

Financial Literacy Annotated Bibliography

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What is Financial Literacy?

Financial literacy is described as a person's competency for managing money (Remund, 2010). The concept of financial literacy has not always been known by that name, but the concept itself dates back to the early 1900s and the beginning of consumer education research and initiatives in the United States (Jelly, 1958). Based on a review of research studies since 2000, there are many conceptual definitions of financial literacy. These definitions fall into five categories (a) knowledge of financial concepts, (b) ability to communicate about financial concepts, (c) ability to manage personal finances, (d) skill level in making acceptable financial decisions and (e) ability to plan effectively for future financial needs.

Why is Financial Literacy in Transition Planning Important?

When students graduate from high school they often experience independence that includes (a) moving out on their own, (b) forming new relationships, and (c) supporting themselves financially. However, according to data from the National Longitudinal Transition Survey -2, only 38% of youth with disabilities have lived independently outside the family home within 3 to 5 years of exiting high school. One key aspect of independence is having finance skills. This is an area that youth with disabilities are struggling with; students with disabilities were less likely than their general education peers to have a checking account (59 percent vs. 74 percent) or a credit card (41 percent vs. 61 percent). (Newman et al., 2011).

Browder and Grasso (1999) described why financial literacy is important for individuals with disabilities. According to the authors, individuals with the autonomy to earn, manage, and spend their own money have greater control over their life. Individuals with disabilities often do not have control their own finances due to lack of skills, opportunity, or both. Without the ability to control their finances, these individuals may lack the autonomy to make key decisions about their lives (e.g., where to live, what to eat, what to wear, and what to do for fun).

Workforce Innovation and Opportunity Act (WIOA) was signed into law in 2014. According to WIOA, use of funds can be utilized in supporting financial literacy skill. These skills include (a) budgeting; (b) planning savings; (c) ability to make informed financial decisions concerning education, retirement, and home ownership; (d) manage spending; (e) understand credit and debt; (f) awareness of all aspects of credit reports; (g) ability to understand, evaluate, and compare financial services, products, and activities; and (h) support for financial literacy of non-English speakers (WIOA, 2014).

What Does the Literature Say About Financial Literacy in Transition Planning?

Financial literacy skills are essential to independent living including paying bills, grocery shopping, managing a budget, and participating in leisure activities. These are just a few of the daily living activities that require money in order to participate. Research with students with disabilities has focused primarily on components of personal finance, such as (a) using a checking account (Davies, Stock, & Wehmeyer, 2003), (b) using an ATM (Scott, Collins, Knight, & Kleinert, 2013), and (c) purchasing skills (Xin, Grasso, Dipipi-Hoy, & Jitendra, 2005). The two most common strategies to teach basic finance skills (e.g., purchasing) are community-based and simulated instruction (Rowe & Test, 2012). The purpose of this annotated bibliography is to provide resources for individuals, educators, families, and other related personnel in the area of financial literacy.

References

- Braunstein, S., & Welch, C. (2002). Financial literacy: An overview of practice, research, and policy. *Federal Reserve Bulletin*, 88, 445-457.
- Browder, D. M., & Grasso, E. (1999). Teaching money skills to individuals with mental retardation. *Remedial and Special Education*, 20, 297-308.
- Davies, D. K., Stock, S. E., & Wehmeyer, M. L. (2003). Utilization of computer technology to facilitate money management by individuals with mental retardation. *Education and Training in Developmental Disabilities, 38,* 106-112.
- Newman, L., Wagner, M., Knokey, A.-M., Marder, C., Nagle, K., Shaver, D., & Schwarting, M. (2011). The post-high school outcomes of young adults with disabilities up to 8 years after high school (A report from the National Longitudinal Transition Study–2 [NLTS2; NCSER 2011-3005]). Menlo Park, CA: SRI International.
- Redmund, D. L. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *The Journal of Consumer Affairs*, 44, 276-295.

