GEERT VAN CAMPENHOUT

Revaluing the Role of Parents as Financial Socialization Agents in Youth Financial Literacy Programs

This paper reviews the role of parents in young people's financial socialization process. Despite robust evidence illustrating the key role of parents in this process, parental involvement in financial education programs is not well-developed. Hence, this study advocates a revaluation of their role in such programs and shows how this fits in with the development of youth financial literacy programs that are more proactive and aimed at raising adaptable financial consumers. Guidelines are provided for the design of such proactive financial literacy programs, which take into account the role of parents in the financial socialization process. In addition, consequences for the role of teachers are discussed. In conclusion, a number of suggestions for future research are formulated that are necessary in order to develop more effective delivery methods and to increase the effectiveness of financial education programs.

In view of the overwhelming evidence that financial illiteracy is still widespread (see, among others, Bernheim 1998; Lusardi and Mitchell 2011; OECD 2013b), various financial literacy policies and initiatives have been developed to mitigate the problem (cf. OECD 2014b; or Fox, Bartholomae, and Lee 2005). Although the effectiveness of these programs and their optimal design have received considerable attention in the literature (see, e.g., Miller et al. 2014; OECD 2013a), results have been largely inconclusive. Based on a meta-analysis, Miller et al. (2014) concluded that recent initiatives have yielded mixed results: positive effects were observed in domains such as saving behavior or financial skills, but no significant progress was made in other domains such as credit default. Furthermore, financial literacy studies consistently report that financial literacy is even worse in young people (Lusardi and Mitchell 2009; Lusardi, Mitchell, and Curto 2010; Mandell 2008). This observation is particularly alarming for two main reasons.

First, financial illiteracy tends to persist (Lusardi, Mitchell, and Curto 2010). Hence, on average, adolescents with low levels of financial literacy

Geert Van Campenhout (geert.vancampenhout@kuleuven.be) is an Associate Professor of Finance at KU Leuven (Belgium). The author thanks the referees for their insightful comments, which substantially improved this paper.

The Journal of Consumer Affairs, Spring 2015: 186–222
DOI: 10.1111/joca.12064

stay illiterate through adulthood. On the other hand, financial knowledge and financial skills obtained at a young age act as a catalyst for sensible financial behavior and wealth accumulation later in life (Beverly and Burkhalter 2005; Martin and Oliva 2001). The positive economic effects of financial literacy are considerable (see Lusardi and Mitchell 2013 for an overview): financial literacy results in higher levels of wealth accumulation (Van Rooij, Lusardi, and Alessie 2012), greater preparedness for retirement (Lusardi and Mitchell 2009, 2011; Van Rooij, Lusardi, and Alessie 2012), and better debt management (i.e., lower levels of debt and better loan conditions) (Campbell 2006; Huston 2012; Lusardi and Tufano 2009).

Second, already at a young age individuals are confronted with important and complex financial choices, and wrong decisions might be costly (Lusardi, Mitchell, and Curto 2010). Agarwal et al. (2009) demonstrated, for instance, that young (and elderly) people are charged higher financial fees and interest rates than others. In addition, two-thirds of American college students will graduate with some level of debt, amounting to $26,600 on average, or a total of $1.2 trillion (Denhart 2013). In this context, growing concerns have been raised about repayment difficulties (Baum and O'Malley 2003; Lyons 2008). In summary, financially illiterate people will, on average, end up in unfavorable economic conditions, and the seeds of some of these financial ordeals are already sown early in life.

In accordance with these arguments, *The Principles and Good Practices for Financial Education and Awareness* (OECD 2005) recommends that financial education should start at school to ensure exposure at an early age. More and more countries follow this policy recommendation. For instance, from September 2014 onward financial education is part of the National Curriculum in the United Kingdom.

The goal of this article is to review the role of parents in the financial socialization process and relate it to the specific demands of financial education programs targeted at young people. Based on this analysis, a number of recommendations are formulated for the design of youth financial literacy programs in schools, as well as suggestions for future research. It is argued that youth financial literacy programs should be proactive. Program designs that have a strong attitudinal component, aimed at making young people sufficiently adaptable so they can deal with any future financial decisions, while paying sufficient attention to parental involvement are therefore recommended. In view of the central role of parents in the financial socialization process (Shim et al. 2009a), the design and effectiveness of youth financial literacy programs could be significantly improved if more efforts were made to increase parental involvement.

PROACTIVE QUALITIES OF YOUTH FINANCIAL LITERACY PROGRAMS

This section focuses on those features that are relevant to framing the role of parents in the financial socialization process and understanding the importance of parental involvement in youth financial literacy programs. The goal is thus not to provide a general overview of youth financial literacy programs and their effectiveness (see, among others, Gale and Levine 2010; Hathaway and Khatiwada 2008; or McCormick 2009 for reviews). Note that although the role of parents in the financial socialization process and parental involvement is essential in proactive youth financial literacy, we do not discuss these elements in this section to avoid repetition.

In view of this paper's topic, it is noteworthy that in spite of the wide array of existing programs that aim to improve financial literacy and/or capability in adults, these programs are not necessarily suitable to promote youth financial literacy (McCormick 2009). The latter differ in terms of philosophy, goals, and implementation. In terms of the underlying philosophy and goal(s), adult programs are often designed to provide immediate assistance with specific financial difficulties (such as indebtedness), and/or focus on specific disadvantaged groups (Collins and O'Rourke 2010; McCormick 2009). In this respect, these could be labeled "reactive" programs: they are designed to provide direct solutions to participants' existing problems. Youth financial education initiatives, on the other hand, need to be more normative and preparatory (McCormick 2009; Shim et al. 2009a). Hence, it is argued that these programs ideally tackle financial issues more in advance, anticipating future financial decisions, in accordance with the concept of anticipatory socialization (Hess and Torney 1967). These programs are therefore referred to as "proactive." Note that besides the existing range of reactive adult program designs, a number of adult programs exist that are proactive as well. Examples of such initiatives are programs targeted at first-time homebuyers (Braunstein and Welch 2002), programs intended to stimulate financial market participation (such as investment clubs), or programs aimed at higher levels of financial inclusion (OECD 2013b). Nevertheless, while a proactive approach is only one of the possibilities available in developing adult financial literacy programs, in the design of youth financial programs it is a crucial prerequisite.

General Program Design Implications

First, it is advisable that school financial literacy programs start early to commence people's education in financial matters at a young age

(NASBE 2006; OECD 2005). An early start creates an environment in which financial education can be rolled out gradually throughout the curriculum (OECD 2014a), and topics can be dealt with through a step-by-step approach. Such an approach gradually familiarizes students with financial concepts, attitudes, and behavior. Although a comprehensive development theory of financial socialization is lacking, the process is likely to mirror the stages identified in consumer socialization literature, where each phase would require a higher level of sophistication than the one before (John 1999). Two other advantages of an early start are worth noting (McCormick 2009): not only will teachers have to spend less time correcting misconceptions developed before the start of pupils' financial education, it also ensures that early school leavers have obtained at least some level of financial literacy training.

With respect to the target group, the differences between adult and youth financial education are somewhat more subtle. School-based financial education requires that programs can be rolled out on a mass scale. A one-size-fits-all approach is nevertheless too undifferentiated given that tailored programs and programs for specific target groups that systematically display low levels of financial literacy are more effective than generic approaches (Chang and Lyons 2007; Lusardi and Mitchell 2013; Lusardi, Mitchell, and Curto 2010). Applying this to youth financial literacy, the difficulty lies in providing large-scale initiatives to address widespread levels of low youth financial literacy while ensuring that implementation is sufficiently tailored to deal with social, economic, and psychological differences such as variations in child development (Lucey 2007) and household environments.

Besides the generic program design implications of proactive financial literacy programs, it is also important to consider the mechanisms through which financial education programs are expected to improve future financial capability. For proactive programs, (1) the development of financial attitudes and (2) the role of parents as socialization agents are key aspects.

Increased Focus on Financial Attitudes

The development of adaptive financial attitudes is a crucial element in the financial socialization process and thus in youth financial education programs. For instance, Sohn et al. (2012) report that of all the variables that are significantly related to the financial literacy of high-school students in South Korea, money attitude variables are the most important. The important role of attitudes in this context is in line with a number of theoretical frameworks, such as social learning theory (Bandura 1977), in which the importance of implicit learning is highlighted, as well as the theory of planned behavior (Ajzen 1991) and family resource management (Deacon and Firebaugh 1981), which both hypothesize that variables such as values, attitudes, and subjective norms are important in the development of financial behavior and financial decision making. With respect to program design, Sohn et al. (2012) conclude that school-based financial education that does not explicitly incorporate attitudinal elements and opportunities to obtain direct experience at home or in real-life consumer finance contexts is insufficient (Sohn et al. 2012, 978). This paper's call for more parental involvement in financial literacy programs is thus strengthened by the fact that in the formation of a child's attitudes parents play a significant role.

The significance of financial attitudes also follows from the observation that young people are still open to such behavioral choices because they are still actively developing their identity. This does not imply that there is no need for adolescents to attain a minimum level of financial knowledge. Nevertheless, increasing financial knowledge is only a means to an end: the ultimate goal of financial literacy initiatives should be to generate a positive effect on financial behavior (Willis 2009), and for this purpose the mechanisms by which financial literacy programs enhance future financial behavior should be scrutinized carefully.

In addition, the relative importance of financial attitudes (compared to financial knowledge) is linked to the fact that there is often a considerable time lag between youth financial education and financial behavior. One of the recommendations by Hathaway and Khatiwada (2008) is to deliver financial education on a just-in-time basis, but for youth financial education this is often not an option, as the purpose is to promote sensible financial behavior throughout life. This observation is in line with the theory of anticipatory socialization (Deacon and Firebaugh 1981), which states that certain skills and attitudes acquired today will only be useful for financial decision making in the more distant future.

Creating Adaptable Financial Consumers

The rapidly increasing complexity of financial products, together with the ever-changing financial landscape, highlights the need for educational programs that relate directly to this complex reality (Bernanke 2011; Grody et al. 2008). Our observation calls for youth financial education programs that shape adaptable financial consumers able to adjust to new financial conditions and novel products, even those that cannot be anticipated today.

Need for an Increased Focus on Proactive Features?

The extent to which current youth financial education programs have already incorporated features of proactive program design cannot straightforwardly be assessed (Center for Financial Security 2012; Hathaway and Khatiwada 2008; McCormick 2009; OECD 2013a). Evaluations of in-school financial education programs at the elementary and secondary level are scarce (Batty, Collins, and Odders-White 2015; Sherraden et al. 2011), and often have significant limitations (Center for Financial Security 2012; CFPB 2013; Fox, Bartholomae, and Lee 2005). Overall, program designs and evaluations fail to specify the mechanisms by which the financial education program is intended to improve financial knowledge and/or behavior. In addition, the expected outcomes with respect to knowledge, attitude, and behavior are often not well suited to measure actual improvements in future financial behavior. Finally, current evaluations of programs often focus on the potential immediate improvements in knowledge or behavior, without examining whether these changes are permanent or transitory. In other words, if a positive change disappears over time, the program's effectiveness is overstated (Fernandes, Lynch, and Netemeyer 2014).

