Financial Literacy in the Elementary Classroom: Integrate not Recreate

Lindsay A Gold, *University of Dayton*

Abstract: *Recently, Ohio adopted a set of financial literacy standards for Grades K–12. While these guidelines may be familiar to some, they are a new requirement for teachers in the early grades. It's important for primary educators to understand that the new standards are not an isolated set of requirements, but rather are intended to guide the inclusion of financial concepts and skills into an already established curriculum. Following a discussion of the meaning of financial literacy in the elementary classroom and its importance for young students, the author discusses strategies for aligning classroom activities to the new financial literacy standards.* ***Keywords:*** *financial literacy, standards*

1 Introduction

Calls to include "financial literacy" in the school curriculum have become more widespread as policymakers have looked to schools to prepare financially literate adults. While changes have focused on middle and secondary level students, relatively little attention has been paid to educating our youngest consumers. In this article, I define financial literacy, why it applies to elementary students, what it means for mathematics educators in the early grades, and how the new Ohio Financial Literacy Standards (OFLS) for K–6 can be implemented and integrated into an already existing mathematics curriculum.

2 What is Financial Literacy?

According to the Jump$tart Coalition's *National Standards in K–12 Personal Finance Education*, financial literacy is "the ability to use knowledge and skills to manage one's financial resources effectively for a lifetime of financial security" (2017, p. 1). But what does this mean to a kindergarten student? A sixth grader? Recognizing that elementary children are not cognitively ready to understand higher-order financial literacy concepts and skills, financial literacy in Grades K–6 involves students learning developmentally appropriate financial skills and concepts that lay the foundation for future progression into financially literate adults. Addressing basic notions of financial literacy in the early grades, we foster deeper understanding of mathematical content and important life skills.

3 Why is Financial Literacy Important?

Though research on financial literacy at the primary level is scant, studies that are available confirm the importance of early implementation. The Assets and Education Initiative (2013) notes that "financial resources have their strongest effect on children's educational outcomes early on in the child's life, not at the point of college entry" (p. 16). The Jump$tart Coalition agreed by "recognizing

that children develop an interest in money and begin to learn financial basics well before entering school" (2017, p. 4). The President's Advisory Council on Financial Capability for Young Americans (2015) stated that "while evidence is scarcer on the financial capability of children under age 15, we believe that today's teens and young adults who lack financial capability not long ago were children who did not have opportunities to gain financial knowledge and skills" (p. 8). The Council went on to report that, "Despite the clear need for financial education for young people to make sound decisions and have more positive outcomes, too many children do not obtain financial education early in their lives" (p. 8).

The National Association of State Boards of Education (NASBE) supports this claim recommending that "the earlier a student begins learning these concepts, the more opportunities schools will have to impact behavior" (2006, p. 20). A study by Friedline (2015) revealed, "that children are developmentally capable of economic agency as early as age five or six" (p. 57). At this young age, children have the financial capability to understand simple saving behaviors and policies that aim at developing these economic agencies (Sherraden, Johnson, Barong, & Elliot, 2013; Friedline, 2015). The consensus is that "economic and financial education ought to start early and be repeated often" (Schug and Hagedorn, 2005, p. 68).

4 What Does This Mean for K–6 Mathematics Educators?

Though the *Personal Finance Guidelines and Benchmarks* document was first created by the Jump$tart Coalition in 1988, many elementary educators are not aware of its existence (Gold, 2016). Now in its fourth edition and second revision, the 2017 National Standards in K–12 Personal Finance Education includes new kindergarten benchmarks (Jump$tart, 2017) [1]. Although national standards of financial literacy have not been adopted, some states, including Ohio, have taken the initiative to improve financial literacy.

Historically, Ohio school children have performed poorly on measures of financial literacy (Council for Economic Education, 2014). In response, Ohio House Bill 391 was passed in 2016 with the goal to improve financial literacy. The University of Cincinnati's Economics Center for Education and Research was earmarked to provide professional development to teachers in Grades 1–6 through the $318,000 funded Smart Ohio program. Richardson (2016) writes that, "The program centers on$martPath, a new online curriculum offered free of charge to educators and students across the globe that incorporates lessons on both economic and financial literacy in an interactive curriculum tailored to students in grades 1-6" (para. 3). Due to positive pilot study results, Smart Ohio has continued its work. In February 2018, the State Board approved the newly revised financial literacy standards for Grades K–12. The financial literacy content standards for Grades 1–6 are broken into two bands, K–3 and 4–6. The K–3 band contains eight standards:

1. Choices can be made with your money. Choices include spending, saving and donating. Money can also be saved in financial institutions.
2. Competencies (knowledge and skills), commitment (motivation and enthusiasm), competition (globalization and automation), training, work ethic, abilities and attitude are all factors impacting one's earning potential and employability.
3. People may receive money as gifts, allowance or income. People earn income by working.
4. Financial responsibility includes the development of a spending and savings plan (personal budget).
5. An informed consumer makes decisions on purchases that may include a decision-making strategy to determine if purchases are within their budget.