- Rowe, D. A., & Test, D. W. (2012). Effects of simulation to teach students with disabilities basic finance skills. *Remedial and Special Education*, 1-12. doi: 10.1177/0741932512448218
- Scott, R., Collins, B., Knight, V., & Kleinert, H. (2013). Teaching adults with moderate intellectual disability ATM use via the iPod, *Division on Autism and Developmental Disabilities*, 48, 190-199.
- U.S. Department of Labor. (2015). *Workforce Innovation and Opportunity Act of 2014.*Retrieved from http://www.doleta.gov/wioa/
- Xin, Y., Grasso, E., Dipipi-Hoy, C., & Jitendra, A. (2005). The effects of purchasing skill instruction for individuals with developmental disabilities: A meta-analysis. *Exceptional Children*, *71*, 379-400.

Intervention Studies

- Alberto, P. A., Cihak, D. F., & Gama, R. I. (2005). Use of static picture prompts versus video modeling during simulation instruction. *Research in Developmental Disabilities*, 26, 327-339.
 - The purpose of this study was to compare the effectiveness and efficiency of static picture prompts and video modeling as classroom simulation strategies in combination with in vivo community instruction.
 - Students with moderate intellectual disabilities were taught to withdraw money from an ATM and purchase items using a debit card.
 - Results indicated both simulation strategies were effective and efficient at teaching the skills.
- Alcantara, P. (1994). Effects of videotape instructional package on purchasing skills of children with autism. *Exceptional Children*, *61*, 40-55.
 - The purpose of this study is to evaluate the effects of a videotape instructional package (i.e., viewing videotapes, on-site prompting, and reinforcement) on the acquisition and generalization grocery-purchasing skills in the community.
 - Results indicated students were able to acquire the skills taught and transfer these skills other settings.
 - After training in two stores, all students increased their level of performance in the third store.
 - This study provided evidence that the use of a videotape instructional package is an effective training tool to teach community survival skills.

- Ayres, K., Langone, J., Boon, R., & Norman, A. (2006). Computer-based instruction for purchasing skills. *Education and Training in Developmental Disabilities*, 41, 253-263.
 - The purpose of this study was to investigate use of computers and video technology to instruct four middle school students with intellectual disabilities to correctly make purchases in a community grocery store using the dollar plus purchasing strategy.
 - Results indicated program was effective at teaching the dollar plus purchasing strategy to three out of four participants and students were able to generalize those skills to the natural environment.
- Bates, P.E., Cuvo, T., Miner, C.A., & Korabek, C.A. (2001). A simulated and community-based instruction involving persons with mild and moderate mental retardation. *Research in Developmental Disabilities*, 22, 95-115.
 - This study used simulated instruction and/or community training of four functional living tasks and compared those across groups of adolescents and young adults with mild and moderate intellectual disabilities.
 - Forty individuals participated in the assessment and training activities of this study, including 20 participants with mild intellectual disabilities and 20 individuals with moderate intellectual disabilities.
 - They evaluated the differences associated with (a) level of intellectual disability,
 (b) simulated versus community-based instruction, and (c) assessment scores in school and community settings.
 - Results indicated participants with mild intellectual disabilities performed better than their counterparts with moderate intellectual disabilities on the simulated tasks and in the community settings.
 - Participants with mild intellectual disabilities were more successful in generalizing from the simulated instructional experiences to the community settings than were their counterparts with moderate intellectual disabilities.
 - Authors indicated the need to more closely examine the design and delivery of functional living skills instruction involving individuals with differing levels of intellectual disabilities. Specifically, to examine the effectiveness of instructional simulations for teaching functional living skills to students across disability level.