This observation is particularly relevant for proactive programs because one of their main aims is to impact financial capability in the future. One of the best impact evaluation studies is the impact study of the *National Strategy for Financial Education (ENEF) financial education project* in Brazil which consists of the largest randomized evaluation in the financial education literature, covering 868 public high schools in six Brazilian states and approximately 20,000 students. Given that the *ENEF financial education project* incorporates many proactive features of financial education programs, we consider it to be closely related to this study. In addition, other examples of programs with parental involvement are provided to illustrate the topic under discussion, although the reader should keep in mind that the effectiveness of these programs is often difficult to assess due to missing or less rigorously developed evaluation frameworks. Despite these caveats, the following conclusions can be drawn regarding the extent to which current program designs incorporate a proactive approach.

Regarding parental involvement, the number of programs that are aimed at children and parents is very limited. This can be explained by the fact that financial education at school and at home is too often considered to be isolated activities. In addition, the financial socialization perspective, in which the pivotal role of parents emerges spontaneously, has often been neglected as a framework to design financial literacy programs. Most programs focus on teacher–student relationships and neglect the network of other financial socialization agents. Some exceptions however exist, and one of the most comprehensive programs is the *ENEF financial education project* mentioned above that is designed to run over three semesters and consists of 72 case studies that can be integrated into regular school subjects (Bruhn et al. 2013). The interactive material includes take-home exercises such as creating a household budget with their parents. In addition, the effect of a financial literacy workshop for parents was investigated by means of a workshop in which parents of the treatment group watched a short financial literacy video. The program documented positive effects of parental involvement over the duration of the project. For instance, discussions of financial matters between parents and children increased. Importantly, the program also documented positive spillover effects to parents. Parents' financial knowledge increased and their financial behaviors improved, as evidenced by increased saving rates and improvements in the likelihood of keeping household budgets. Student saving rates from families who attended the financial education workshop increased as well. Nevertheless, the low attendance at workshops for parents is a source of concern (Bruhn et al. 2013; Chodkiewicz et al. 2005).

Besides parental workshops, current programs that aim at stimulating parental involvement often incorporate one or more of the following features (see also, Grinstein-Weiss et al. 2011; Johnson and Sherraden 2007; CFPB 2013): (1) homework or home activities with parents; (2) increased financial communication at home; and (3) school banking programs or matched saving programs.[1] Regarding home activities, *Financial Fitness for Life* is illustrative for the way in which efforts of teachers, parents, and students can be aligned. It provides comprehensive material for K-12 students and explicitly includes a parent guide with material for family discussions on financial issues, as well as a list of financial activities which parents and children can do together. In the *Utah K-12 Passport*, only students who complete the in-class lessons *and* the additional at-home or community activity will obtain Passport recognition. A "Get involved" section is included to show parents how they can help with the at-home and community activities. This illustrates that the program designers found parental involvement particularly valuable, although it can be argued that the

1. More details are provided in (1) *ENEF financial education project* (Brazil), *Utah K-12 Financial and Economic Education Integration and Passport, Financial Fitness for Life*; (2) *Family Money Talks* in *NFEC Financial Literacy Curriculum, Financial Fitness for Life*; (3) *School Savings Program, Save for America, Credit Where Credit Is Due, Save for America, KIPP College Account, I Can Save*.

mandatory school program and the activities with parents are still viewed too much as isolated events, given that the Passport recognition is optional and is thus not integrated into the mandatory program. This is not supportive for the establishment of true partnerships between schools and parents as advocated in this study (see also Danes, Huddleston-Casas, and Boyce 1999; Hobbs et al. 1984). Program designers of the *Even Start* program in Australia for adults (introduced in order to complement the *MakingCents* program for young children) were confronted with similar concerns. In an evaluation of the program, Chodkiewicz et al. (2005, 8) concluded that the two programs are likely to become disconnected unless the parent program can be integrated into a statewide school education program.

Program design that explicitly incorporates financial communication at home like *Family Money Talks* or *Financial Fitness for Life* could be important in view of the recommendation to stimulate family discussion on financial topics at home (CFPB 2013). Based on the *Arizona Pathways to Life Success for University Students (APLUS)* longitudinal research, Shim and Serido (2011) concluded that these kind of discussions may be particularly important in furthering financial capability among young adults. Currently, however, it remains unclear whether it is necessary to incorporate an explicit financial communication component in the design of financial literacy programs because participation in programs without such a component could also result in increased communication on financial topics at home, for instance, as a result of increased financial knowledge.

Finally, school banking programs and matched saving programs that stimulate hands-on experience are considered. Although such experimental learning is found to be helpful in increasing financial capability (see, e.g., Drever et al. 2015; OECD 2014c; Sherraden et al. 2007), the role assigned to parents in those programs is often rather limited. For instance, families' involvement in *Illinois Bank at School*, or *Credit Where Credit Is Due* is focused on contributions to savings in a child's account. In the *School Savings Programs*, parents and children can save together for a specific goal. *Save for America* has a broader perspective given that parents are also encouraged to be part of the program implementation or to teach financial education (Johnson and Sherraden 2007).

Overall, there is still room to revalue the role of parents in existing initiatives because parental involvement is either not foreseen or the tasks assigned to parents in these programs do not fully reflect their pivotal role in the child's financial socialization process. In addition, more attention could be paid to initiating partnerships between schools and parents in order to maximize the contribution of both parties. Besides parental involvement, the following conclusions on the features of proactive programs can be drawn.

The consensus grows to start youth financial education at an early age (McCormick 2009), even as early as elementary school level because development of financial attitudes and practices begins very young (i.e., before children reach 7 years of age) (Friedline 2015; OECD 2014a; Whitebread and Bingham 2013) and takes place gradually. The fact that in its 2013 policy recommendations for advancing K-12 financial education the Consumer Financial Protection Bureau recommends to teach financial education early and consistently through K-12 years is an indication that current programs insufficiently take these elements into account (CFPB 2013). Studies that are supportive for financial education at an early age include Webley (2005) who documented that children show significant progress in terms of their economic understanding when they are between 6 and 12 years of age. This progress can be attributed to age-related cognitive development, together with socialization influences and direct experiences (Center for Financial Security 2012).

Nevertheless, despite the prevailing consensus to start youth financial education at an early age, what is lacking is a more formal developmental approach, linking financial socialization stages with the type of (cognitive) abilities that children display as they mature, although some recent papers stress the importance of this line of research (Drever et al. 2015; Friedline 2015). Friedline (2015) links the ability of children to save and to use saving accounts with their cognitive, social, and linguistic development. They conclude that children are developmentally capable of saving by age 5 or 6. Drever et al. (2015) reviews how financial well-being can be stimulated during three developmental stages (pre-elementary, elementary to middle school, and adolescence and beyond). They conclude that executive function development is essential during the first stage, while financial socialization is critical for stage two and financial skill building is vital for stage three.

Contrary to financial literacy research, there has been more attention to the development of a formal developmental approach in the broader consumer socialization theory, where it is embedded in Piaget's theory of cognitive development, and supplemented by insights from information processing theories of child development (Gudmunson and Danes 2011; John 1999; Ward 1974). John (1999) and Beutler and Dickson (2008) illustrated the hierarchical stages of consumer socialization through which children progress (i.e., the perceptual stage [age 3–7], the analytical stage [age 7–11], and the reflective stage [age 11–16]). Each phase is described along three dimensions (orientation, complexity, and perspective), which become increasingly complex as children progress to the next stage.[2] These dimensions and their evolution over the various phases are essential in the analysis of the financial socialization process in order to link it with (variations in) child development and further refine the step-by-step approach. The argument presented by Lucey (2007) that current financial education processes do not account for differences in child development illustrates that there is still room for improvement in this area. In addition, the effect of elements related to anticipatory socialization that take place at a very early age, such as delay of gratification, is not sufficiently accounted for in existing programs either.

Regarding the aim of creating adaptable financial consumers and the need to pay attention to their attitudes, current programs devote insufficient attention to the mechanisms by which improvements in, for instance, financial knowledge result in improved future financial capability. In addition, existing programs have largely ignored general attitudes and variables related to anticipatory socialization (Center for Financial Security 2012; Fernandes, Lynch, and Netemeyer 2014; Webley and Nyhus 2006), which we consider to be very important in creating adaptable financial consumers. In spite of the concern that cognitive financial knowledge alone would only be a weak mechanism to promote responsible financial behavior (NEFE 2006), changing financial attitudes is generally not a primary objective of existing programs. The *ENEF financial education project* is an exception as it clearly indicates that it aims at developing proactive financial education that should result, among other things, in improvements in behavior and attitudes. In terms of delivering methods, Zia (2013) indicates that in the ENEF financial education program in Brazil the developed interactive material with practical exercises selected to be relevant to various aspects of young people's lives was successful in persuading students to try out the new behavior and to assist them in putting it into practice. All in all, Jorgensen and Savla (2010, 466) concluded that "only a few [education programs] aim at altering attitudes towards finances and spending." Hence, an increased focus on attitudes is necessary.

In sum, assessing the extent to which (features of) a proactive financial literacy design are incorporated in existing programs is not straightforward in view of the difficulties related to the evaluation of the effectiveness of

2. More specifically, in terms of orientation, children evolve from understanding concrete situations to the ability to grasp abstract concepts. With regard to complexity, children evolve from insight into uni-dimensional problems to being able to analyze multi-dimensional problems. Finally, over the course of the three phases identified in this framework, children's perspective evolves from an egocentric one to a collective/diversified perspective (i.e. taking into account the social context).

existing programs. The fact that some programs include certain features of a proactive financial literacy design is promising, although a lot more has to be done to arrive at programs with a fully fledged proactive design. Regarding parental involvement, existing programs do not sufficiently capitalize on the role of parents.

THE ROLE OF PARENTS AS FINANCIAL SOCIALIZATION AGENTS

A proactive approach that acknowledges the importance of financial attitudes and adaptable financial consumers will inherently be cooperative in order to incorporate influences of various socialization agents. There are various ways such as (school) education, peers, parents, media in which people enhance their financial literacy levels (Hilgert, Hogarth, and Beverly 2003; Lee and Cho 2005), but the consensus is that for young people parents are the main socialization agents.

Theoretical Frameworks

The observation that youth financial literacy efforts are best analyzed within the framework of a *financial socialization process* is rooted in the theory of consumer socialization (see John 1999 for an overview on consumer socialization of children). In general, consumer socialization is defined as "processes by which young people acquire skills, knowledge, and attitudes relevant to their functioning as consumers in the market place" (Ward 1974, 2). Note that financial socialization is often considered to be a broader concept, in the sense that it is related not only to the functioning of consumers in the market place, but also to the financial viability and well-being of the individual in general (Danes 1994, 128). Calls for a more "proactive" approach to youth financial literacy fit within the concept of *anticipatory socialization*. The latter refers to the fact that attitudes, beliefs, values, and skills are acquired in anticipation of roles, which will be assumed sometime in the future.