[1] Kindergarten benchmarks were first included in the standards in 2015, with minor modifications made in a 2017 revision.

6. Recognize that money is needed to purchase goods and services.
7. Borrowing includes at least two people who agree to a transaction. There are responsibilities with borrowing.
8. Individuals must protect their identity, money and property.

The Grades 4–6 band builds upon the K–3 guidelines and contains ten standards as follows:

1. People have limited resources and must prioritize their needs and wants. Saving and/or investinga percentage of income contributes to an individual's financial well-being. Professionals can help individuals determine financial goals.
2. Competencies (knowledge and skills), commitment (motivation and enthusiasm), competition (globalization and automation), training, work ethic, abilities and attitude are all factors impacting one's earning potential and employability.
3. People may receive money as gifts, allowance or income. Incomes can vary based on knowledge, skills and experiences.
4. Recognize that people pay taxes on the money they earn. Money collected from taxes is used to provide local, state and national government services.
5. Financial responsibility includes the development of a spending and savings plan (personal budget).
6. An informed consumer makes decisions on purchases that may include a decision-making strategy to determine if purchases are within their budget.
7. Examine the different ways that people pay for goods and services.
8. People may have to borrow money for large purchases. There are financial responsibilities with borrowing.
9. Saving today can help meet future goals, including education.
10. Individuals must protect their identity, money and property.

Both sets of standards were developed using research-based materials and expert knowledge. Both align with the 2015 National Standards in K–12 Personal Finance Education. The standards were created to scaffold in a developmentally appropriate fashion with students in the early grades engaging in financial literacy concepts in preparation for more advanced financial concepts in the middle grades.

5 How Do Mathematics Teachers Address the Standards?

The financial literacy content standards are meant to be embedded into the curriculum and not taught in isolation. The key to successful implementation is integration. The standards aren't categorized by content area (e.g., social studies, mathematics). Rather, they are transdisciplinary—teachers across content areas and levels are expected to discuss and explore financial concepts and skills with their students.

As mathematics teachers, it is our responsibility to share in the mission of adopting the new standards. As I investigated ways I could apply the financial literacy standards in my teaching, I found many possibilities! For instance, when kindergarten students explore counting and cardinality (Ohio's Learning Standards: Mathematics [OLSM], K.CC), why not let them count pennies? Using real American pennies is a great way to investigate the attributes of the coin, such as size, color, value, etc., and also promotes understanding the relationship between numbers and quantities. As students count, they discover the one-to-one correspondence between the number of pennies and the numeral representation. Students attend to precision through their counting and identification of the number of pennies in the set (Standards for Mathematical Practice [SMP] 6). Because a penny is worth one cent, counting with pennies is an excellent introduction to coins

having value. As an extension, teachers can address the value of money and how it is needed to purchase goods or services (Ohio's Learning Standards: Financial Literacy [OLSFL], K–3.6).

In Grades 1–3, students can use nickels and dimes to skip count by fives and tens (OLSM 2.NBT.2), develop algebraic reasoning by determining the missing amount in a collection of pennies (OLSM 1.OA.8), use financial concepts to justify their reasoning for making a particular purchase involving money (SMP 3; OLSFL, K–3.5), and collaborate with others to compare how many unique ways coins can be combined to total a dollar (OLSM 3.MD.1b).

Activities involving spending and saving are beneficial for all grade levels and encourage the use of mathematical operations. Students' previous experiences with allowances or receiving money as gifts is an authentic setting for discussing decisions regarding what to do with one's money (OLSFL, K–3.3; 4–6.3), leading to various scenarios involving mathematical functions and applications. For instance, students can consider what it means to wait for something and the idea of saving their money in a bank or other financial institution (OLSFL, K–3.1; 4–6.1). Spending can be simulated through authentic mathematical experiences involving exchanging money for goods or services using classroom stores, book fairs, or other in-school opportunities (OLSFL, K–3.6; 4–6.7). Also, budgets (OLSFL, K–3.4; 4–6.5) can be created to practice the mathematical properties (OLSM 1.OA.3; 2.NBT.5; 3.OA.5), the four operations (OLSM K.OA.2; 1.NBT.4; 2.NBT.7; 3.NBT.2; 4.OA.3), fractions (OLSM 3.NF.1; 4.NF.3a; 5.NF.1; 6.NS.1), decimals (OLSM 4.MD.2; 5.NBT.7), positive and negative numbers (OLSM 6.NS.5) and even data and measurement through graphs (OLSM 3.MD. 3; 4.MD.4; 5.MD.2). The important takeaway is that these activities are integrated and purposeful, as to not add more to the already full plate of an elementary teacher.

