

Financial Education for School Youths Curriculum

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Abstract: There are still many prevalent problems surrounding the high school curriculum. This can be seen with many teachers still struggling with students' retention on subjects being taught, as well as students having difficulty with test taking. A focal point with the matter is the subjects themselves that are taught, as both teachers and students complain about how many of the school subjects do not object towards practical skill sets needed towards real life. In several countries, students are taught subjects related to vocation, career, finances, and even investment. A main reason as to why these countries suffer less from economic distress, as well as having more successful outputs for students, is because financial education is well implemented into the high school curriculum. The purpose for this paper is to show case studies of various countries showing success due to financial education taught in schools, and to therefore prove the point that financial education is needed all around for the youth.

Keywords: Financial Education, High School Curriculum, Education System.

I. INTRODUCTION

A problem within the modern education system is not having enough subjects being taught for the real adult world, particularly when it comes to finances. Several countries that have implemented in teaching high school students financial literacy have witnessed success in longevity, as statistics show that those who are financially literate even impact the country's economy in a positive manner. This research will provide an overall background of the problems with the education system and the reform that is needed for the system. And so forth, this paper will also discuss the positive impacts of financial education within high schools and also provide various case studies of several countries that have met success when implementing financial education. A case study of a country that has not implemented financial education (thus showing negative effects), will also be presented as well.

II. BACKGROUND

A. Problems in the Education System

The sentiment "school sucks" is widespread within popular culture, which is shown by the fact that when a student makes a search on Youtube, there are hundreds of videos showing students screaming about how much they hate school. Because of so many policies, school is viewed as a terrible and oppressive place to be in, for both students and teachers. Will Letts and Jennifer A. Sandlin, two researchers of school curriculum and pedagogy, have noted, "Schools exclude, rather invisible, and leave unspoken the realities and lives of many who inhabit them" (Letts and Sandlin, 2016). Schools can exclude the 'life' out of students and teachers, taking away joyous learning environments since they suck essential attributes out of students and replace them with apathy, obedience, and predictability. Letts and Sandlin repeat this sentiment by saying, "But over time, school sucks those essential attributes out of too many of us...and replaces them with predictability, obedience, and apathy" (Letts and Sandlin, 2016). Although people question how we can replace the current school system or at least fix it, there are actually ways that this can be done, now that there are so many historical and contemporary critiques of the politics of schooling. The first important step of curating a curriculum is, "Asking questions such as 'What can we learn from the artmaking of young children?' and 'Why is this important?'" (Letts and Sandlin, 2016). However, these questions have not become the basis of formulating a robust syllabus for students to learn

and thrive off of. The democratic complaints demonstrate the burdensome tasks ranging from standardized tests to silence. Some people have proposed to approach teaching and learning as something that situates artful ways of thinking, being, and moving at the center of how we teach. Also, Letts and Sandlin address a sharp reproach by saying, “Because of these neoliberal policies, practices of de facto segregation and white-washed curricula, school is experienced as a terrible and oppressive place to be, for both students and teachers” (Letts and Sandlin, 2016).

B. Needed Policy Reforms in the Education System

In all levels of education systems, there is always a never-ending series of policy reforms and decisions aimed at increasing standards and competitiveness as part of a new knowledge economy. In Sweden, the need for creating measures on educational outcomes has been the development of a changed national grading system by giving grades earlier, along with a more refined grading scale and more explicit criteria for accessing grades. Since performance assessment practices tend to dominate an increasing part of life in classrooms, there is a strong need for further investigation of how these policy-driven issues are dealt with socially in students’ everyday lives. Students argue that besides the national tests, they had to do a large number of common tests in science and social studies. Marie Tanner and Hector Perez Prieto, two professors of Educational Studies at Karlstad University in Sweden, interviewed various students when it comes to the testing system. Tanner and Prieto have realized, “From a student perspective, this means increased pressure towards earlier and more extensive assessment practices, where assessment criteria and curricular goals have become frequent topics in everyday instructions at the classroom level” (Tanner and Prieto, 2020). When the students tell the interviewer about the discussion, they show disappointment and say that it did not come out as they had expected. This is due to how tests are designed through, “Neoliberal rhetorics about learning effectiveness, competition, self-regulation and the constant need for improvement have worked their way into the students’ everyday lives” (Tanner and Prieto, 2020). The people conclude that the tests make students lose time, which is negative for their learning options, and puts them in a competitive disadvantage. Tanner and Prieto conclude that, “The analysis of students’ interaction shows how a performative educational system produces performative students who learn to manage this system, and how the constantly present performative pressure has seeped deep into everyday relations between students, teachers and headteachers” (Tanner and Prieto, 2020). This means that students are not outstandingly learning ‘well’, but rather are ‘working’ the system (or for the system), to meet its’ demands.