Hess and Torney (1967, 6–7) distinguished between three types of anticipatory socialization. First, children acquire attitudes and values about adult roles which have limited relevance for the child, but form the basis for subsequent learning and specific behavior. Second, the acquisition of specific information that cannot be used until later in life is also a form of anticipatory socialization. An example of this is a child that learns about life insurance: although the child might grasp the basic concept of life insurance, he/she will only be able to apply this knowledge during later stages of life (Ward 1974). Third, the concept also refers to general and specific skills practiced during childhood which the individual can fall back on whenever a relevant occasion arises later in life. Delay of gratification and self-control, for instance, is negatively related to debt and positively related to savings behavior and economical spending (Baumeister 2002; Norvilitis et al. 2006; Romal and Kaplan 1995). This last type of anticipatory socialization is particularly relevant for the creation of adaptable financial consumers as the general principles adopted during the anticipatory socialization process will be helpful to deal with unforeseen financial situations and new financial products in the future.

Further insight into the role of parents in the financial socialization process can be gained by studying the effect of environmental and attitudinal factors in more detail. In this respect, the *theory of planned behavior* (Ajzen 1991) and the *theory of family resource management* (Deacon and Firebaugh 1981) are relevant as broader frameworks within which financial socialization can be incorporated. *Planned behavior theory* postulates that a person's behavior is determined by her/his behavioral intentions, which in turn are shaped by attitudes, subjective norms, and perceived control (Ajzen 1991).[3] Examples of applications to financial behavior include research on investments (East 1993), debt management, and credit card use (Bansal and Taylor 2002; Rutherford and DeVaney 2009) as well as financial behavior of college students (Shim et al. 2009a, 2009b). In turn, the *family resource management* model, originally designed to explain resource development, allocation, and management within the family, is a dynamic model that considers four stages (inputs, throughputs, outputs, and feedback loops) to explain how people develop financial behaviors and make financial decisions. Inputs (demands, values, attitudes, knowledge, and personal factors) are transferred by means of throughputs (planning, implementation, use of resources, decision making, and behaviors) into satisfied demands and ultimately into achieved goals (Deacon and Firebaugh 1981; Jorgensen and Savla 2010). Jorgensen and Savla (2010), for instance, illustrates how the financial behavior of young people is a result of the available inputs (in terms of knowledge, attitudes, and personal characteristics), which in turn are considered to be shaped by environmental influences, such as parents.

3. Behavioral intention is a person's readiness to display particular behavior/perform a particular activity. Attitude is the degree to which relevant behavior is positively or negatively evaluated by that person. A subjective norm refers to a person's perception of how significant agents in his/her social network would judge this particular behavior. Perceived control denotes the person's belief in the difficulty or ease of displaying particular behavior.

The theories above are mainly helpful in explaining *why* parents impact the financial socialization process. To better understand *how* parents affect this process, Bandura's (1977) *social learning theory* is useful. This theory acknowledges the fact that learning is a process which takes place in a social context, and hence, can also occur without direct reinforcement. Importantly, it highlights the fact that learning also occurs through observation (observational learning), aside from learning by means of direct instruction (formal learning). Hence, in addition to explicit learning, implicit learning may occur.

In the current financial literacy literature, the theoretical frameworks presented are not commonly used to explicitly frame financial literacy efforts. Notable exceptions are Sohn et al. (2012), Jorgensen and Savla (2010), Hira, Sabri, and Loibl (2013), and Shim et al. (2009a). The latter is an excellent example of how financial literacy can be framed within a theory of financial socialization. They posit a hierarchical model in which anticipatory socialization through parents, school, and early-life work experience will impact financial learning outcomes (financial knowledge and parental role modeling) and subsequent financial attitudes, norms, and self-control. This process, in turn, consolidates in certain forms of financial behavior. Their empirical analysis also provides a useful illustration of the relevance of planned behavior theory to explain the financial socialization process in young people. Based on a structural equation model, they concluded that the three elements of planned behavior theory under consideration (financial attitude, perceived behavioral control, and subjective norms) are significantly related to financial conduct. In addition, evidence was found corroborating the application of consumer socialization theory to young people's financial development in the sense that anticipatory socialization variables affected predicted financial learning outcomes.

The Role of Parents

In reviewing the theoretical frameworks, the importance of parents in financial socialization emerges spontaneously. First, although the child is considered to be affected by an intricate set of agents (parents, media, peers, school) that impact its financial socialization process (Churchill and Moschis 1979; Sohn et al. 2012), parents are recognized as playing the most prominent role in a child's life (Grusec and Davidov 2008). This especially holds true in view of the recommendation to start financial socialization at a young age: in the early stages of childhood, the role of parents, compared with other socialization agents, is even more prominent. In the context of anticipatory socialization, which is important to create adaptable financial consumers, parents play an essential role. For instance, research on self-regulation of young people (in which delay of gratification is considered to be an essential part) has revealed that parental style plays a role here (see, e.g., Diaz, Neal, and Amaya-Wiliams 1992, among others). Although there are many financial literacy studies that do not consider the role of parents, their importance is confirmed in the empirical literature: of all the financial socialization agents, parents play the most dominant role and are pivotal for the development of financial literacy and responsible financial behavior in children (see, e.g., Jorgensen and Savla 2010; Shim et al. 2009a; Sohn et al. 2012). In a longitudinal study of students enrolled at the University of Arizona that started in 2007, parents' influence is found to be 1.5 times greater than that of financial education and more than twice that of friends (Shim and Serido 2011).

Second, environmental influences and "inputs" are highlighted, such as values, attitudes, and subjective norms, which are factors on which parents exert significant influence during their children's upbringing (Jorgensen and Savla 2010; Miller et al. 1986; Parsons, Adler, and Kaczala 1982, among others). Pritchard and Myers (1992), for instance, demonstrated that the financial values of teens are similar to those of their parents, while Webley and Nyhus (2006) found that the saving behavior of children is related to their parents' saving behavior and economic socialization. In addition, parents are also important in the development of sensible financial attitudes (Lusardi, Mitchell, and Curto 2010; Norvilitis and MacLean 2010; Shim et al. 2009a). For instance, in reference to over-indebtedness, parental mentoring of financial skills and high levels of financial education by parents are associated with lower levels of debt (Grinstein-Weiss et al. 2011; Norvilitis and MacLean 2010). In addition, Norvilitis and MacLean (2010) showed that the ability to delay gratification, and as a result keep impulsive credit card purchases under control, were attitudes that led to the lower credit card debt.

Third, parents are also important because of the various learning processes that take place during the financial socialization process. Following social learning theory, implicit or observational learning is an important process in addition to learning from direct instructions. Previous research has concluded that both implicit and explicit learning impact financial behavior (Shim et al. 2009a), but implicit learning is more prevalent (John 1999). In terms of direct financial instruction, more attention could be paid to the effects of such formal learning at home, besides (or perhaps more precisely, in conjunction with) formal financial learning at school. Clarke et al. (2005) suggested that such formal instruction by parents is important in shaping future financial behavior at a young age. Jorgensen and

Savla (2010) have indeed found that such forms of teaching by parents are important financial learning mechanisms. With regard to implicit learning, several studies, such as Hibbert, Beutler, and Martin (2004), Gudmunson and Danes (2011), or OECD (2014c), emphasize that parents assert significant influence on the financial socialization of their children by functioning as role models. Similarly, Clarke et al. (2005) found that adolescents' preparedness to perform financial tasks is positively correlated with the frequency with which these tasks are modeled in the household. In sum, parents' financial behavior, norms, and attitudes will be passed down in the financial attitudes and behavior of their children.

Finally, parents act as a primary source of financial information in children's efforts to learn more about certain topics. Pinto, Parente, and Mansfield (2005) reported that families in which discussions of financial matters were avoided had a higher probability of problematic debit card use. Similarly, Edwards, Allen, and Hayhoe (2007) observed a relation between family communication patterns with regard to financial matters and attitudes toward money. With respect to the development of reliable information search strategies, the family not only acts as a filter for information from the outside world (Danes and Haberman 2007), but parents are also considered to be the primary source of information in the financial search process.

Overall, this review illustrates that it is unfortunate that the financial socialization framework is not used more often to analyze youth financial literacy. In summary, parents were found to have an influence on the financial socialization of their children through their role in the (anticipatory) socialization process, the manner in which they shape attitudes, subjective norms, and skills, their impact on children's efforts to search for financial information and their explicit or implicit contribution to the financial learning process. Because all these processes are related to the specific features of proactive youth financial literacy programs, the role of parents in the financial socialization process is crucial and should be given more attention in the design of financial literacy programs.

IMPLICATIONS FOR THE DESIGN OF YOUTH FINANCIAL LITERACY PROGRAMS

The current state of affairs provides sufficient grounds to advocate a shift in the way that financial literacy programs are designed in favor of an approach that revalues the role of parents and increases parental involvement. We further discuss how this fits in with the development of youth financial literacy programs that are more proactive as evidenced by a strong focus on financial attitudes and aimed at raising adaptable financial consumers. Implications for the role of teachers are discussed as well. The main recommendations presented here are summarized in Table 1.

General Program Design Implications for Proactive Programs

Programs should start early because at this stage young people are more receptive to various inputs as they are still constructing their identity. Although this is widely acknowledged in this study, the absence of a developmental approach and the fact that elements related to anticipatory socialization taking place before the start of financial literacy programs is not sufficiently taken into account in existing programs, suggest that future programs could adopt a gradual approach that is more in line with children's overall development (Beutler and Dickson 2008; Friedline 2015; Lucey 2007; Sonuga-Barke and Webley 1993).

In terms of program design, this implies that young people would gradually be familiarized with financial concepts (cf. a step-by-step approach). OECD provides an overview of several such programs. The *K-12 National Standards for Financial Literacy* (downloadable from http://www.jumpstart.org) also provides an excellent example of how such a gradual progress can be achieved across the curriculum (in this case: from 4th to 12th grade). For example, with respect to the standard regarding the identification of risks and basic risk management methods, a 4th grader is expected to be able to give examples of risks faced by individuals and families and formulate basic risk-reducing behavior, but only related to age-related activities like biking. Among other things, an 8th grader is expected to be able to relate risk and insurance, while one of the goals for a 12th grader is to be able to recommend the most adequate type of insurance for various types of risk. This example clearly shows that such a gradual approach not only provides the necessary knowledge but also familiarizes young people with the appropriate framework and attitudes to reflect on these issues. However, the manner in which the norms, beliefs, and attitudes instilled at home influence these efforts at school needs to be better understood.

