

Financial Literacy as the Future and its Socioeconomic Inequalities

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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Introduction

With consumerism increasing and the financial environment changing with technological advances, financial literacy has become popular and necessary. The definition of financial literacy has many interpretations such as the understanding of household economics or the knowledge of money management skills such as budgeting, borrowing, saving, etc. (Hogarth, 2002). The root of this newfound importance for finances could be attributed to the increased range of options in bank loans, saving plans, online trading accounts, etc. In addition, major decisions such as retirement plans have been shifted away from employers and the government and towards the individual (OECD, 2006). Thus, financial education is critical and is on the verge of becoming ingrained in school education systems and promoted through outside non-profits and financial organizations as well.

Unfortunately, equitable access to financial education is hard to find and a problem that needs to be addressed. This imbalance is rooted in many demographic and socioeconomic differences found within students and their households. The research question analyzed throughout this paper is what solutions to financial ineducation are being explored and accepted by social groups in the U.S.? This paper reviews financial education as a sociotechnical system and its goal is to highlight the inequality in financial education and to review relevant social groups and technologies working to fix this issue in and outside of the classroom. The technologies and resources being reviewed are in-class financial courses, free online learning tools, and subsidized financial services.

The social construction of technology (SCOT) framework, which states that successful innovations don't just work better than failed ones but that the social context in which the innovation was formed helped in its promotion or failure, will be applied in examining solutions

to financial illiteracy. This paper will begin with the history of financial education and its disparities and will then move into technical solutions. This paper will cover an overview of each solution, its connection to specific social groups promoting its success, and its potential disadvantages.

History and Background

Financial literacy has been an important part of life since the beginning of our country. John Adams, a founding father and former president, claimed that America's problems were due to "downright ignorance of the nature of coin, credit, and circulation" (Adams, 1787). Interest in understanding money and financial markets only increased from this point. In 1914, The Smith-Lever Act set the stage for formal financial education. In this act, the Cooperative State Research, Education, and Extension Service was established to educate rural Americans about advances in agricultural technology and personal finance (Gardner, 2021). The 2000s were responsible for the formalization of this financial education. In 2003, The Financial Literacy and Education Commission was formed and worked on national strategies for financial education. Later in 2008, President George W. Bush formed the advisory council on financial literacy operated by the U.S. treasury department (Gardner, 2021). These organizations worked to spread awareness and create research, policy, and education practices to promote financial independence across the country. This brief history and these major efforts brought us to 2022 where the Next Gen Personal Finance report shows that 15 states now guarantee that all high school students will take at least one Personal Finance course before graduation (NGPF's 2022 State of Financial Education Report, 2022). This report also shows that only 4.8% of U.S. high school students have no access to financial education in any of their courses. Since the initial incorporation of

finance into the school system, there have been major advances but still many states and students are missing out on this important curriculum.

As the need for financial education has and continues to become more essential it is important to consider how we can ensure that all students receive an equitable, reliable, and quality financial education. According to the Program for International Student Assessment (PISA), the financial literacy gap between socioeconomically advantaged and disadvantaged students is about 26% wider in the US than the average across OECD countries (Contreras and Bendix, 2021). This wide gap is because, in the US, financial literacy depends on a student's demographic and socioeconomic status. For instance, a person's financial knowledge is often correlated to their gender, race, parent education level, household income, etc. According to the National Financial Capability Study (FNCS), the demographic groups with the lowest financial literacy levels are women, Hispanic and African Americans, young adults, lower social class, and from families with lower levels of formal education (Bradley, 2021). It is crucial that as the financial education system continues to form, educators and policymakers are aware of the disadvantages many individuals are being put at and how to best mitigate them. These obstacles may include a lack of access to a computer or the internet, lack of a foundation because of being raised in a low-income home, and lack of opportunity due to not having access to banks, credit cards, etc.

SCOT- New Technology and Practices

This section of the paper will go through three different solutions to financial illiteracy: in-class education, free online tools, and financial services targeted at underprivileged groups.

For each solution, there will be an overview of the system, a review of the relevant social groups and stakeholders supporting and creating the solution, and its disadvantages.