III. FINANCIAL EDUCATION FOR THE YOUTH IN SCHOOLS

A. The Positive Impact of Financial Education

This is why the subjects being taught to students are highly important for proficient education. Many students, and even teachers, have mentioned how many of the subjects currently instructed do not do a competent job in keeping students engaged. Also, such subjects do not help students when it comes to practical skills for the later future. Subject matters teaching students ‘practical skills’ are noticeably lacking within the youth education system. However, many researchers have noted ‘financial education’ showing a great deal of promise when it comes to retaining students’ retention and helping them in the long run. Such positive impacts via financial education have been seen around the world. Multiple studies were done to analyze whether financial and economic education are actually helpful to high school students. They put the money management and financial investment topic into two different treatment groups to get the best possible results. Some past studies suggest that financial investments are more appropriate for adults, rather than high-school students. However, a different study suggests that economic concepts in financial applications helped increase financial knowledge by a big margin. The financial literacy test given to students tested key parts of economics and also money management and financial investment topics. Higher scores were reported for both groups on the EC posttest, specifically a gain of 19.7 percentage points in a 6-hour curriculum compared to 25.34 percentage points in a 90-day curriculum. In this curriculum score, “The results displayed that column (1a) of table 5 show that gain scores for the MM and FI treatment groups are 12.6 percentage points and 12.91 percentage points higher than the HC group, other things being equal” (Gill and Bhattacharya, 2019).

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	Mean pretest score in %	<i>n</i>	Mean post-test score in %	<i>n</i>	Mean Difference in Scores Percentage Points	Mean positive learning in %	<i>n</i>
<i>Financial knowledge</i>							
MM	37.73 (14.67)	244	49.05 (20.76)	238	13.46*** [1.37]	25.87 (9.91)	199
FI	37.83 (14.27)	181	50.88 (19.16)	166	13.35*** [1.31]	24.88 (10.24)	162
EC	42.84 (14.26)	366	43.01 (17.88)	353	0.244 [0.749]	15.73 (7.38)	320
HC	39.26 (11.57)	213	40.03 (12.07)	222	0.442 [0.824]	16.61 (7.06)	191
<i>TEL scores</i>							
MM	33.78 (17.54)	242	35.88 (20.58)	239	3.44** [1.60]	20.25 (15.43)	200
FI	31.22 (20.84)	179	36.06 (18.94)	156	4.85** [1.97]	20.39 (15.00)	152
EC	35.42 (18.79)	366	37.88 (20.39)	362	1.92* [1.15]	17.64 (13.40)	326
HC	32.11 (17.29)	211	28.78 (16.78)	225	-2.55* [1.44]	15.31 (12.54)	191

Notes: Test of Economic Literacy (TEL) scores are for the eight TEL questions listed in note 5. Standard deviations in parentheses; standard errors in brackets. The "*n*" refers to the number of observations in the column to the left.

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$ for the null hypothesis that differences (post-test – pretest) scores are equal to zero.

Figure 1: Means and Standard Deviation for Financial Knowledge Showing Positive Learning Scores from Financial Intervention Groups (Gill and Bhattacharya, 2019).