In terms of program implementation, more creativity is needed in order to develop programs that are highly customizable to accommodate discrepancies in child development, environmental factors, and interpersonal differences. In light of the growing amount of empirical evidence that a wide range of socioeconomic, attitudinal, and psychological conditions play a role, it has become clear that a one-size-fits-all approach is not preferable, but the development of separate financial education programs

TABLE 1
Recommendations for Building Proactive Programs with Parent Involvement

Toward …	Away from …
1. General design implications for proactive programs	
• Financial education that starts at an early age and takes into account children's development.	The introduction of financial concepts on a just-in-time basis, which is too late if not preceded by earlier initiatives. A design that does not fit child development.
• Innovative approaches that are highly customizable to accommodate variations in child development as well as environmental and interpersonal differences.	One-size-fits-all approach or a multitude of programs for specific target groups that cannot be implemented on a mass scale.
• Young people's gradual introduction to financial concepts.	One-off initiatives that ignore a step-by-step approach.
2. Increased focus on attitudes	
• Increased attention to financial attitudes and mechanisms through which financial literacy programs are expected to lead to higher financial capability in the future.	Programs that assume that financial knowledge automatically results in improved financial capability in the future.
3. Creating adaptable financial consumers	
• Development of reliable (online) information search strategies.	Presentation of time-sensitive information that might only apply to the current state of affairs.
• Increased attention to rules of conduct.	Programs that focus on static knowledge.
• Stimulation of young people's financial self-efficacy.	Programs that neglect psychological factors and personal traits.
4. Revaluation of the role of parents and establishing increased parental involvement	
• A more explicit acknowledgment of the role of parents as financial socialization agents.	Programs that only involve teacher–student transfer.
• Stimulation of parental involvement.	
• Creation of collaborative partnerships in which parents and schools reinforce each other.	

TABLE 1
Continued

Toward …	Away from …
• Attention for the changing role of parents during young people's lives.	
• Initiatives to increase parents' awareness of their role and impact on the financial socialization process of their children, (possibly) accompanied by courses to increase parents' financial literacy.	
• Consideration for the positive impact of involving parents who are not financially savvy.	
• Development of approaches that do not sustain wealth inequalities of participants and deal with different levels of parental involvement due to socioeconomic backgrounds.	
• Incorporation of direct financial experience in the program and attention for parents' influence in this area.	
5. Role of teachers and parent–teacher interaction	
• Social strategies to initiate and stimulate parental involvement. • Additional efforts to help teachers to coordinate and manage student–teacher–parent relations to ensure that the efforts of these various socialization agents reinforce each other.	Teacher assistance that only considers the teacher–student relationship (which should not be abandoned, but complemented by initiatives that consider teacher–student–parent relationships).
• Strategies to identify situations in which school initiatives are in conflict with the role of parents in the financial socialization process.	Initiatives that ignore the role of parents as socialization agents.
• Training in skills needed to motivate and engage young people.	Training that focuses only on content.

for each specific demographic or subgroup with specific attitudinal or psychological characteristic is not realistic either. Although Lusardi, Mitchell, and Curto (2010) make a valid claim that financial education should to an extent be differentiated in order to maximize its effectiveness and overall social benefits, this does not imply that it is always necessary to set up distinct programs. Such an approach would be impossible to implement on a mass scale throughout the educational system.

A first alternative (that is still implementable on a large scale) could be to design more hybrid module-based schemes in which the entrance level, the emphasis placed on specific modules, and the advancement from one level to the next are more adaptable to the factors mentioned above. A viable option might be computer-based applications that deal with financial topics in a progressive manner (from basic to more advanced, real-life, unpredictable settings) in which young people can progress from one level to the next at their own pace. The entry level, degree of coaching (by teachers), and expected progress could be made conditional upon social, economic, and psychological determinants of financial literacy, as well as variations in child development. This is only one example of an approach that might prove fruitful, but clearly the development of such innovative adaptive financial literacy tools is still in its infancy.

A second approach that is interesting to examine in more detail is a program design that does not sustain wealth inequalities but is designed to decrease such differences during the financial literacy training. In this respect, initiatives that stimulate young people to have direct experience with financial matters and matched saving accounts are promising.

Increased Focus on Attitudes

An increased focus on financial attitudes helps to make the case for gradually implemented financial literacy initiatives, because attitudes are typically shaped over time. More generally, it is argued that it is not advisable to focus exclusively on the improvement of financial knowledge, but to pay more attention to the various mechanisms through which financial education is expected to have an effect on responsible future financial behavior. Indeed, several authors have raised questions about the fact that many financial education programs assume an automatic causal link between financial education and financial knowledge on the one hand, and increases in financial knowledge and improved financial behavior on the other (García 2013; Hathaway and Khatiwada 2008; Klapper, Lusardi, and Panos 2013; Marcolin and Abraham 2006 and references therein). With regard to optimal program design, other mechanisms, such as financial attitudes, also need to be incorporated, especially since empirical evidence shows a strong impact of financial attitudes on financial behavior (see, e.g., Shim et al. 2009a). Sohn et al. (2012), for instance, suggested that it is important to include an attitudinal component in youth financial literacy initiatives. Similarly, Fernandes, Lynch, and Netemeyer (2014) argue that future financial literacy initiatives should focus less on content knowledge, and more on general attitudes and factors related to perceived behavior control and self-efficacy (Bandura 1977) like the propensity to plan or confidence to be proactive.

Creating Adaptable Financial Consumers

Strategies to shape adaptable financial consumers can be difficult to define. In any case, programs focusing on static financial knowledge presenting information that only apply to the current state of affairs are too narrow to deal with all aspects of future financial behavior. For instance, only teaching pupils how to deal with a specific type of financial fraud that is currently prevalent will be insufficient, given that new fraudulent schemes arise constantly, and come and go in the public domain. Programs that emphasize the development of reliable (online) information search strategies, rules of conduct, and increased self-efficacy are sensible alternatives and could help creating adaptable financial consumers.

Consulting reliable information sources before making financial decisions is a good financial habit, and identifying objective information sources and developing sensible information search strategies can be taught in youth financial literacy programs. Existing financial information is often excessive or too complex to be fully understood by non-experts (García 2013). If financial information is not presented clearly, financial education may point out the adverse effects this can have on financial decisions, and make young people better equipped to resist practices associated with dubious financial information (e.g., phishing). It is therefore essential that students are trained to discriminate between reliable and biased information sources and providers, and consult reliable information sources when faced with new or confusing financial circumstances. To be effective, it is important that financial literacy programs make young people more knowledgeable about where to retrieve such objective information, which in turn should be presented as accessibly as possible (Altman 2012; Shiller 2010; Van Campenhout and Weyts 2012).

To create more adaptable financial consumers, a "rule-of-conduct" approach is more appropriate than programs that focus on static knowledge.[4] In the former approach, good financial habits are developed that can be applied to various financial cases. For instance, in case of fraudulent schemes, adopting the principle to contact one's own bank directly when confronted with dubious requests regarding personal financial data is more effective than trying to describe and anticipate all specific fraudulent bank schemes because new schemes will arise. As another example of such a rule of conduct, the observation of a predefined period of reflection, or "cold" period, before taking important financial decisions could be encouraged. During this cold period, the client could consult reliable financial information in order to compare the offer and assess its attractiveness without being subject to the direct influence of the seller. The habit of observing a period of reflection is a practice that can be trained during youth financial literacy programs.

Finally, in accordance with the concept of anticipatory socialization, the creation of adaptable financial consumers requires that more attention is paid to general personal traits (see also Shim et al. 2009a). For instance, social learning theory also highlights the importance of self-efficacy, which refers to one's belief in one's capability to bring specific tasks to a good end or to reach predetermined goals. An individual might be convinced that saving for retirement is desirable, but if he/she lacks the perceived self-efficacy (e.g., in terms of ability to delay gratification), they will not put the desired financial behavior into practice. With reference to adaptable financial consumers, those with high levels of self-efficiency are more likely to display sensible financial behavior when confronted with unfamiliar or uncertain financial circumstances compared with people with low levels of self-efficiency. The effect of self-efficacy might also be particularly important for children from disadvantaged backgrounds because poverty has a negative effect on self-efficacy and the more general notion of self-regulation.[5] Several studies have documented these adverse effects of childhood poverty on self-regulatory behavior (see Brody and Flor 1997; Evans and Rosenbaum 2008, among others). In addition, economic deprivation negatively affects parents' self-regulatory behavior by eroding coping behavior (Eamon 2001) and exposing parents to increased stress (Conger and Donnellan 2007; McLoyd 1998). This, in turn, affects parents' ability to act as a role model (Eamon 2001). In

4. On a related note, Drexler, Fischer, and Schoar (2014) and Winter, Schlafmann, and Rodepeter (2012) reported that rules of thumb could be an effective tool in order to stimulate financial literacy and sensible financial behavior.

5. Self-regulation is defined as "the self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals" (Boekaerts, Pintrich, and Zeidner 2000, 14; see also Bandura 1991).

sum, financial literacy programs have to take into account general traits like self-regulation (and more specifically self-efficiency) because they are important in shaping adaptable financial consumers and because they could present an opportunity to deal with socioeconomic disparity.

Revaluing the Role of Parents and Establishing Increased Parental Involvement

A proactive program design will assign a more important role to parents, given that such an approach requires inputs (e.g., attitudes and norms) in which parents play a dominant role as financial socialization agents. School financial literacy programs could therefore be more focused on the development of partnerships involving shared responsibility between schools and parents (Danes, Huddleston-Casas, and Boyce 1999; Hobbs et al. 1984) in view of the documented beneficial effects of such parental involvement in general (see, e.g., Hill and Taylor 2010; Miedel and Reynolds 2000). In this respect, a number of elements are important.

First, specific determinants of parental involvement in financial education programs need to be identified (see Hill and Taylor 2010 for a discussion of general determinants of parental involvement). Sherraden et al. (2007) even reported that in the *I Can Save* program about 25% of the parents initially had not signed up. This was remarkable because by doing so they declined “free” money given that in the program an initial deposit of $250 is made and all deposits (up to a maximum amount) are fully matched (including the initial deposit). Parents’ hesitation to participate reflects skepticism, uncertainty, lack of familiarity about matched saving programs, and lack of experience with financial institutions (Aizcorbe, Kennickell, and Moore 2003; Sherraden et al. 2005, 2007). *Second*, effective parents–school partnerships are only attainable if the specific domains where parents and school might reinforce or counteract each other are known. For instance, Shim et al. (2009a) concluded that parental financial behavior had a positive impact on responsible financial behavior, but not on financial knowledge, while financial education at school did affect financial knowledge, but not the probability that students would adopt financial behavior modeled on that of their parents. *Third*, effective proactive programs do not consider the role of parents to be static, but try to integrate their changing role in the different stages in young people’s lives. The *APLUS* longitudinal research at the University of Arizona revealed that that the role of parents indeed changes: as students matured the relationship between parents and students became more peer-like and the perceived quality of the relationship by students increased as well (Shim and Serido

2011). Currently, the manner in which the role of parents in the financial socialization process changes over time is however not well understood.

