movement to be successful, elementary level teachers must be connected now with high quality financial literacy materials. The answer, then, to the “chicken or egg” question about which should be accomplished first, mandatory standards or teaching financial literacy to elementary level students, is both. Catherine Pulley of the American Bankers Association argues that “Financial literacy is a basic survival skill that is as important as teaching kids to look both ways before crossing the street.” Likewise, Paula Fraher, as director of national initiatives for the Bank of America Foundation, has stated that “It’s important, therefore, to start teaching children money management skills as young as possible.”

A substantive body of research has been developed over the past thirty years demonstrating the importance of childhood exposure to literacy as the basis for subsequent development in all subjects. And according to the Workforce 2020 report, good early education generally is “the most effective way to build the basic skills necessary for the 21st century and to increase national productivity and prosperity.” Furthermore, particular studies have noted that before children are even ready to begin communicating, they are able to respond to parents modeling behaviors of literacy (reading a magazine, typing on a computer, having bedtime stories read to them), and thus draw value judgments from these

37 Dickinson 27.
38 “Now More Than Ever” 2.
39 “Preparing the Workers of Tomorrow” 5.
observations. Parents, teachers, school districts, boards and departments of education, and our entire nation must come to terms with the fact that, just as with literacy generally, students cannot afford to wait until middle or high school to begin learning about financial literacy. “Educators need to adopt and meaningfully apply the view of consumer education as a lifelong process, which should be initiated early to ensure responsible consumer behavior that will continue into adulthood.”\textsuperscript{40} Until a set of financial literacy standards are adopted nationally, stakeholders of our educational system need to glean teachable moments of financial literacy from existing curricula in all subject areas. At the youngest grade levels, doing so will entail concentrating on the baseline concepts that form the foundation for the personal financial decisions children and, ultimately, adults must be prepared to make about building and managing wealth, including:

- Goal setting – beginning to develop the ability to plan for future purchases and to take the steps necessary to achieve those goals.

- Intertemporal choice – presenting scenarios to children so that they understand that there are times when it is better to wait for something instead of acquiring it immediately.

- Earning – giving children the opportunity to earn rather than always receiving gifts helps them to see the value in the time and effort they would expend towards purchasing an object.

- Saving – developing habits in children where it becomes second nature to put a portion of their earnings away, and promoting activities where the act of saving becomes a form of instant gratification.

- Spending – learning how to be more savvy in the way children make choices as consumers, comparing costs and marketing claims.

- Giving – helping children to see that philanthropy can be a natural part of being financially literate, thereby setting the stage for a nation of givers in the future.

The stakes are enormous. Through financial literacy education, we need to directly address the trends we are experiencing of mounting debt, ever increasing rates of bankruptcy, and an uncertain healthcare, social security and retirement funding systems.

\textsuperscript{40} Cohen 244.
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