These results demonstrate that the money management and financial investment courses had higher gains than those of normal high school economics courses. Thus the researchers have noted, “We find that our eight-class-period financial literacy treatment increased financial knowledge, measured as the gain in knowledge in the financial literacy component of the test, by about 13 percentage points after controlling for gender, GPA, school effects, and working status of the student” (Gill and Bhattacharya, 2019). Although there were some limitations in the study, such as not acknowledging the differences in classrooms, the overall results suggested that financial literacy treatment increased knowledge. In conclusion, the case study states that, “This result is encouraging insofar as it validates the continued need to teach financial education in high school, even if it is for a short duration of time” (Gill and Bhattacharya, 2019). Therefore, it is promising and even incentivizing for financial education to be integrated into the high school curriculum.

A 1998-1999 study on financial education demonstrated that there were significant and positive effects from the program on financial knowledge, financial behaviors, and financial self-efficacy. Also, “Other studies have reported positive effects on student knowledge or understanding of personal finance topics and concepts based on education with specific financial curriculum” (Walstad et. al., 2010). This study tested these three concepts on self-assessment on a posttest basis and then a retrospective pretest basis, which gave useful insights about students’ change in perception about their knowledge before and after the test. FFL trained teachers and students scored much higher than students who were in the control group in this experiment. As such the researchers have given evidence that, “The results showed that high school students whose teachers had participated in an FFL (5.2% of the student sample) scored significantly higher on average on the mandated economics test than did students of teachers who did not receive such training” (Walstad et. al., 2010). Evaluating the effectiveness of a financial education in youth requires a lot of attention to content, delivery, design, measurement, and analysis. The effects of the FYF curriculum on students’ knowledge of concepts demonstrated that there was a statistically significant increase in the percent correct from pretest to posttest for twenty-nine of the thirty items. This shows that, “The regression results from the full sample showed that students in economics courses had larger increases in measured gains in financial knowledge relative to students in other courses after controlling for other factors” (Walstad et. al., 2010). However, a limitation on the data set is that not all teachers taught both a control group and a treatment group. This is important to realize as students eventually became independent in developing financial coherence on their own from the curriculum and outside from a teacher’s influence. Additionally, “The analysis also revealed that financial education can improve financial knowledge across a range of different courses taught in the school curriculum” (Walstad et. al., 2010). Overall, instruction has been shown that personal finance in high school has the potential to improve financial knowledge.

B. Examples of Positive Impacts in Different Countries**(a) Korea**

Kyungho Jang, Jinsoo Hahn, and Hyung Joon Park evaluate the extent of financial literacy between South Korea and the USA. They write about how Korea and the USA began to adopt financial education, and explicitly stated that Korea implemented a financial education system to equalize income equality and make sure that a financial crisis doesn't occur again. Over the years, financial literacy among high school seniors dropped from 2006 to 2008, but it was higher among college students. In Korea, macroeconomics classes are taught in eighth grade; however, the classes prove to be way too difficult for the students, which makes them discouraged from learning economics in high school. In 2009, the financial education curriculum was finally implemented, but very few students took it, causing them to miss out on important concepts on money. Eventually, "Korea implemented a reinforced financial education program to improve the public's financial literacy as a possible solution for the country's income inequality, which has been driven in part by the financial literacy divide, as well as for sustainable economic growth" (Jang et. al., 2014). On accessing financial education between these two countries, the results were very hard to implement, since Korea did better in some categories, and the U.S. did better in the other ones. However, once the Korean education system implemented a more robust financial education for high school students, the comparison between Korean and U.S. students changed drastically. Jang, Hahn, and Park note, "It seems that the percentage of correct responses of Korean students who were frequently exposed to the concept of human resources was exceedingly higher than that of U.S. students" (Jang et. al., 2014). They also conducted a statistical study which resulted in showing Korean students who were exposed more to the concept of personal resources, did better than the U.S. students when it came to financial literacy.