Which specific measures could be taken in order to stimulate parental involvement in youth financial education programs? First, accompanying initiatives to make parents aware of their crucial role in the financial socialization process could be effective because it is sensible to assume that all parents wish to develop their child's potential (Jorgensen and Savla 2010; Lusardi, Mitchell, and Curto 2010). Second, accompanying initiatives aimed at increasing parents' level of financial literacy or financial skills are welcome (see Grinstein-Weiss et al. 2011; Koonce et al. 2008, among others). Eccles and Harold (1996), for instance, observed that the confidence parents have in their own intellectual abilities is a salient predictor of their school involvement. If parents feel that their level of financial knowledge or financial skills are insufficient, they will feel less prepared to teach financial skills at home or act as role models (Center for Financial Security 2012; Sherraden 2010). In the *ENEF financial education project* in Brazil, parents were randomly assigned to a financial education workshop or a health education workshop. Students from parents who followed the financial education workshop had saving rates that were 2.5 percentage points higher than students whose parents participated in the health education workshop, indicating that such accompanying financial literacy initiatives can be successful in reinforcing desirable financial behavior (Bruhn et al. 2013). Although these results are encouraging, a practical problem that arose (and that is also encountered in other programs with similar features) is the low attendance at the workshops (Bruhn et al. 2013; Chodkiewicz et al. 2005). For instance, in a pilot of the *Even Start* program for parents initiated to complement the *MakingCents* program for young children, the attendance rate in two out of the three schools involved was below 2%. Practical concerns could be relevant in explaining low attendance rates. Parents involved in *Even Start*, for instance, indicated that they would prefer to attend sessions when organized around the time that they dropped off or picked up their children, while they generated little interest in programs organized after school or in the evenings (Chodkiewicz et al. 2005). In the *I Can Save* program, monetary incentives are given to encourage parents to attend workshops by depositing $25 into the children's accounts each time a parent participates in a workshop. Although there is little consensus about how to stimulate participation, the *I Can Save* program revealed that also good communication and positive relationships between parents and schools could stimulate participation (Sherraden et al. 2007). In addition to the measures discussed above, more explicit attention could be paid to the possible input of parents who are not financially savvy. A few possible strategies are listed below.

First, a number of more general inputs and attitudes, like delay of gratification and self-efficacy, have been shown to be important in the anticipatory financial socialization of children. *Second*, showing sufficient interest in the child's participation in the financial program as such might be another way to stimulate its financial socialization process because parents are known to be important motivators for their children. The PISA 2009 survey on reading, mathematics, and science competencies of 15-year-olds conducted by OECD showed that parents who showed genuine interest and active engagement can significantly impact the performance of their children (OECD 2011). In addition, in terms of information search strategies, parents who do not have an in-depth financial knowledge still could direct their children to reliable (online) information sources. *Finally*, the fact that financial literacy is highly positively correlated with other skills, such as mathematical literacy and reading literacy (OECD 2014c), opens up the opportunity for parents with comprehensive mathematical or reading skills to indirectly stimulate their children's financial socialization by educating them in these areas. Remarkably, the *ENEF financial education project* reported "trickle-up" effects of the program on parents. For instance, parents not only showed improvements in financial knowledge but also displayed more desirable financial behaviors. Parents were more likely to keep household budgets and had an increase of 0.67 percentage points in their saving rate. Hence, this evidence suggests that students can act as agents of change in their households (Bruhn et al. 2013).

Stimulating parental involvement is also important to design financial literacy programs that deal with disparity in financial literacy (Atkinson and Messy 2012; Lusardi, Mitchell, and Curto 2010), financial inclusion (see, e.g., Hogarth, Beverly, and Hilgert 2003; Sherraden 1991), and financial socialization among youths by socioeconomic background.[6] Financial

6. A particular concern in the design of such programs is that highly-educated or high-income parents are more likely to be involved in school participation (Hill and Taylor 2010), but compared with children from disadvantaged backgrounds, this has a relatively lower effect on their children, as they already receive substantial financial socialization at home (Shim et al. 2009a), have higher levels of financial literacy (OECD 2014c), and display more desirable financial behavior (Furnham 1999; Jorgensen and Savla 2010; Shim et al. 2009a). Students of parents who were above-average savers did not materially alter their behavior in response to the financial education curriculum, while there was a positive effect for students of parents who were not frugal, indicating that the formal education curriculum was more likely to be redundant for the former than for the latter (Bernheim, Garrett, and Maki 2001). Jorgensen and Savla (2010) suggests for instance that parents of high-income families have more diverse financial domains in which they can interact with their children compared with those of low-income families.

literacy initiatives at schools are therefore strongly recommended because all children have access to school-based programs (OECD 2014c). In light of the considerations above, initiatives that do not sustain wealth inequalities but have the potential to decrease such differences over the course of the financial literacy training would be very welcome. A good example of such programs would be youth saving programs with matched saving accounts for low-income families, which means the individual savings are matched by charitable donations, typically at a rate ranging from 1:1 to 3:1. In this way, these programs prevent the continuation of wealth inequalities due to the fact that low-income families have fewer resources to contribute to the child's saving account (Johnson and Sherraden 2007). These programs belong to a wider class of programs that stimulate direct financial experiences (e.g., by means of having a bank account [and other mainstream financial products] or having work experience) and that have been found to raise financial knowledge and capabilities, even after accounting for socioeconomic differences (see, e.g., Loke 2015; OECD 2014c). As these direct experiences transcend the school context, they present a natural opportunity to increase parental involvement as well. Nevertheless, it should be acknowledged that the possibilities of such programs have only just started to be explored and that, as noted by Johnson and Sherraden (2007, 134), a key issue is "… to understand more fully the optimal roles for parents and the effectiveness of including parents in children's financial education programs."

Teachers and Parent–Teacher Interaction

To start, teachers are not the only financial mediator, but just one of many socialization agents, each of which might play a unique role (Shim et al. 2009a). A program with a high level of parental involvement (as this study recommends) also requires teachers to have specific skills. In this section, we focus on the following elements: the interaction between teachers and parents, as well as teachers' ability to motivate students and stimulate parental involvement. For a broader discussion of the role and capabilities of teachers with regard to financial education, the reader is referred to Way and Holden (2009).

First, teachers could be taught (social) strategies in order to stimulate parental participation in financial literacy initiatives and motivate them to ensure they keep their commitment. This might be more difficult to achieve in financial literacy efforts compared with other more general pedagogical processes because efficient parental involvement implies that parents will share some information on household finances and expose their own level of financial literacy. Specific social strategies are therefore needed. *Second*, active participation of parents is only possible if there is extensive coordination between teachers and parents. Hence, teachers could receive more comprehensive training to allow them to act as a coach, not only in student–teacher relationships but also in the more complex student–parent–teacher context. Ideally, the efforts of the various socialization agents are coordinated and reinforce each other, so the result is a cooperative integrated approach that benefits the pupils' financial socialization process. In case of conflict, teachers need to have a number of strategies at their disposal to deal with this in an effective way.

Finally, teachers have to make an effort to truly engage young people (see also van Uden, Ritzen, and Pieters 2014) as they will only create long-lasting effects if they succeed in motivating pupils. Mandell and Klein (2007) demonstrated that low levels of financial literacy are partly due to a lack of motivation on the part of the students. In this respect, two conclusions could be drawn. To increase their motivation, students have to be convinced more explicitly as to "why" financial capability is vital in the first place (McCormick 2009). With regard to the input of teachers, more attention should be devoted to their role as motivators for students (Pintrich 2003). More guidelines and teach-the-teacher efforts would be helpful to allow teachers to fulfill this role successfully. In addition, it is advisable that teachers possess a sufficient level of financial knowledge, as this is key in boosting their confidence to teach financial literacy topics (Baron-Donovan et al. 2005). In terms of parental involvement, future research could investigate how the roles of teachers and parents as motivators interact, and to which extent they reinforce or hinder each other.

SUGGESTIONS FOR FUTURE RESEARCH

Although the recommendations above are sound directions for future program design and follow directly from the existing literature, it is premature to formulate conclusions regarding optimal delivery methods within this framework of recommendations that would maximize parental involvement in optimally designed proactive programs. This conclusion follows from the fact that the socialization perspective has mostly been neglected in the design of financial literacy programs and the issues related to the evaluation of the effectiveness of existing programs. The fact that no conclusion can be drawn on optimal delivery methods within a well-established framework of recommendations is a limitation that is often encountered in the financial literacy literature. For instance, the Consumer Financial Protection Bureau recommends practicing money management skills through innovative hands-on learning opportunities, but concludes that in terms of the optimal delivery method (CFPB 2013, 31): "Many of the innovative hands-on learning programs that have been developed are too new to suggest robust results at the moment."

The knowledge of optimal delivery methods will increase as more programs adopt the recommendations formulated in Table 1, at least if these programs also have a strong impact evaluation framework such as a randomized control trial. Nevertheless, the current state-of-affairs creates an opportunity for future research in this area.

General studies on parental involvement mainly focus on its impact at the elementary school level (Hill and Taylor 2010), while studies on financial literacy often focus on high school students. Secondary schools are also likely to be an interesting area to investigate parental involvement, particularly in the context of financial literacy programs because a large part of the development of sensible financial attitudes and practices takes place around the age that children attend secondary school. In terms of school policy, the extension of existing programs for parental involvement to higher levels of education needs to be further investigated. In this respect, the extent to which conclusions regarding the effects of school settings on parental involvement (Hoover-Dempsey, Bassler, and Brissie 1987) can be transferred to parental involvement in financial literacy programs is another interesting area for future research. Traditional studies of parental involvement, for instance, have focused on the role of the mother (Hill and Taylor 2010), while in the context of financial socialization the role of the father might be more prominent. The manner in which financial education at school could reinforce the financial socialization process at home and vice versa is also an important issue. The fact that the effect of financial education curricula on students saving behavior differs depending on whether their parents are frugal illustrates that the school and home context affect each other (Bernheim, Garrett, and Maki 2001). Currently, however, these processes are still viewed too much as isolated events (see, e.g., Clarke et al. 2005).

We also lack insight into the manner in which the role of parents changes over the course of young people's lives. This gap in the literature originates from the lack of longitudinal studies on parental involvement in financial socialization. A notable exception is the *APLUS* longitudinal research that follows students at the University of Arizona and concludes that the role of parents indeed changes over time (Shim and Serido 2011). The role of parents might even change more substantially for younger children, but this is not investigated in the *APLUS* project. Although some researchers propose that the influence of other socialization agents (e.g., peers) is likely to increase over time (Collins and Laursen 2004; De Goede, Branje, and Meeus 2009),[7] Hill and Taylor (2010) argue that the role of parents itself might also change. In general, too little attention is devoted to the interaction between various socialization agents and how these interaction patterns might evolve during the different phases in young people's lives (Jorgensen and Savla 2010; Sohn et al. 2012). Besides parental influence, other sources of socialization, for instance media and Internet, have also been found to play a role (Loibl and Hira 2005; Lyons, Scherpf, and Roberts 2006; Sohn et al. 2012). With regard to parental involvement in financial education programs, a critical issue is to gain more insight into the extent to which other socialization agents reinforce or impede certain effects.

