

**Profits and Gains: How Adding Direct Instruction to The Checkbook Game Effects
Students' Financial Competency and Confidence**

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Abstract

There is no denying that personal finance is something that every student should learn before graduating and trying to start a life on his/her own (Kedlec, 2013; Lewis & Scott, 2000). *The Checkbook Game* was developed to teach middle school students about personal finance. However, after years of trial and error, *The Checkbook Game* curriculum has shown a weakness in giving students a depth of financial knowledge. A four-week direct instruction addition to *The Checkbook Game* was developed with the goal of adding to the depth of financial competency of middle school students in a fifth through eighth grade classroom in southwest Michigan. The study was cut short a week, but after three weeks of direct instruction, the data collected showed improvement in financial competency and overall ability.

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Chapter I: Introduction

The Importance of the Study

Saving money and budgeting is critical. In a 2017 report from MarketWatch, half of Americans are currently living paycheck to paycheck (Fottrell, 2017). A Gallup poll reported that only one-third of Americans are living on a household budget (Jacobe, 2013). Without their careful spending habits and budgeting, people can come up short financially and panic, worry, and a feeling of being ashamed would follow. With good planning, budgeting, and self-control, people prepare themselves for the future. To learn these basic, prerequisite skills, students need to be taught in a clear, explicit, and efficient way (Cohen, 2008).

St. Paul reminds us in his first letter to Timothy, “For we brought nothing into the world, and we certainly cannot take anything out.” (1 Timothy 6:7) King Solomon tells us in Proverbs 3:9, “Honor the LORD with your wealth, with the first fruits from your entire harvest.” Teaching financial competency is so much more than making sure students make wise decisions. To this point, God commands his people to be good stewards with the gifts he has given them. Learning about being good stewards of the gifts God has given us is just one way that our WELS schools can connect financial education with the students’ lives. Teaching financial stability and budgeting in a direct instructional way along with real-life applications should be a priority in our WELS schools.

The Purpose of the Study

It is important that students gain financial literacy before high school. *The Checkbook Game* curriculum was developed to provide financial literacy education to middle school students through a year-long simulation. Despite its potential, students did not always see the connections between the game and financial realities. To greater intentionally and reach the intended benefits of the game, a direct instruction component was added that connected the game experiences with the learning objectives.

What is *The Checkbook Game*?

The Checkbook Game is a financial simulation for students in fifth through eighth grade. The game was integrated into the students' whole classroom experience each week. Once a week, there was a Checkbook Game group activity where students received income and paid bills. *The Checkbook Game* has real-life connections so that the students see consequences and benefits of their financial decisions. The students' bills are set using a quiz that is taken during the teacher's summer home visit. After discussing the results of that quiz with the student's parents, the teacher sets the amount of each of the student's bills. Despite including financial items such as loans, the stock market, taxes, and jobs, *The Checkbook Game* curriculum fell short in some areas of financial competency. The students play the game through trial-and-error, but the game does not force students to actually learn about financial topics or how they work. This study explored the benefits of adding twenty-minutes of direct instruction focused on a different financial topic to each weekly Checkbook Game session.

How was *The Checkbook Game* created and developed?

The Checkbook Game was derived from a financial education class created by Ken White, principal and seventh and eighth grade teacher from St. Paul's Lutheran School in East Troy, WI. White says that his idea originated when a student's father asked him if there was a way to teach personal financing to his students. Since he created that game in 2009, *The Checkbook Game* curriculum has been modified and further developed into what it is today through trial and error and documentation. Appendices B through F give more information on the rules of the game and how the teacher conducted *The Checkbook Game* throughout the school year.

Project Goal

The Checkbook Game thrived in making real-life connections with some financial components like income and paying bills. By adding in a twenty-minute direct instruction session to the game each week, students were taught a greater depth of the financial topics that the game covers in the activities. The goal was that by equipping students with a deeper knowledge of the financial world through direct instruction supplemented into the current Checkbook Game, they would become more responsible and competent and apply that knowledge when they are old enough to handle their own finances. This curriculum project was designed to create a stronger connection between the game activities and the financial literacy learning outcomes by adding a direct instruction component to *The Checkbook Game*.

Chapter II: Literature Review

Personal Finance Class Attempts

Personal Finance Curriculums have been developed and put to test all around the world. Many banks and individual financial groups offer financial education resources to teachers and parents. Some popular examples include *Rich Dad, Poor Dad for Teens*, resources from Personal Finance Education Group (PFEG), Teachernet, HMRC Education Zone, RBS Money Sense, Money Maestro, Number Partners, and Jump\$start (Mandell & Klein, 2007). The Jump\$start Coalition has actively promoted financial curricular guidelines from kindergarten to high school (Deng, Chi, Teng, Tang, & Chen, 2013).