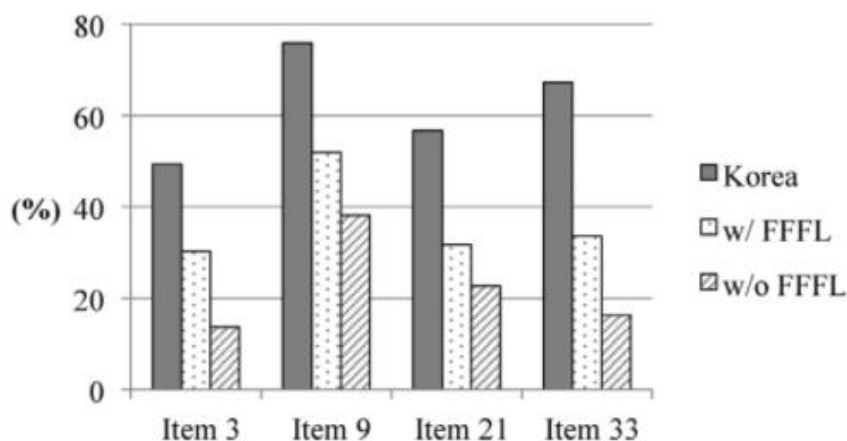


Figure 2: Comparison of Financial Literacy between Korean Students and U.S. Students with and without Financial Education (Jang et. al., 2014).

(b) Ghana

The study during the 2010-11 year in Ghana determined the scope and effectiveness of financial education in Ghana. Financial literacy programs for children are more common than people often think. Although there is a significant policy interest in Ghana's education, there is little known about its actual effects on the students. The Aflatoun curriculum developed by the NGO, and the HMB program, operated as savings books and taught children financial concepts that they needed in life. To conduct a study on the effectiveness of the financial programs present in Ghana schools, there were three areas that were chosen due to their compositions and financial situations. The outcomes were based on student-self reports, which raised questions on whether the impact estimates would be biased or not. This is because the students were more likely to overreport a verifiable behavior rather than unverifiable attitudes. Nevertheless, "The authors find positive effects on financial proficiency, saving for purchases, and financial budgeting in data collected four and 16 months after the start of program implementation" (Berry et. al., 2018). Both programs indicate that both programs were overall effective in influencing savings in schools. However, the results for aggregate savings were null, and the results for savings were null and fairly precise. The researchers of the study have also noted, "In our context, the costs of developing and implementing school-based financial education were relatively modest, and expansion to a larger portion of students per school would likely result in substantially lower costs per student reached" (Berry et. al., 2018). Such a financial

curriculum in Ghana was called the Aflatoun program. This program, “included encouragement of savings but integrated it with education on personal exploration and children’s rights and responsibilities” (Berry et. al., 2018). The most important part is that the program may have been incredibly effective at making younger children start saving.

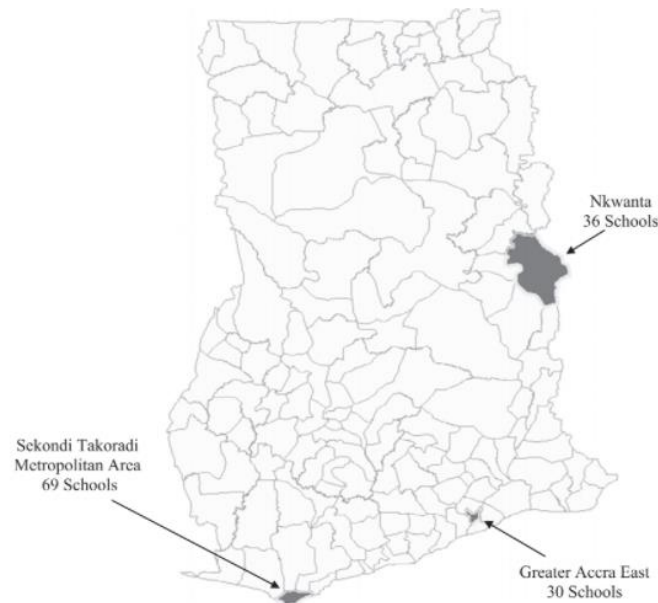


Figure 3: Map Showing School Districts Implementing Financial Education Programs (Berry et. al., 2018).