Framing financial literacy in a socialization context also puts more emphasis on the family dynamics (see Gudmunson and Danes (2011) for an overview of family financial socialization). The way that family members communicate about financial matters, for example, will be relevant (see, e.g., Koerner and Fitzpatrick 2006 for a review on consumer family communication patterns). In addition, the quality of interpersonal family relationships will be important in order for a successful financial socialization process to develop in a family context (Drever et al. 2015; Gudmunson and Danes 2011; Kuczynski and Parkin 2007). Edwards, Allen, and Hayhoe (2007) have demonstrated that parents' financial attitudes and conduct influence the extent to which children are willing to discuss personal finance matters with them. Parents who make irresponsible decisions or parents who are narrow-minded about money (in the sense that they associate it with authority or have an unhealthy fixation on money) are considered to be less suitable as discussion partners. In addition, financial socialization processes within a family will also be influenced by cultural backgrounds, as cultural values, for instance, shape family roles and communication patterns (Beutler and Dickson 2008; Gudmunson and Danes 2011). Cross-cultural research in the consumer socialization literature has shown that culture matters in some areas of economic socialization. Falicov (2001) found cultural differences in the meaning attributed to money, while Beutler and Dickson (2008), who compared the Netherlands with Hong Kong, concluded that, although ideas about the functioning of banks were similar, cultural differences affected the understanding of complex financial concepts. Overall, the consequences of variations

7. Shim et al. (2009a), on the other hand, have argued that for personal finance, parental involvement might remain high at an older age because such tasks are still new tasks that the adolescent needs to master.

in family dynamics and cultural factors for developing optimal delivery methods in proactive programs are currently still unclear.

On a broader level, this section illustrates that insights from different disciplines are required in order to fully comprehend financial literacy (see also Lyons and Neelakantan 2008). While early studies have mostly applied the framework of economics, the financial socialization process explicitly frames financial literacy within a sociological framework. In addition, there are indications that psychological factors are relevant. Finally, pedagogical insights are crucial in order to bridge the gap between theory and practice. Dealing with teacher–parent–student relationships also requires specific interpersonal skills and communication strategies. For instance, parents involved in the *Even Start* program indicated that they wanted to receive more information about their children's financial education (Chodkiewicz et al. 2005), but little to nothing is known about communication strategies that would optimally engage parents. In a pilot of the *It's Worth It* program, a one-page newsletter for parents was distributed to students at each session, but the team of instructors felt that this type of communication had little to no effect on spurring discussion at home or increasing parents' financial knowledge (Iowa Student Loan 2012). Much work still needs to be done in this area, given the observation that teachers already tend to feel highly unprepared for teaching financial literacy, even in programs that do not consider parental involvement.

In view of the current state of affairs, the following areas for future research look promising to advance our knowledge of effective delivery methods that would maximize parental involvement. A first important line of research is the study of parents' willingness to participate in youth financial literacy programs. Hoover-Dempsey and Sandler (1997) showed that parents' decisions to become involved in children's education depends on how they view their parenting role, the value of their contribution in helping their children become successful at school, as well as the requirements and opportunities for involvement as initiated by the school and child. Hence, researchers are advised to carefully examine program designs in order to establish a set of factors that act as obstacles for parents' involvement. Subsequently, optimal delivery methods can be put forward that remove these barriers. In addition, it could be examined whether parents are more inclined to participate if they first follow a complementary initiative targeted at adults that points out the importance of their role in the financial socialization process, or attempts to enhance their own financial literacy. In view of the positive general effects on parents' financial behavior that were found in the *ENEF financial education project* after parents attended a financial literacy workshop, such an approach looks promising. In terms of delivery methods, the *ENEF* project considers only a workshop wherein a financial literacy DVD is shown, so more research is welcome to examine if other forms of financial literacy training might be more effective in increasing parents' engagement in the financial literacy program. In terms of the research approach, randomized experiments could be set up in which subgroups are assigned to programs with and without accompanying initiatives aimed at parents.

In conclusion, revaluing the role of parents in proactive financial literacy programs poses a number of challenges in terms of optimal delivery methods with respect to parental involvement in a financial literacy context, teacher preparedness, family dynamics, and potential interactions with other socialization agents. Advancements in the research in these areas are important in order to further develop and implement optimal delivery methods that maximize parental involvement in proactive financial literacy programs.

CONCLUSION

The existing low level of financial literacy among young people is alarming, given its tendency to persist and the long-term negative economic effects in terms of wealth accumulation, retirement, and debt contracting. Although various financial literacy programs exist, insufficient attention is paid to the specific attributes that distinguish youth financial education programs from adult programs. This paper argues that youth financial literacy programs should be proactive, and as a result need a strong attitudinal component, that they should be aimed at making young people sufficiently adaptable to be able to deal with various uncertain financial decisions in the future, and encourage parental involvement in their implementation.

Central to our analysis is the importance of parents in the financial socialization process. Despite robust evidence that parents are young people's main financial socialization agent, parental involvement is not well developed in the design of existing youth financial literacy programs. Nevertheless, this review shows that it is beneficial to move away from isolated school programs toward an approach that is sufficiently embedded in a cooperative network of socialization agents, especially with respect to parental involvement in school financial literacy programs. We argue that the role of parents in youth financial literacy programs should be revalued, a conclusion that is strengthened by the observation that they are also crucial in order to achieve other objectives of proactive programs such as creating adaptable financial consumers. Hence, recommendations have been formulated related to the general design of proactive programs and their specific features (such as an increased focus on attitudes, the development of adaptable financial consumers, and parental involvement) that may assist in their design in the future. Based on this analysis, it can also be concluded that a reassessment of the teacher's role is also advisable in order to provide them with the necessary skills to function in a teacher–student–parent context.

Although evidence for the role of parents in the financial socialization process is strong and an increase in parental involvement is essential for the design of youth financial literacy programs, future research and sound evaluations of (future) programs with proactive qualities are recommendable in order to identify optimal delivery methods that would maximize the contribution of parents in financial literacy programs.

In conclusion, it is clear that a proactive and cooperative approach to financial education programs that truly engages parents has the potential to increase the effectiveness of in-school financial education. By doing so, it is likely that a more robust positive impact on young people's financial capability can be created in both the short and the long term.

REFERENCES

Agarwal, Sumit, John C. Driscoll, Xavier Gabaix, and David Laibson. 2009. The Age of Reason: Financial Decisions over the Life-Cycle with Implications for Regulation. *Brookings Papers on Economic Activity* (Fall): 51–117.

Aizcorbe, Ana M., Arthur B. Kennickell, and Kevin B. Moore. 2003. Recent Changes in US Family Finances: Evidence from the 1998 and 2001 Survey of Consumer Finances. *Federal Reserve Bulletin*, 89: 1–32.

Ajzen, Icek. 1991. The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50 (2): 179–211.

Altman, Morris. 2012. Implications of Behavioural Economics for Financial Literacy and Public Policy. *The Journal of Socio-Economics*, 41 (5): 677–690.

Atkinson, Adele and Flore-Anne Messy. 2012. *Measuring Financial Literacy: Results of the OECD/International Network on Financial Education (INFE) Pilot Study*. OECD Publishing.

Bandura, Albert. 1977. *Social Learning Theory*. Englewood Cliffs, NJ: Prentice-Hall.

———. 1991. Social Cognitive Theory of Self-Regulation. *Organizational Behavior and Human Decision Processes*, 50 (2): 248–287.

Bansal, Harvir S. and Shirley F. Taylor. 2002. Investigating Interactive Effects in the Theory of Planned Behavior in a Service-Provider Switching Context. *Psychology & Marketing*, 19 (5): 407–425.

Baron-Donovan, Corinne, Richard L. Wiener, Karen Gross, and Susan Block-Lieb. 2005. Financial Literacy Teacher Training: A Multiple-Measure Evaluation. *Journal of Financial Counseling and Planning*, 16 (2): 63–75.

Batty, Michael, J. Michael Collins, and Elizabeth Odders-White. 2015. Experimental Evidence on the Effects of Financial Education on Elementary School Students' Knowledge, Behavior, and Attitudes. *Journal of Consumer Affairs*, this issue.

Baum, Sandy and Marie O'Malley. 2003. College on Credit: How Borrowers Perceive Their Education Debt. *Journal of Student Financial Aid*, 33 (3): 1–13.

Baumeister, Roy F. 2002. Yielding to Temptation: Self-Control Failure, Impulsive Purchasing, and Consumer Behavior. *Journal of Consumer Research*, 28 (4): 670–676.

Bernanke, Ben Shalom. 2011. Statement of the Chairman of the Board of Governors of the Federal Reserve System at a Hearing Conducted by the Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia of the Committee on Homeland Security and Governmental Affairs, U.S. Senate, Washington, DC, April 12.

Bernheim, B. Douglas. 1998. Financial Illiteracy, Education, and Retirement Saving. In *Living with Defined Contribution Pensions*, edited by Olivia S. Mitchell and Sylvester J. Schieber. Philadelphia: University of Pennsylvania Press.

Bernheim, B. Douglas, Daniel M. Garrett, and Dean M. Maki. 2001. Education and Saving: The Long-Term Effects of High School Financial Curriculum Mandates. *Journal of Public Economics*, 80 (3): 435–465.

Beutler, Ivan and Lori Dickson. 2008. Consumer Economic Socialization. In *Handbook of Consumer Finance Research*, edited by J.J. Xia (83–102). New York: Springer.

Beverly, Sondra G. and Emily K. Burkhalter. 2005. Improving the Financial Literacy and Practices of Youths. *Children & Schools*, 27 (2): 121–124.

Boekaerts, Monique, Paul R. Pintrich, and Moshe Zeidner. 2000. *Handbook of Self-Regulation*. San Jose, CA: Academic Press.

Braunstein, Sandra and Carolyn Welch. 2002. Financial Literacy: An Overview of Practice, Research, and Policy. *Federal Reserve Bulletin*, 88: 445.

Brody, Gene H. and Douglas L. Flor. 1997. Maternal Psychological Functioning, Family Processes, and Child Adjustment in Rural, Single-Parent, African American Families. *Developmental Psychology*, 33 (6): 1000–1011.

Bruhn, Miriam, Luciana de Souza Leao, Arianna Legovini, Rogelio Marchetti, and Bilal Zia. 2013. *The Impact of High School Financial Education: Experimental Evidence from Brazil*. Washington, DC: World Bank Group. http://documents.worldbank.org/curated/en/2013/12/18640673/impact-high-school-financial-education-experimental-evidence-brazil.

Campbell, John Y. 2006. Household Finance. *The Journal of Finance*, 61 (4): 1553–1604.

Center for Financial Security. 2012. *Youth, Financial Literacy, and Learning: The Role of in-School Financial Education in Building Financial Literacy*. University of Wisconsin-Madison. Research Brief 2012-5.2.

CFPB (Consumer Financial Protection Bureau). 2013. *Transforming the Financial Lives of a Generation of Young Americans: Policy Recommendations for Advancing K-12 Financial Education*. Washington, DC: CFPB Office of Financial Education.

Chang, Yunhee and Angela C. Lyons. 2007. *Are Financial Education Programs Meeting the Needs of Financially Disadvantaged Consumers?* Networks Financial Institute. Indiana State University. Working Paper.

Chodkiewicz, Andrew, Betty Johnston, Sallie Sunders, and Keiko Yasukawa. 2005. Educating Parents: The EvenStart Financial Literacy Program. *Literacy and Numeracy Studies*, 14: 33–47.