- Bourbeau, P., Sowers, J., & Close, D. (1986). An experimental analysis of generalization of banking skills from classroom to bank settings in the community. *Education and Training of the Mentally Retarded*, 21, 98-107.
 - The purpose of this study was to examine the effectiveness of a banking curriculum on secondary students with mild intellectual disabilities banking skills in the community setting.
 - Four participants with mild intellectual disability were trained individually in a simulated bank setting at their school. First, they measured their performance of savings account operations in the classroom. Second, at the bank for which the curriculum was designed. Lastly, their performance was measured at another bank in the community for which subjects were not trained.
 - Results indicated all of the participants learned the skills and their performance improved. Students were able to generalize newly trained skills to the community setting.
 - Additionally all participants received additional in-vivo training at the target bank to achieve perfect performance. Weekly maintenance probes were taken and showed that subjects retained skills after the training was complete.
- Branham, R. S., Collins, B. C., Schuster, J. W., & Kleinert, H. (1999). Teaching community skills to students with moderate disabilities: Comparing combined techniques of classroom simulation, videotape modeling, and community-based instruction. *Education and Training in Mental Retardation and Developmental Disabilities*, 34, 170-181.
 - The purpose of this study was to investigate the effects of constant time delay instruction on the community skills (i.e., mailing a letter, cashing a check, and crossing the street) with secondary students with moderate intellectual disabilities.
 - The instructional format was counterbalanced across skills and students and consisted of (a) classroom simulation plus community based instruction, (b) videotape modeling plus community based instruction, and (c) classroom simulation plus videotape modeling plus community based instruction.
 - Results indicated that all instructional formats were effective in teaching the skills and participants were able to generalize those skills in the community.
 - Additionally, data showed the combination of classroom simulation and community based instruction to be the most efficient procedure across participants.

- Brushwein, L., McLaughlin, T. F., Derby, K. M., & Shank, L. (2014). The effects of using direct instruction and model, lead, and test with four young adults with developmental disabilities. *International Journal of English and Education, 3,* 437-455.
 - The purpose of this study was to investigate the effects of think to say for coin identification, counting and giving change on the fluency and accuracy of those skills with four 20-year-old-students with developmental disabilities.
 - The intervention was conducted in a special education classroom located at a community college campus.
 - During the intervention, students were taught using the model, lead, and test (MLT) error correction procedure.
 - Results showed an increase in correct responses and a decrease in errors.
 - This study demonstrated that systematic instruction and MLT were shown to be an effective way to (a) increase coin identification, (b) how to give the proper dollar amounts, and (c) how to give proper change.
- Cihak, D., & Grim, J. (2008). Teaching students with autism spectrum disorder and moderate intellectual disabilities to use counting-on strategies to enhance independent purchasing skills. *Research in Autism Spectrum Disorders*, 2, 716-727
 - The purpose of this study was to investigate the effects of the use of counting-on math skills in conjunction with the next-dollar strategy on students with autism and intellectual disabilities independent purchasing skills.
 - Four students with autism and intellectual disabilities successfully attained these skills and were able to generalize counting-on and next dollar skills to the community setting.
 - Maintenance data indicated students maintained both skills at a 100% level for 6 weeks.
- Danes, S. M., Huddleston-Casas, C., & Boyce, L. (1999). Financial planning curriculum for teens: Impact evaluation. *Journal of Financial Counseling and Planning, 10,* 26-39
 - The purpose of this study was to investigate the impact of a high school financial planning curriculum on the financial knowledge, behavior, and self-efficacy of teens.
 - 4,107 teens nationally participated in this study.
 - Results showed statistically significant changes in financial knowledge, behavior, and self-efficacy directly after studying the curriculum and were maintained for three months following their completion of the curriculum.

- Results indicated 50% of teens demonstrated gains in knowledge, 30% gains in behavior, and 40% increased their confidence in managing their money.
- Davies, D. K., Stock, S. E., & Wehmeyer, M. L. (2003). Utilization of computer technology to facilitate money management by individuals with mental retardation. *Education and Training in Developmental Disabilities, 38,* 106-112.
 - The purpose of this study was to investigate the effects of a specially designed money management software prototype on the personal financial management skills of individuals with intellectual disabilities.
 - The software described in this report provided users the capacity to store and retrieve common payments, review automatic posting of checks to their account, automatic balancing of their account, and the ability to print checks.
 - Results indicated all participants performed significantly better on all three measures (p < .001). Thus demonstrated the use of the money management system could enhance financial management skills of individuals with intellectual disabilities.
- Denny, P. J., & Test, D. W. (1995). Using the one-more-than technique to teach money counting to individuals with moderate mental retardation: A systematic replication. *Education and Treatment of Children, 18,* 422-432.
 - The purpose of this study was to determine the effects of using the one-morethan technique on the money counting skills of individuals with intellectual disabilities.
 - This study systematically replicated previous research on using the one-morethan strategy.
 - This study used one, five, and ten dollars bills and training all dollar amounts simultaneously rather than sequentially.
 - The participants included three high school students with moderate intellectual disabilities and who were enrolled in community based training activities.
 - Results demonstrated that all three students learned to use the one-more-than strategy to count out non-trained amounts and complete purchases in the community.
- Hsu, G., Tang, J., & Hwang, W. (2014). Effects of extending the one-more-than technique with the support of a mobile purchasing assistance system. *Research in Developmental Disabilities*, 35, 1809-1827.
 - The purpose of this study was to investigate the effects of extending the onemore-than technique with the support of using a mobile purchasing system (MPAS) on the independently purchasing skills of secondary students with intellectual disabilities.