Studies show, “The Aflatoun program resulted in a 2.4 percentage-point increase, while the HMB program resulted in a slightly larger 3.1 percentage-point increase” (Berry et. al., 2018). This conclusively shows that there are positive effects when it comes to implementing such programs. This is because, “An additional area for future work is the potential for basic savings devices at school, without any accompanying curriculum, to encourage savings behavior” (Berry et. al., 2018).

(c) Finland

Finland has constantly been known for having the best education system in the world, and this is shown in some of the factors. For example, “Although students score very highly on international tests, such as the PISA, Finland has very few external accountability measures, and teachers spend less time in classrooms than in many other countries” (Morgan, 2014). Finland implemented a system called *Persuloku* in 1872, in an attempt to improve many of the problems with the previous education system. In this system, students were obligated to learn education surrounding vocation and employment, in which managing finances came into the background. And so, “In Finnish schools, teachers meet weekly to plan and develop curriculum, and they also make important decisions regarding syllabi, textbooks, assessments, course offerings, budgets, and professional development” (Morgan, 2014). Thus, Finnish schools teaching students related to matters such as vocation and budgeting has benefited both students and the entire Finnish society when it comes to long term effects of economy and job employment.

(d) Italy

An experiment testing the effect on financial investment attitudes were implemented on high school students in Italy. Financial education is becoming an increasingly investigated topic due to the wake of the financial crisis. This study suggests that the progress in financial literacy is stronger in subgroups which exhibit lower *en ante* knowledge levels. The authors show that with a simple two-period model in which financial education is a form of investment in human capital, which proves that lower intertemporal discount rates generate both higher investment in financial education and higher savings. The course for more financial literacy accounts for more correct answers on a test regarding how much knowledge one has in finance. Overall, financial education is continuously increasing in significance, in a turbulent financial environment in which individuals are ever more frequently asked to make financial decisions which will always affect their wealth. In general, students in Italy, “Tend to be more familiar with concepts related to those aspects of financial markets with which they are in contact (current accounts, credit cards, etc.) with those related to macro-

economics or economic and financial institutions” (Becchetti, 2013). The findings demonstrate whether or not progress in financial education is temporary, and whether their decisions and answers in financial courses are actually proxies for their actual financial decisions in the future.

(e) United States of America

Some states in America have implemented robust financial education which have shown positive outcomes. In 2012, nearly half of all schools in the United States included some financial course in their course curriculum. This relies on the fact that teaching financial education at such an early age may possibly help prevent financial problems that might come across in the future. Thus, these trends put a burden on young people to develop credit management skills. Such ‘burdens’ have shown promising results in two states particularly: Texas and Georgia. In both states, “We find that financial education decreased the likelihood of being 90+ days behind on an account” (Urban et. al., 2020). However, some studies show that financial education in the United States is associated with borrowing and loaning more. Defining financial policies can create gaps in knowledge in different students and also generates different policy variables than in other studies. For example in Texas, “These policies reflect a belief that teaching about personal finance and credit management in particular, at a young age may help prevent future financial problems, such as defaulting on a loan” (Urban et. al., 2020). This can therefore prevent any future financial problems for younger students who will eventually grow to become adults, and even for the U.S.’s economic problem stemmed by inflation. The difference-in-difference estimation relies on three primary assumptions: individuals begin their credit record, students that were graduating were exposed to the financial education graduation requirement, and that credit outcomes would be similar in control and experiment groups. Receiving a financial education decreased the likelihood that a person would be behind by ninety days for an account. In Georgia for example, “The education reduced severe delinquencies by 1.3, 2.8, and 4.0 percentage points in years one, two, and three, respectively (Column (2))” (Urban et. al., 2020). Just like delinquency, this type of education is more effective in its second and/or third year of implementation.