Churchill, Gilbert A. and George P. Moschis. 1979. Television and Interpersonal Influences on Adolescent Consumer Learning. *Journal of Consumer Research*, 6 (June): 23–35.

Clarke, Maribeth C., Martie B. Heaton, Craig L. Israelsen, and Dennis L. Eggett. 2005. The Acquisition of Family Financial Roles and Responsibilities. *Family and Consumer Sciences Research Journal*, 33 (4): 321–340.

Collins, W. Andrew and Brett Laursen. 2004. Parent-Adolescent Relationships and Influences. In *Handbook of Adolescent Psychology*, edited by Richard M. Lerner and L. Steinberg (331–361). Hoboken, NJ: John Wiley & Sons.

Collins, J. Michael and Collin M. O'Rourke. 2010. Financial Education and Counseling—Still Holding Promise. *Journal of Consumer Affairs*, 44 (3): 483–498.

Conger, Rand D. and M. Brent Donnellan. 2007. An Interactionist Perspective on the Socioeconomic Context of Human Development. *Annual Review of Psychology*, 58: 175–199.

Danes, Sharon M. 1994. Parental Perceptions of Children's Financial Socialization. *Financial Counseling and Planning*, 5: 127–146.

Danes, Sharon M. and Heather R. Haberman. 2007. Teen Financial Knowledge, Self-Efficacy, and Behavior: A Gendered View. *Financial Counseling and Planning*, 18 (2): 48–60.

Danes, Sharon M., Catherine Huddleston-Casas, and Laurie Boyce. 1999. Financial Planning Curriculum for Teens: Impact Evaluation. *Financial Counseling and Planning* 10 (1): 25–37.

De Goede, Irene H.A., Susan J.T. Branje, and Wim H.J. Meeus. 2009. Developmental Changes in Adolescents' Perceptions of Relationships with Their Parents. *Journal of Youth and Adolescence*, 38 (1): 75–88.

Deacon, Ruth E. and Francille M. Firebaugh. 1981. *Family Resource Management: Principles and Applications*. Boston: Allyn & Bacon.

Denhart, Chris. 2013. How the $1.2 Trillion College Debt Crisis Is Crippling Students, Parents and the Economy. *Forbes*, July 8.

Diaz, Rafael M., Cynthia J. Neal, and Marina Amaya-Wiliams. 1992. The Social Origins of Self-Regulation. In *Vygotsky and Education: Instructional Implications and Applications of Sociohistorical Psychology*, edited by Luis C. Moll (127–154). Cambridge: Cambridge University Press.

Drever, Anita, Elizatbeth Odders-White, Charles Kalish, Nicole Else-Quest, Emily Hoagland, and Emory Nelms. 2015. Foundations of Financial Well-Being: Insights into the Role of Executive Function, Financial Socialization, and Experience-Based Learning in Childhood and Youth. *Journal of Consumer Affairs*, this issue.

Drexler, Alejandro, Greg Fischer, and Antoinette Schoar. 2014. Keeping It Simple: Financial Literacy and Rules of Thumb. *American Economic Journal: Applied Economics*, 6 (2): 1–31.

Eamon, Mary Keegan. 2001. The Effects of Poverty on Children's Socioemotional Development: An Ecological Systems Analysis. *Social Work*, 46 (3): 256–266.

East, Robert. 1993. Investment Decisions and the Theory of Planned Behaviour. *Journal of Economic Psychology*, 14 (2): 337–375.

Eccles, Jacquelynne S. and Rena D. Harold. 1996. Family Involvement in Children's and Adolescents' Schooling. In *Family-School Links: How Do They Affect Educational Outcomes*, edited by A. Booth and J.F. Dunn (3–34). New York: Erlbaum.

Edwards, Renee, Myria Watkins Allen, and Celia Ray Hayhoe. 2007. Financial Attitudes and Family Communication About Students' Finances: The Role of Sex Differences. *Communication Reports*, 20 (2): 90–100.

Evans, Gary W. and Jennifer Rosenbaum. 2008. Self-Regulation and the Income-Achievement Gap. *Early Childhood Research Quarterly*, 23 (4): 504–514.

Falicov, Celia J. 2001. The Cultural Meanings of Money: The Case of Latinos and Anglo-Americans. *American Behavioral Scientist*, 45 (2): 313–328.

Fernandes, Daniel, John G. Lynch, and Richard G. Netemeyer. 2014. Financial Literacy, Financial Education, and Downstream Financial Behaviors. *Management Science*, 60 (8): 1861–1883.

Fox, Jonathan, Suzanne Bartholomae, and Jinkook Lee. 2005. Building the Case for Financial Education. *Journal of Consumer Affairs*, 39 (1): 195–214.

Friedline, Terri. 2015. A Developmental Perspective on Children's Economic Agency. *Journal of Consumer Affairs*, this issue.

Furnham, Adrian. 1999. The Saving and Spending Habits of Young People. *Journal of Economic Psychology*, 20 (6): 677–697.

Gale, William G. and Ruth Levine. 2010. *Financial Literacy: What Works? How Could It Be More Effective?* Arlington, VA: RAND Corporation.

García, María José Roa. 2013. Financial Education and Behavioral Finance: New Insights into the Role of Information in Financial Decisions. *Journal of Economic Surveys*, 27 (2): 297–315.

Grinstein-Weiss, Michal, Jonathan Spader, Yeong Hun Yeo, Andréa Taylor, and Elizabeth Books Freeze. 2011. Parental Transfer of Financial Knowledge and Later Credit Outcomes among Low-and Moderate-Income Homeowners. *Children and Youth Services Review*, 33 (1): 78–85.

Grody, Allan D., Deborah Grody, Erin Kromann and Jim Sutliff. 2008. *A Financial Literacy and Financial Services Program for Elementary School Grades-Results of a Pilot Study*, May 12. doi: 10.2139/ssrn.1132388. Working Paper.

Grusec, Joan E. and Maayan Davidov. 2008. Socialization in the Family: The Roles of Parents. In *Handbook of Socialization: Theory and Research*, edited by Joan E. Grusec and Paul D. Hastings (284–308). New York and London: Guilford Press.

Gudmunson, Clinton G. and Sharon M. Danes. 2011. Family Financial Socialization: Theory and Critical Review. *Journal of Family and Economic Issues*, 32 (4): 644–667.

Hathaway, Ian and Sameer Khatiwada. 2008. *Do Financial Education Programs Work?* Federal Reserve Bank of Cleveland. Working Paper 08-03.

Hess, Robert Daniel and Judith V. Torney. 1967. *The Development of Political Attitudes in Children*. Chicago: Aldine Publishing.

Hibbert, Jeffery R., Ivan F. Beutler, and Todd Martin. 2004. Financial Prudence and Next Generation Financial Strain. *Journal of Financial Counseling and Planning*, 15 (2): 51–59.

Hilgert, Marianne A., Jeanne M. Hogarth, and Sondra G. Beverly. 2003. Household Financial Management: The Connection between Knowledge and Behavior. *Federal Reserve Bulletin*, 89: 309.

Hill, Nancy E. and Lorraine C. Taylor. 2010. Parental School Involvement and Children's Academic Achievement: Pragmatics and Issues. *Current Directions in Psychological Science*, 13 (4): 161–164.

Hira, Tahira K., Mohamad Fazli Sabri, and Cäzilia Loibl. 2013. Financial Socialization's Impact on Investment Orientation and Household Net Worth. *International Journal of Consumer Studies*, 37 (1): 29–35.

Hobbs, Nicholas, Paul R. Dokecki, Kathleen V. Hoover-Dempsey, Robert M. Moroney, May W. Shayne, and Karen A. Weeks. 1984. *Strengthening Families: Strategies for Child Care and Parent Education*. San Francisco: Jossey-Bass.

Hogarth, Jeanne M., Sondra G. Beverly and Marianne Hilgert. 2003. Patterns of Financial Behaviors: Implications for Community Educators and Policy Makers. Federal Reserve System Community Affairs Research Conference, February 2003.

Hoover-Dempsey, Kathleen V. and Howard M. Sandler. 1997. Why Do Parents Become Involved in Their Children's Education? *Review of Educational Research*, 67 (1): 3–42.

Hoover-Dempsey, Kathleen V., Otto C. Bassler, and Jane S. Brissie. 1987. Parent Involvement: Contributions of Teacher Efficacy, School Socioeconomic Status, and Other School Characteristics. *American Educational Research Journal*, 24 (3): 417–435.

Huston, Sandra J. 2012. Financial Literacy and the Cost of Borrowing. *International Journal of Consumer Studies*, 36 (5): 566–572.

Iowa Student Loan. 2012. Financial Literacy Middle School Pilot Project. March 2012. Report.

John, Deborah Roedder. 1999. Consumer Socialization of Children: A Retrospective Look at Twenty-Five Years of Research. *Journal of Consumer Research*, 26 (3): 183–213.

Johnson, Elizabeth and Margaret S. Sherraden. 2007. From Financial Literacy to Financial Capability among Youth. *Journal of Sociology & Social Welfare*, 34 (3): 119.

Jorgensen, Bryce L. and Jyoti Savla. 2010. Financial Literacy of Young Adults: The Importance of Parental Socialization. *Family Relations*, 59 (4): 465–478.

Klapper, Leora, Annamaria Lusardi, and Georgios A. Panos. 2013. Financial Literacy and Its Consequences: Evidence from Russia During the Financial Crisis. *Journal of Banking & Finance*, 37 (10): 3904–3923.

Koerner, Ascan F. and Mary Anne Fitzpatrick. 2006. Family Communication Patterns Theory: A Social Cognitive Approach. In *Engaging Theories in Family Communication: Multiple Perspectives*, edited by D.O. Braithwaite and L.A. Baxter (50–65). Newbury Park, CA: Sage.

Koonce, Joan C., Yoko Mimura, Teresa A. Mauldin, A. Michael Rupured, and Jenny Jordan. 2008. Financial Information: Is It Related to Savings and Investing Knowledge and Financial Behavior of Teenagers? *Journal of Financial Counseling and Planning*, 19 (2): 19–28.

Kuczynski, Leon and C. Melanie Parkin. 2007. Agency and Bidirectionality in Socialization: Interactions, Transactions, and Relational Dialectics. In *Handbook of Social Development*, edited by Joan E. Grusec and Paul D. Hastings (259–283). New York: Guilford.

Lee, Jinkook and Jinsook Cho. 2005. Consumers' Use of Information Intermediaries and the Impact on Their Information Search Behavior in the Financial Market. *Journal of Consumer Affairs*, 39 (1): 95–120.

Loibl, Cäzilia and Tahira K. Hira. 2005. Self-Directed Financial Learning and Financial Satisfaction. *Journal of Financial Counseling & Planning*, 16 (1): 11–21.

Loke, Vernon. 2015. Increasing Youth Financial Capability: An Evalution of the My Path Savings Initiative. *Journal of Consumer Affairs*, this issue.