- They assessed the effectiveness of the one-more-than technique on independent purchases for items with prices beyond the participants' money counting skills.
- Results indicated techniques with the MPAS could effectively convert participants' initial money counting problems into useful advantages for successfully promoting the independent purchasing skills and mobile technologies potentially could be a permanent prompt for those with intellectual disabilities and assist them in making purchases in their daily lives.
- Maintenance data indicated students were able to maintain the skills for eight weeks and were able to generalize these skills across three community settings.
- McDonnell, J., & Ferguson, B. (1989). A comparison of time delay and decreasing prompt hierarchy strategies in teaching banking skills to students with moderate handicaps. *Journal of Applied Behavior Analysis*, 22, 85-91.
 - This purpose of this study was to examine the effects of a time delay and decreasing prompt hierarchy intervention on students with intellectual disabilities ability to cash checks and use an automatic teller.
 - Four students with moderate intellectual disabilities participated in the study.
 - Results demonstrated both strategies led to the attainment of target tasks.
 - It also indicated decreasing prompt hierarchy was more efficient for these students.
 - Maintenance data indicated students were able to maintain skills for eight weeks.
- Mechling, L. C., Gast, D. L., & Barthold, S. (2003). Multimedia computer-based instruction to teach students with moderate intellectual disabilities to use a debit card to make purchases. *Exceptionality*, 11, 239-254.
 - The purpose of this study was to investigate the effectiveness of a multimedia program including (a) interactive computer program, (b) video captions, and (c) still photographs on students moderate intellectual disabilities ability to make purchases using a debit card and an automated payment machine (APM).
 - The intervention sessions occurred through simulations using video captions and still photographs that replicated the process for using the APM. Following this instruction, students were assessed on these skills at a community store.
 - Results indicated multimedia program was effective in teaching students to generalize skills in the community setting on the operation of the APM using a debit card.
- Nietupski, J., Welch J., & Wacker, D. (1983). Acquisition, maintenance, and transfer of grocery item purchasing skills by moderately and severely handicapped students. *Education and Training of the Mentally Retarded*, 18, 279-286.

- The purpose of this study was to investigate the effects of using a pocket calculator to purchase nontaxable and taxable supermarket items in conjunction with picture prompt cards on students with moderate to severe disabilities grocery purchasing skills.
- Results indicated all four students reached criterion on the eight-step task analysis. Then following these four students, 12 additional students were taught the procedures to perform these tasks.
- Maintenance data indicated students were able to maintain these skills for three months.
- Rowe, D. A., Cease-Cook, J., & Test, D. W. (2011). Effects of simulation training on making purchases with a debit card and tracking expenses. *Career Development for Exceptional Individuals*, *34*, 107–114. doi:10.1177/0885728810395744
 - The purpose of this study was to investigate the effects of simulation training on student's ability to make purchases with a debit card and track their expense.
 - The intervention included classroom simulation using static picture prompts and measured the impact on students' ability to acquire, maintain, and generalize skills necessary to use a debit card to make a purchase and track their expenses.
 - Results indicated a functional relation between simulated instruction and students' ability to use a debit card to make a purchase and track their expenses in a check register.
 - Maintenance data indicated all three students maintained their newly acquired skills for 4 weeks and students were able to generalize these skills to three community sites.
- Rowe, D. A., & Test, D. W. (2012). Effects of simulation to teach students with disabilities basic finance skills. *Remedial and Special Education*, *34*, 237-248.
 - The purpose of this study was to examine the effects of classroom simulation using static picture prompts on students' ability to make a purchase using a debit card and track expenses by subtracting purchase amounts and adding deposits into a check register.
 - Results demonstrated a functional relation between simulated instruction and students' ability to complete a 20-step task analysis of debit card use and expense and deposit tracking in a check register.
 - Generalization data showed the students were able to generalize purchasing skills to new community settings for up to 5 weeks after intervention.