As financial education and its downfalls become more prevalent, new methodologies for teaching this topic and bridging the financial literacy gap launch. Classroom lesson plans being taught by teachers following the national standards for K-12 grades are a first step. This in-class support is important as the financial literacy gap based on socioeconomic status can be seen by the age of 15 (Banh, 2019). The school system provides the perfect place to reach younger children and help give them the support they need to financially succeed. In 2022, 22.7% of U.S. high school students are guaranteed to receive personal finance courses, meaning that about 1 in 4 students are hopefully going to graduate financially literate (NGPF's 2022 State of Financial Education Report, 2022). General social groups (local governments, school systems, parents, etc.) continue to promote financial education in public schools with the goal of having the overall percentage of high school students guaranteed a financial education increase by over 10% in the coming years. This increase will in part be due to the number of states committing to this goal almost doubling from 8 to 15 states (NGPF's 2022 State of Financial Education Report, 2022). Although these statistics seem like growing and promising numbers, in schools with >75% Black and Brown student population or reduced lunch students only 1 in 20 students are guaranteed the same level of personal finance courses (NGPF's 2022 State of Financial Education Report, 2022). Since there is already widespread support for financial education through the school system, potential in-class solutions to the drawbacks of financial education for certain groups may include starting financial education at a younger age, utilizing low-cost materials to teach, and providing ways for all students to have the opportunity to handle money even if the money is fake. Relevant social groups are promoting this in-class approach with the number of states that

mandate a financial education curriculum increasing. The only disadvantage to this approach is the time it will take to spread this mindset and curricula to all 50 states and across all high schools. Even though there is immense support it still takes time to filter through all the relevant social groups, local governments, school districts, parents, and students, and make a change.

Although the school system is a great start at targeting financial illiteracy in the U.S. many may believe that other options must also be explored to help support in-class methods. One example is websites that students can access at young ages to take lesson plans and play games to help build their financial knowledge. Teach for America promotes one of these websites/organizations called Next Gen Personal Finance (NGPF) which includes resources for every grade and category for free (Zingg, 2020). This website has a growing connection with teachers and students with over 60,000 educators using the site for lesson plans and learning games for students. More than 7 out of 10 U.S. high school students attend schools where a teacher uses the NGPF curriculum. These stats demonstrate the support for NGPF, which is only one example of a helpful online tool. There are hundreds of other free online resources for people to use to help educate themselves on finances. Some other popular examples of free websites with financial education courses may include Advanced Learning Interactive System Online (ALISON), Coursera, Udemy, etc. (Wolfson, 2022). Clearly, utilizing resources similar to NGPF is growing increasingly popular with major stakeholders: teachers, students, and parents. These websites also have another social group pushing for their success: the non-profits and entrepreneurs behind them. These businesses saw the needs of potential customers, and financially illiterate people, and created a space for them in the budding technological world of websites and app development. These technological resources are a great alternative to textbooks or games that must be purchased for use. As these online resources continue to evolve there are

now also free resources such as the Mint app to help people budget, track their net worth, see their monthly spending and earning, etc. These free online tools will only continue to improve with time and hopefully be a fast alternative or support to in-class teaching. These online tools can be seen as an alternative for people out of the school system who never got a financial education or for people who want to learn multiple finance topics in a matter of hours instead of years. The major disadvantage to this method of learning could be the lack of access for people who don't have a computer or can't reach the internet.

School curriculums and free online learning tools such as websites are examples of direct solutions to helping individuals learn about personal finance. Other solutions to financial ineducation may extend beyond the classroom and teaching people directly. For instance, one researched method to increase financial access and awareness among low-income people is Individual Development Accounts (IDAs) which is a financial tool that encourages low-income people to save up toward acquiring an appreciating asset. This asset could be a home, college degree, small business, etc. These IDAs are known to come with a matched savings account, financial literacy education, training, etc. (Kezar, 2008). The financial literacy aspect of these programs is praised by stakeholders as the key to finding financial success. Evidently, IDAs have immense potential to help certain social groups actively learn about finances. Due to this potential, IDAs have grown from three programs in 1995 to more than 500 programs in 2002, and encompass more than 20,000 account holders (Howard and Frumkin, 2005). The groups helping create these IDA opportunities are banks which compromise 81% of financial institutions sponsoring IDAs and credit unions who make up the rest (Howard and Frumkin, 2005). These banks and credit unions also partner with non-profit organizations to spread awareness and use. Clearly, the social groups leading the change here are the financial

institutions and marginalized groups who are eligible for the program. IDAs are the clear embodiment of the SCOT framework. Specifically, the program began after social needs caused the launch of a task force equipped with people from financial institutions, community organizers, and representatives from state and local government. This task force researched how to help low-income families become economically self-sufficient and the result was IDAs (Russell, n.d). This solution was chosen as the results can be life-changing for marginalized social groups since it doesn't just give them financial knowledge but also sets them up for success with additional financial help and advice. The disadvantage of this approach to spreading financial literacy could potentially be a lack of presence in bank desert areas. Bank deserts are communities that don't have banking branches located within a 10-mile radius of their center (Lake, 2022). These communities may very well be the ones that need IDAs the most but aren't aware of and/or have this opportunity in reach.