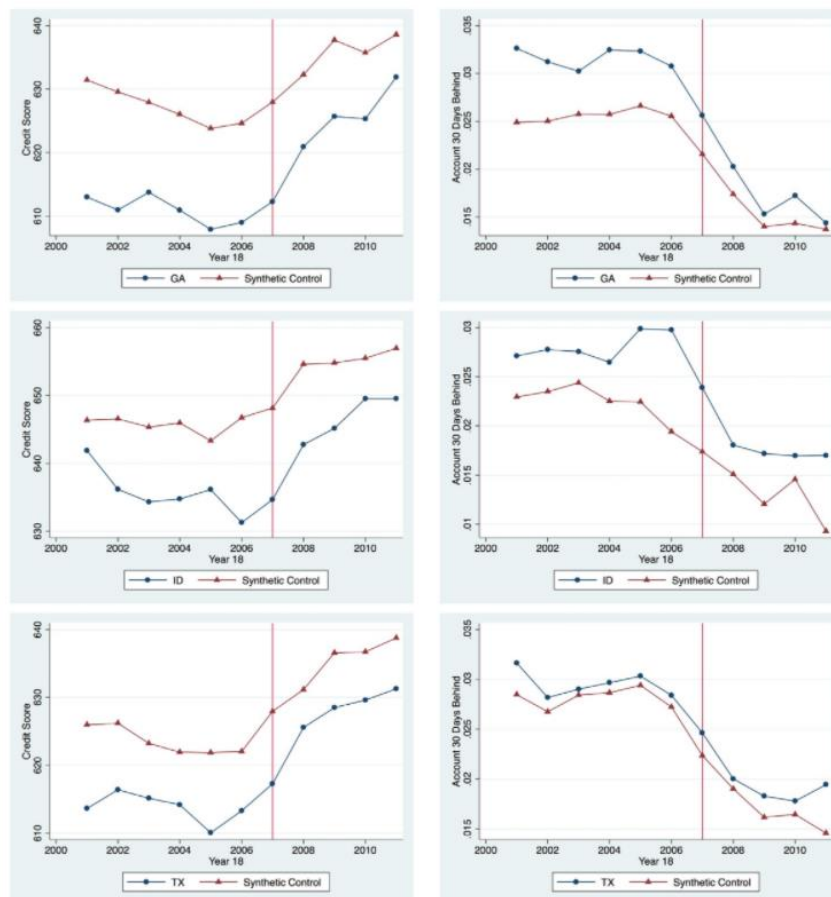


Figure 4: States Implementing Financial Education (Georgia, Idaho, and Texas) Showing an Increase in Credit Score and Decrease in Delinquency (Urban et. al., 2020).

C. Negative Impacts from Lack of Financial Education

(a) Germany

There is a severe lack of financial education within the German education system. Economic professors have stated, “While there are initiatives in many countries to promote financial education, it is surprising that no dedicated financial education programs exist in Germany” (Erner et. al., 2016). Schools in Germany work in three-tiers, where students first go to a primary school, and then go to one out of three different types of high schools. A fairly high percentage of students exhibited knowledge of basic financial concepts, and only the very few had little to no knowledge on these concepts. The test scores show that students had a hard time with compound interest, since they had difficulty applying the mathematical concepts. Overall, “Results indicate that German high school students share the lack of general knowledge that has been found across various samples” (Erner et. al., 2016). What was the most surprising was the thought that students had that stocks do not have higher long-term returns, which came as a result of negative events that occurred in the stock market during the 2000s. This is an issue since, “This finding also is problematic because it indicates that those students who are willing to invest in the stock market may not take advantage of its beneficial diversification effects and may thus assume unnecessarily large investment risks” (Erner et. al., 2016). Essentially, students knew that the stock market was risky, but failed to consider the potential of return they had. All-in-all, German students clearly have a lack of financial knowledge, but this varied among different high schools since the different high schools had different functions.

IV. CONCLUSION

And so, effectuating financial education within the high school curriculum can solve many of the problems inherent within the educational system. This can be seen as statistically, financial education showed a positive impact within the education system (as seen in student successes). Several countries such as Korea, Ghana, Finland, and Italy have shown the societal impact caused by financial education. Though the United States still needs more effectuation of financial education, three states (Georgia, Texas, Idaho) that have effectuated, show promising results. Countries that have not implemented such education, for example Germany, show the negative ramifications from not teaching high school students the importance of finance. This goes to show how important it is to teach the youth the value and skill behind money and currency.

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