- Sandknop, P.A., Schuster, J.W., Wolery, M., & Cross, D.P. (1992). The use of an adaptive device to teach students with moderate mental retardation to select lower priced grocery items. *Education and Training in Mental Retardation*, *27*, 219-229.
 - The purpose of this study was to examine the effects of the use of an adaptive device to teach students with moderate intellectual disabilities ability to select lower priced grocery items using an adaptive number line.
 - Results indicated all students reached criterion on the skill, maintained the skill
 with at least 90% accuracy for up to 14 weeks after training, and were able to
 generalize the skill from their classroom to a community grocery store with at
 least 97% accuracy.
 - Students also improved their ability to compare and select the lower priced item
 when the comparison involved two prices with a different number of digits in
 each price.
- Scott, R., Collins, B., Knight, V., & Kleinert, H. (2013). Teaching adults with moderate intellectual disability ATM use via the iPod, *Education and Training in Autism and Developmental Disabilities*, 48, 190-199.
 - The purpose of this study was to investigate the effects of using an iPod to teach adults with moderate intellectual disabilities to use the ATM.
 - iPods were selected because they may be an effective, portable, and socially acceptable device for adults to use.
 - The participants included three college-aged students with moderate intellectual disability (MSD) and they were taught to use a self-operated Pod cast containing video modeling and auditory prompts presented on an iPod to withdraw money from an ATM.
 - Results indicated a function relation between the pod cast via the iPod and students" percentage of correct steps completed on the task analysis.
 - Generalization data showed students were able to generalize the skills to a new setting in the community.
- Test, D. W., Howell, A., Burkhart, K., & Beroth, T. (1993). The one-more-than technique as a strategy for counting money for individuals with moderate mental retardation, *Division on Autism and Developmental Disabilities*, 28, 232-241.
 - Two studies were conducted to investigate the effects of teaching the one-morethan money counting strategy to individuals with intellectual disabilities.
 - The first experiment examined two adults that work in the community receiving long-term, supported employment services.
 - The second experiment focused on three students in a community-based training program.

- Results for both studies, indicated the one-more-than technique was effective
 on increasing the money counting skills and participants were able to generalize
 those skills to amounts they did not receive training on and to making purchases
 in the community.
- Westling, D. I., Floyd, J., & Carr, D. (1990). Effect of single setting versus multiple setting training on learning to shop in a department store. *American Journal of Mental Retardation*, *94*, 616-624.
 - The purpose of this study was to examine the effects of single setting training versus multiple setting training on the shopping skills of students with intellectual disabilities.
 - Participants included 15 students aged 13-19 yrs. old with intellectual disabilities.
 - The students were split into two groups and one group received training in a single department store. The second group received training in three different stores.
 - Data were taken on their operational behaviors, social behaviors, number of sessions require to reach criterion, and number of settings where the criterion was reached
 - Results indicated there were no differences between groups related to training condition. These results show that for some students with intellectual disability, training in a single setting or in multiple settings will be sufficient for generalization of the skills.
- Zencius, A. H., Davis, P. K., & Cuvo, A. J. (1990). A personalized system of instruction for teaching checking account skills to adults with mild disabilities. *Journal of Applied Behavior Analysis*, 23, 245-252.
 - The purpose of this study was to investigate the effects of a personalized system of instruction to teach checking account skills to individuals with mild disabilities.
 - 8 participants were divided into two groups were taught to write checks, complete deposit slips, and reconcile monthly bank statements using a selfpaced manual.
 - Data were collected for four participants on their ability to generalize skills from the classroom to community sites and results showed almost perfect scores.
 - A multiple probe design was used and results indicated acquisition occurred sequentially for each of the skills only after participants received training using the self-paced manual.
 - Maintenance data indicated participants were able to maintain skills during follow up sessions.