Lucey, Thomas A. 2007. The Art of Relating Moral Education to Financial Education: An Equity Imperative. *Social Studies Research and Practice*, 2 (3): 484–498.

Lusardi, Annamaria and Olivia S. Mitchell. 2009. *How Ordinary Consumers Make Complex Economic Decisions: Financial Literacy and Retirement Readiness*. National Bureau of Economic Research.

———. 2011. Financial Literacy around the World: An Overview. *Journal of Pension Economics and Finance*, 10 (4): 497–508.

———. 2013. The Economic Importance of Financial Literacy: Theory and Evidence. NBER Working Paper No. 18952.

Lusardi, Annamaria and Peter Tufano. 2009. Debt Literacy, Financial Experiences, and Overindebtedness. NBER Working Paper No. 14808.

Lusardi, Annamaria, Olivia S. Mitchell, and Vilsa Curto. 2010. Financial Literacy among the Young. *Journal of Consumer Affairs*, 44 (2): 358–380.

Lyons, Angela C. 2008. Risky Credit Card Behavior of College Students. In *Handbook of Consumer Finance Research* (185–207). New York: Springer.

Lyons, Angela C. and Urvi Neelakantan. 2008. Potential and Pitfalls of Applying Theory to the Practice of Financial Education. *Journal of Consumer Affairs*, 42 (1): 106–112.

Lyons, Angela C., Erik Scherpf, and Helen Roberts. 2006. Financial Education and Communication between Parents and Children. *The Journal of Consumer Education*, 23: 64–76.

Mandell, Lewis. 2008. *The Financial Literacy of Young American Adults: Results of the 2008 National Jump$tart Coalition Survey of High School Seniors and College Students*. Washington, DC: The Jump$tart Coalition for Personal Financial Literacy.

Mandell, Lewis and Linda Schmid Klein. 2007. Motivation and Financial Literacy. *Financial Services Review*, 16 (2): 106–116.

Marcolin, Sonia and Anne Abraham. 2006. Financial Literacy Research: Current Literature and Future Opportunities. Paper presented at Proceedings of the 3rd International Conference on Contemporary Business, Leura NSW, Australia, September 21–22.

Martin, Allen and Juan Carlos Oliva. 2001. Teaching Children About Money: Applications of Social Learning and Cognitive Learning Developmental Theories. *Journal of Family and Consumer Sciences: From Research to Practice*, 93 (2): 26–29.

McCormick, Martha Henn. 2009. The Effectiveness of Youth Financial Education: A Review of the Literature. *Journal of Financial Counseling & Planning*, 20 (1): 70–83.

McLoyd, Vonnie C. 1998. Socioeconomic Disadvantage and Child Development. *American Psychologist*, 53 (2): 185–204.

Miedel, Wendy T., and Arthur J. Reynolds. 2000. Parent Involvement in Early Intervention for Disadvantaged Children: Does It Matter? *Journal of School Psychology* 37 (4): 379–402.

Miller, Brent C., J. Kelly McCoy, Terrance D. Olson, and Christopher M. Wallace. 1986. Parental Discipline and Control Attempts in Relation to Adolescent Sexual Attitudes and Behavior. *Journal of Marriage and the Family*, 48 (3): 503–512.

Miller, Margaret, Julia Reichelstein, Christian Salas, and Bilal Zia. 2014. *Can You Help Someone Become Financially Capable?* World Bank. Policy Research Working Paper no. 6745.

NASBE. 2006. *Who Will Own Our Children: The Need for Financial Literacy Standards*. Arlington, VA: National Association of State Boards of Education (NASBE). Report.

NEFE. 2006. *Closing the Gap between Knowledge and Behavior: Turning Education into Action. Financial Counseling and Planning*. Denver, CO: National Endowment for Financial Education. NEFE White Paper Report.

Norvilitis, Jill M. and Michael G. MacLean. 2010. The Role of Parents in College Students' Financial Behaviors and Attitudes. *Journal of Economic Psychology*, 31 (1): 55–63.

Norvilitis, Jill M., Michelle M. Merwin, Timothy M. Osberg, Patricia V. Roehling, Paul Young, and Michele M. Kamas. 2006. Personality Factors, Money Attitudes, Financial Knowledge, and Credit-Card Debt in College Students. *Journal of Applied Social Psychology*, 36 (6): 1395–1413.

OECD. 2005. *Improving Financial Literacy: Analysis of Issues and Policies*. Organisation for Economic Co-operation and Development (OECD) Publishing.

———. 2011. What Can Parents Do to Help Their Children Succeed in School? *PISA in Focus*, 10 (November), 1–4.

———. 2013a. *Evaluating Financial Education Programmes: Survey, Evidence, Policy Instruments and Guidance*. OECD (Organisation for Economic Co-operation and Development).

———. 2013b. *Financial Literacy and Inclusion: Results of OECD/INFE Survey across Countries and by Gender*. OECD (Organisation for Economic Co-operation and Development).

———. 2014a. *Financial Education for Youth: The Role of Schools*. OECD Publishing.

———. 2014b. *International Gateway for Financial Education: Global Database on Financial Education*. OECD. http://www.financial-education.org/gdofe.html.

———. 2014c. *PISA 2012 Results: Students and Money (Volume VI): Financial Literacy Skills for the 21st Century*. PISA, OECD Publishing. DOI: 10.1787/9789264208094-en.

Parsons, Jacquelynne Eccles, Terry F. Adler, and Caroline M. Kaczala. 1982. Socialization of Achievement Attitudes and Beliefs: Parental Influences. *Child Development*, 53: 310–321.

Pinto, Mary Beth, Diane H. Parente, and Phylis M. Mansfield. 2005. Information Learned from Socialization Agents: Its Relationship to Credit Card Use. *Family and Consumer Sciences Research Journal*, 33 (4): 357–367.

Pintrich, Paul R. 2003. A Motivational Science Perspective on the Role of Student Motivation in Learning and Teaching Contexts. *Journal of Educational Psychology*, 95 (4): 667–686.

Pritchard, Mary E. and Barbara Kimes Myers. 1992. Consumer Education: A Partnership between Schools and Families. *Journal of Consumer Education*, 10: 38–43.

Romal, Jane B. and Barbara J. Kaplan. 1995. Difference in Self-Control among Spenders and Savers. *Psychology: A Journal of Human Behavior*, 32: 8–17.

Rutherford, Leann and Sharon A. DeVaney. 2009. Utilizing the Theory of Planned Behavior to Understand Convenience Use of Credit Cards. *Journal of Financial Counseling and Planning*, 20 (2): 48–63.

Sherraden, Michael Wayne. 1991. *Assets and the Poor*. Armonk, NY: ME Sharpe.

Sherraden, Margaret Sherrard. 2010. *Financial Capability: What Is It, and How Can It Be Created*. Center for Social Development.

Sherraden, Margaret, Amanda Moore McBride, Elizabeth Johnson, Stacie Hanson, Fred M. Ssewamala, and Trina R. Shanks. 2005. *Saving in Low-Income Households: Evidence from Interviews with Participants in the American Dream Demonstration*. Washington University. http://gwbweb.wustl.edu/csd/Publications/index.htm.

Sherraden, Margaret S., Lissa Johnson, William Elliott III, Shirley Porterfield, and William Rainford. 2007. School-Based Children's Saving Accounts for College: The *I Can Save* Program. *Children and Youth Services Review*, 29 (3): 294–312.

Sherraden, Margaret Sherrard, Lissa Johnson, Baorong Guo, and William Elliott III. 2011. Financial Capability in Children: Effects of Participation in a School-Based Financial Education and Savings Program. *Journal of Family and Economic Issues*, 32 (3): 385–399.

Shiller, Robert J. 2010. How Nutritious Are Your Investments? *Project Syndicate: A World of Ideas*. Available at http://www.project-syndicate.org/commentary/how-nutritious-are-your-investments-

Shim, Soyeon and Joyce Serido. 2011. *Young Adults' Financial Capability APLUS, Wave 2*. http://www.nefe.org/Portals/0/WhatWeProvide/PrimaryResearch/PDF/APLUSWave2_Final.pdf.

Shim, Soyeon, Bonnie L. Barber, Noel A. Card, Jing Jian Xiao, and Joyce Serido. 2009a. Financial Socialization of First-Year College Students: The Roles of Parents, Work, and Education. *Journal of Youth and Adolescence*, 39 (12): 1457–1470.

Shim, Soyeon, Jing J. Xiao, Bonnie L. Barber, and Angela C. Lyons. 2009b. Pathways to Life Success: A Conceptual Model of Financial Well-Being for Young Adults. *Journal of Applied Developmental Psychology*, 30 (6): 708–723.

Sohn, Sang-Hee, So-Hyun Joo, John E. Grable, Seonglim Lee, and Minjeung Kim. 2012. Adolescents' Financial Literacy: The Role of Financial Socialization Agents, Financial Experiences, and Money Attitudes in Shaping Financial Literacy among South Korean Youth. *Journal of Adolescence*, 35 (4): 969–980.

Sonuga-Barke, Edmund J.S. and Paul Webley. 1993. *Children's Saving: A Study in the Development of Economic Behaviour*. Hove: UK Lawrence Erlbaum Associates Publishers.

van Uden, Jolien M., Henk Ritzen, and Jules M. Pieters. 2014. Engaging Students: The Role of Teacher Beliefs and Interpersonal Teacher Behavior in Fostering Student Engagement in Vocational Education. *Teaching and Teacher Education*, 37: 21–32.

Van Campenhout, Geert and Britt Weyts. 2012. The Need for 'Competent' Financial Education (in Dutch). *De Tijd*, October 20, 2012.

Van Rooij, Maarten C.J., Annamaria Lusardi, and Rob Alessie. 2012. Financial Literacy, Retirement Planning and Household Wealth. *The Economic Journal*, 122 (560): 449–478.

Ward, Scott. 1974. Consumer Socialization. *Journal of Consumer Research*, 1 (2): 1–14.

Way, Wendy L. and Karen C. Holden. 2009. Teachers' Background and Capacity to Teach Personal Finance: Results of a National Study. *Journal of Financial Counseling and Planning Volume*, 20 (2): 64–78.

Webley, Paul. 2005. Children's Understanding of Economics. In *Children's Understanding of Society*, edited by M. Barrett and E. Buchanan-Barrow (43–65). New York: Psychology Press.

Webley, Paul and Ellen K. Nyhus. 2006. Parents' Influence on Children's Future Orientation and Saving. *Journal of Economic Psychology*, 27 (1): 140–164.

Whitebread, David and Sue Bingham. 2013. *Habit Formation and Learning in Young Children*. London: Money Advice Service.

Willis, Lauren E. 2009. Evidence and Ideology in Assessing the Effectiveness of Financial Literacy Education. *San Diego Law Review*, 46: 415–458.

Winter, Joachim K., Kathrin Schlafmann, and Ralf Rodepeter. 2012. Rules of Thumb in Life-Cycle Saving Decisions. *The Economic Journal*, 122 (560): 479–501.

Zia, Bilal. 2013. Financial Education and Behavior Formation: Large-Scale Experimental Evidence from Brazil, May 31–June 1. World Bank.