The financial education system has given a platform for multiple social groups with different needs and ideas. There is certain design flexibility that comes with solving financial ineducation since different social groups have differing criteria. For example, younger people would learn best from an in-class education course while older financially illiterate people don't have time to go back to school for multiple years. This is why free online learning tools are a productive alternative as they can learn at their own pace and on their own time. Further, some financially illiterate people need knowledge but also money in a pressing time constraint. This could be so they can afford to go to college or put a roof over their heads. This is where IDAs help solve this conflict with other solution methods. As these teaching methods continue to form, financial education as a sociotechnical system has not found closure or stabilization yet. The only solution method that is not threatened by alternative designs is the in-class financial

education courses. Currently, online resources and subsidized financial services serve as alternatives or support to the in-class solution but don't pose a threat to its methodology.

Conclusion

Furthermore, financial education is a growing field with inequalities that persist as a significant social issue. Lack of access to financial education disproportionately impacts marginalized groups and has caused basic financial education to become a sociotechnical system over time with new innovations to solve this inequality. These solutions are rooted in solving a present and pressing social problem that underprivileged communities are facing and increasing access to financial education both in and out of the classroom. This paper analyzed in-class financial curriculums, free online learning tools, and financial services targeted at marginalized groups as solutions. For each solution, there were the main social groups that gave the need for change (financially illiterate people and children) and the social groups which strived to formulate the solutions (the school systems, nonprofits/entrepreneurs, and financial institutions).

References

- Banh –, M. (2019, October 24). *What international data tells us about youth financial literacy*. Consumer Financial Protection Bureau.
<https://www.consumerfinance.gov/about-us/blog/what-international-data-tells-us-about-youth-financial-literacy/>
- Bradley, S. L. (2021). Financial literacy education: An opportunity for colleges and sociology. *Sociology Compass*, 15(10), e12922. <https://doi.org/10.1111/soc4.12922>
- Erick Russell. (n.d.). *Individual Development Accounts*. CT.Gov - Connecticut's Official State Website. Retrieved March 15, 2023, from
<https://portal.ct.gov/OTT/About-the-Treasury/Individual-Development-Accounts>
- History of Financial Literacy: History of Personal Finance | NFEC*. (2022). History of Financial Literacy.
<https://www.financialeducatorsCouncil.org/history-of-financial-literacy/>
- Huston, S. J. (2010). Measuring Financial Literacy. *Journal of Consumer Affairs*, 44(2), 296–316. <https://doi.org/10.1111/j.1745-6606.2010.01170.x>
- Jeanne M. Hogarth. (2002, January). *Financial literacy and family & consumer sciences—ProQuest*. <https://www.proquest.com/docview/218195497>
- John Adams. (1787, August 25). *Founders Online: To Thomas Jefferson from John Adams, 25 August 1787*. University of Virginia Press.
<http://founders.archives.gov/documents/Jefferson/01-12-02-0064>
- Kezar, A. (2009). Increasing Access for Low-Income Students and Making Financial Education a Priority for Higher Education. *Liberal Education*, 95(3), 38–43.

Laura Zingg. (2020, April 23). *Closing the Financial Literacy Gap* | *Teach For America*.

<https://www.teachforamerica.org/one-day/ideas-and-solutions/closing-the-financial-literacy-gap>

Mac Gardner. (2021, December 6). *Improving financial literacy is more important now than ever*.

<https://emoneyadvisor.com/blog/a-brief-history-of-financial-literacy-and-its-importance-today/>

Oscar Contreras and Joseph Bendix. (2021). *Financial Literacy in the United States*. Milken Institute.

Rebecca Lake. (2022, June 4). *What Is a Banking Desert?* Investopedia.

<https://www.investopedia.com/what-is-banking-desert-5218028>

Susan Howard and Samuel Frumkin. (2005). *Individual Development Accounts: An Asset Building Product for Lower-Income Consumers*.

Wolfson, L. (2022, July 20). *These four free personal finance courses can set you up for financial success in three hours or less*. CNBC.

<https://www.cnbc.com/select/free-personal-finance-courses/>