 Results indicated evidence of the effectiveness and adaptability of a personalized system of instruction for teaching monetary skills to individuals with mild disabilities

Literature Review/Meta-Analysis

Browder, D. M., & Grasso, E. (1999). Teaching money skills to individuals with mental retardation. *Remedial and Special Education*, 20, 297-308.

- This was a review of the research literature of studies that taught money skills or the use of money to individuals with intellectual disabilities.
- From this review, 43 studies were identified that provided instruction for individuals with mild, moderate, or several intellectual disabilities.
- The majority of the studies taught money skills in the context of making purchases or included classroom instruction on money computation.
- From this research synthesis, guidelines are offered for future research and practice.
- Xin, Y., Grasso, E., Dipipi-Hoy, C., & Jitendra, A. (2005). The effects of purchasing skill instruction for individuals with developmental disabilities: A meta-analysis. *Exceptional Children*, *71*, 379-400.
 - This meta-analysis examined the impact of functional mathematics instruction, specifically purchasing skill instruction, on individuals with disabilities.
 - This analysis identified and reviewed 28 intervention studies. All of the studies used single-subject research designs, a nonparametric procedure, the percentage of non-overlapping data (PND), was used to estimate treatment effects.
 - Results indicated a moderately positive effect for purchasing skill instruction (median PND = 87%). Maintenance (median PND = 100%) and generalization effects (median PND = 86%) revealed large and moderate effects.
 - Further comparisons were one for variables such as participants' entry skills, money skill adaptations, type of purchase, error correction procedure, and instructional setting were related to the effectiveness of the treatment.

Resource Articles

Dahlem, K. A. (2012). Financial and future planning for siblings with special needs and disabilities. *Center for Financial Security, Research Brief*, 11.

 This report describes the findings from two focus groups and additional research on how families address financial and future planning for adult family members with disabilities.

- Findings discuss families' experiences with future and financial planning for (a) a sibling's long-term needs, (b) options for guardianships, (c) understanding Social Security benefits, (d) estate planning, (e) special needs trusts, and (f) the impact on other family members.
- This report also includes program descriptions and contact information for organizations and agencies that provide support and information for families with adult siblings with disabilities.

Jump\$tart Coalition for Personal Financial Literacy (2007). *National standards in K-12 personal finance education*. Retrieved from http://www.jumpstart.org/national-standards.html.

- The National Standards are based on personal finance knowledge that youth need to learn starting in kindergarten through 12th grade school years (K-12) in order for them to emerge as independent adults prepared to make astute financial decisions that will enable them to live a life of economic wellbeing.
- The standards were designed to guide classroom instruction and the development of financial education programs. They can also be used to guide informal education outside of the classroom, at home, and in postsecondary and adult education.

Tachau, S., & Beck, T. (2013) Cents and Sensibility: A guide to money management for people with disabilities. Aid for Pennsylvania Assistive Technology Foundation.

• Lessons for teaching financial literacy to students with disabilities.

Why is Financial Literacy Important?

Fox, J., Bartholomae, S., & Lee, J. (2005). Building the case for financial education, The Journal of Consumer Affairs, 39, 195-214.

- This article discussed the need for financial education among Americans.
 Indicated alarming rates of bankruptcy, high consumer debt levels, low savings rates, and other negative outcomes that may be the results of low financial literacy levels and poor family financial planning.
- This article also provided an overview of the programs that have been developed to improve financial literacy. Additionally, a short review of the current evidence on how effective financial education programs are.
- This article advocated for the adoption of a comprehensive framework to help those who are currently delivering financial education.