Since the integrated mathematics curriculum includes children's literature, teachers can help build financial understanding and skills through story. Books such as *Counting with Common Cents: Penny's Journey* (2014), *Money Mama and the Three Little Pigs* (2003), *Our Vacation Budget: Working with Decimals* (2008), and *Ayo's Money Jar* (2016) communicate important aspects of the financial literacy standards through situations that include mathematical applications and processes. By incorporating appropriate literature, we support an integrated curriculum and provide cohesion to the standards being addressed.

6 Conclusion

Mathematics educators need to recognize that financial literacy concepts and skills can be interwoven into the curriculum they are already teaching. The impact that starting these conversations at an early age is profound, playing a significant role in the development of financially literate adults. Teaching students to be responsible and having conversations regarding money in the elementary grade levels opens a door to rich dialogue that students might not otherwise experience. Teaching financial literacy in an integrated elementary classroom is a step in the right direction for educating our littlest consumers on a life skill that they will soon face independently as young adults.

References

Assets and Education Initiative (2013). Building Expectations, Delivering Results: Asset-based Financial Aid and the Future of Higher Education. In W. Elliot (Ed.), *Biannual report on the assets and education field*. Lawrence, KS: Author. Retrieved from https://aedi.ku.edu/sites/aedi.ku.edu/files/docs/publication/CSA/reports/Full-Report.pdf

Council for Economic Education (2014). *Survey of the states 2014: Economic and personal finance education in our nation's schools*. New York: NY: Author. Retrieved from http://www.councilforeconed.org/wp/wp-content/uploads/2014/02/2014-Survey-of-the-States.pdf

Gold, L. A. (2016). *Teachers' perceptions regarding financial literacy in Kindergarten through Grade 2* (Doctoral dissertation). Retrieved from https://etd.ohiolink.edu/!etd.send_file?accession=ohiou1470600168&disposition=inline

Fadirepo, C. H. (2016). *Ayo's money jar*. San Bernardino, CA: CreateSpace Independent Publishing Platform.

Friedline, T. (2015). A developmental perspective on children's economic agency. *Journal of Consumer Affairs, 49*(**1**), 39–68.

Jump$tart Coalition for Personal Financial Literacy. (2017). *The national standards in K12 personal finance education* (4th ed.). Washington, DC: Author. Retrieved from http://www.jumpstart.org/national-standards.html

Mackey, L. (2003). *Money mama and the three little pigs*. Agoura Hills CA: P4K Publishing.

McCarthy, D. (2014). *Counting with common cents: Penny's journey*. North Charleston, SC: CreateSpace Independent Publishing Platform.

National Association of State Boards of Education (2006). *Who will own our children? The report of the NASBE commission on financial and investor literacy*. Retrieved from http://www.finrafoundation.org/web/groups/foundation/@foundation/documents/foundation/p118452.pdf

Ohio Department of Education (2017). *Ohio's learning standards: Mathematics* (OLSM). Retrieved from http://education.ohio.gov/getattachment/Topics/Learning-in-Ohio/Mathematics/Ohio-s-Learning-Standards-in-Mathematics/MATH-Standards-2017.pdf.aspx

Ohio Department of Education (2018). *Ohio's learning standards: Financial literacy* (OLSFL). Retrieved from https://education.ohio.gov/getattachment/Topics/Learning-in-Ohio/Financial-Literacy/FLFinalStandards060518.pdf.aspx?lang=en-US

President's Advisory Council on Financial Capability for Young Americans. (2015). *Final Report, June 2015*. Washington DC: Author. Retrieved from https://www.treasury.gov/resource-center/financialeducation/Documents/PACFCYA%20Final%20Report%20June%202015.pdf

Richardson, R. (2016). *Adding dollars and cents to the three Rs.* Retrieved from http://magazine.uc.edu/editors_picks/recent_features/smartohio.html

Schug, M. C., & Hagedorn, E. A. (2005). The money savvy pig goes to the big city: Testing the effectiveness of an economics curriculum for young children. *The Social Studies, 96*, 68–71.

Sherraden, M. S., Johnson, L., Barong, G., & Elliot, W. (2011). Financial capability in children: Effects of participation in a school-based financial education and savings program. *Journal of Family and Economic Issues, 32*, 385–399.

Lindsay A. Gold, lgold1@udayton.edu, is an Assistant Professor of STEM Mathematics in the Teacher Education department at the University of Dayton. She previously taught first, fourth, and fifth grades. Her research interests include pre-service teacher education, teacher education, STEAM, financial literacy, teaching with technology, and professional development.