- This article described a five-tiered approach to program evaluation and outlined a general framework to assist with the evaluation of financial education.
- Hilgert, M. A., & Hogarth, J. A. (2003). Household financial management: The connection between knowledge and behavior. *Federal Reserve Bulletin*, 309-322.
 - This article discussed the connection between financial knowledge and financial behavior. Authors reviewed the issue of financial education and how this topic has risen in importance across several groups of people including (a) educators, (b) community groups, (c) businesses, (d) government agencies, and (e) policymakers.
 - Additionally, this article shared number and types of financial education programs have grown dramatically since the mid-1990s.
 - This article explored the connection between knowledge and behavior, focused on four financial-management activities (a) cash-flow management, (b) credit management, (c) saving, and (d) investment.
 - Data were shared from the University of Michigan's monthly Surveys of Consumers conducted during two months 2001. Also, data from the Survey of Consumer Finances were used in order to provide a comparison.
- Hopley, V. (2003). Financial education: What is it and what makes it so important. *Community Reinvestment Report, Spring,* 1-12.
 - This article discusses the need for financial education. It shares that financial knowledge helps people make informed financial decisions. This issue has become increasingly important for financial institutions and community economic development practitioners.
 - They also share that rising consumer debt and low household saving rates indicate Americans' growing need for financial education
- Mansfield, P. M., & Pinto, M. B. (2008). Consumer vulnerability and credit card knowledge among developmentally disabled citizens. *The Journal of Consumer Affairs*, *42*, 425-438.
 - The purpose of this study was to explore the basic credit card knowledge of individuals with a developmental disability and the impact it has on their consumer vulnerability.
 - Participants in this study were all diagnosed with a developmental disability and appeared to have some financial knowledge, however, during the study it showed that most of them did not have a strong knowledge of financial literacy.
 - Results from this study suggest that some individuals with developmental disabilities are at risk for vulnerability due to their lack of credit card knowledge.

- Marcolin, S., & Abraham, A. (2006). Financial literacy research: Current literature and future opportunities. *Conference paper*, 21-22.
 - This paper reviewed, compared, and analyzed studies conducted in Australia, the United States and the United Kingdom to identify areas of both commonality and inconsistency concerning financial literacy.
 - Findings discussed gaps in financial literacy research and opportunities for future research.

McCormick, M. H. (2009). The effectiveness of youth financial education: A review of the literature. *Association for Financial Counseling and Planning*, 20, 70-83.

- This article reviewed literature and explored the current state of youth financial education and policy. It also included definitions of financial literacy and measures of effectiveness.
- Additionally, reported on effectiveness data, best practices for financial literacy education, and highlighted controversies associated with financial education.
- Lastly, provided a discussion of gaps in knowledge about financial education and suggestions for future research.

Tennyson, S., & Nguyen, C. (2001). State curriculum mandates and student knowledge of personal finance. *Journal of Consumer Affairs*, *35*, 241-262.

- This study investigated the relationship between high school student's scores on a test of personal financial literacy and their states' implementation of a personal finance curriculum.
- At the time of this study, 20 of 31 states included in the study had an educational policy in the area of personal financial management.
- Results indicated that curriculum mandates are not generally associated with higher student scores.
- However, students in states that required specific financial education course work scored significantly higher than those in states with either a general mandate or with no mandate.

NTACT Financial Literacy Resources

Each year NTACT conducts a review of the literature to determine effective practices. For each practice, a brief Practice Description is developed. In addition, for most practices at least one research-to-practice lesson plan starter is developed. Each lesson plan starter includes an objective, materials, content, instructional plans, and a strategy for evaluating student learning. Below are links to the NTACT Practice Descriptions relevant to financial literacy with links to lesson plan starters if available.

Extension of Career Services after Graduation

Promising Practice

• Extension of Services after graduation for Financial Literacy

Banking Skills

Promising Practices

- Community based instruction to teach banking skills
- Constant time delay to teach banking skills
- Using Simulation to Teach Banking Skills

Purchasing Skills

Evidence Based Practices

• Using Simulation to teach purchasing skills

Promising Practices

- Progressive time delay to teach purchasing skills
- Community based instruction to teach grocery shopping skills
- System of least-to-most prompts to teach grocery shopping

Research Based Practices

- Community Based Instruction to teach purchasing skills
- Computer Assisted Instruction to teach grocery shopping
- Least to Most Prompting to teach purchasing skills
- One-More-Than strategy to teach purchasing skills
- Response Prompting to teach grocery shopping skills
- Response Prompting to teach purchasing skills

Counting Money Skills

Promising Practices

• One-more-than strategy to teach counting money

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