PFEG conducted case studies in England which varied in different ages between fifth grade and twelfth grade. The case studies had shown that the most difficult part in evaluating a personal finance curriculum was assessing the students on what they had learned (Mandell & Klein, 2007). This author will only be referring to two of the studies from this PFEG report. A third case study referred to is from Chicago Public Schools (CPS).

One attempt studied was in a high school in England during summer school. Students in ninth grade were taught life skills which included finance in a direct instruction format in a two full-day session. The teacher in the study used PFEG materials to teach the class. During those two days, between eight to twelve lessons on finance were taught to the students. Eight of the students were interviewed after the class and were found to have a better knowledge on personal finances (Mandell & Klein, 2007).

Another school in England taught personal finance to eleventh graders in six lessons over the course of two weeks in a mathematics class, again in a direct instruction setting. After those two weeks, the students were given a summative assessment. Before taking the class, they averaged 4.125 out of 10 questions correctly. After taking the class, they averaged 6.5 out of 10 correctly on the same assessment. Students said that the lessons had raised their awareness of the dangers of borrowing and made them more confident about money and budgeting (Mandell & Klein, 2007).

In 2011, Chicago Public Schools pushed for the initiative to teach financial education. The school system found time during the students' library hour to teach personal finance. A group of CPS teachers taught a six-hour curriculum over eight lessons during the school year to third graders. After the course was taught, a summative assessment was carried out. Overall, they saw a slight increase in scores from when the students took the same test at the beginning and middle of the class (Hagedorn, Schug, & Suiter, 2012).

Those are just three examples of many that have been tried around the world. Especially in public schools, which are driven by state standards, it is difficult to designate time for students to learn solely about personal finance without the evidence of learning found by experimental study. A quality personal finance class requires a teacher who is passionate about it, has been trained to teach the class, and has the necessary resources (Spielhofer et al., 2010). Preparing a teacher to teach this class, collecting all of the materials needed for class, and opening a time slot for the class to be taught all takes money to achieve, which can be hard for schools to acquire for a class that 1) is not

considered a core subject, such as mathematics or language arts and 2) lacks the professional research to validate such a class (Kadlec, 2013).

Students lack financial literacy because they have not received adequate financial education (Deng et al., 2013). Successful programs must focus on relating the importance of understanding basic financial literacy to the students' ability to reach and potentially exceed their level of aspiration (Mandell & Klein, 2007). In order to accurately assess a class, it needs to be taught well. In other words, to understand if there is a growth of student learning and retention, the material needs to be taught in a way that is clear, organized, and in a learning environment that is fair to all students. In order to be taught well, the teacher needs to be trained to teach that class and the school needs to provide the appropriate materials (Spielhofer et al., 2010). The teacher also needs to present the material in a well-developed planned lesson where information is taught efficiently in a short period of time. Financial literacy skills are not the kinds of skills that most students will be able to discover on their own.

There is no denying that personal finance is something that every student should learn before graduating and trying to start a life on his/her own (Kedlec, 2013; Lewis & Scott, 2000). When consumers are taught to manage their financial affairs, they can make an important contribution to the soundness and efficiency of the financial system and to the performance of the economy (Deng et al., 2013). Large majorities of parents felt that schools should not only be providing careers advice but also personal finance management, to teach how a bank operates, and the appropriate use of credit and debit cards (Lewis & Scott, 2003). Many high schools have added personal finance into their economics or mathematics classes, but it is most effective when taught in stand-alone

lessons, which usually entails balancing a checkbook as well as learning the stock market and budgeting (Deng et al., 2013; Spielhofer et al., 2010). Playing a stock market game is consistently related to higher financial literacy scores, presumably because the fun and interactivity of playing such a real-time game provides the intrinsic motivation necessary for learning (Mandell & Klein, 2007).

Using direct instruction in this setting reaps countless benefits. Direct instruction is a model for teaching that “...emphasizes well-developed and carefully planned lessons designed around small learning increments and clearly defined and prescribed teaching tasks” (National Institute, 2007). Though learners take on more of a passive role, teacher-centered methods of instruction are necessary to educate students on difficult material that requires multiple steps, and for procedures which are unlikely for students to discover on their own (Cohen, 2008). Direct instruction’s best practices include teaching the skills in small units, ordered sequentially, and taught explicitly (Cohen, 2008). The topics covered in the direct instruction sessions of *The Checkbook Game* curriculum are prerequisite skills. Students first need to learn and understand basic skills and facts before taking on more complex roles (Cohen, 2008). Direct instruction works because it plants concepts in the students’ long term memory banks (Cohen, 2008). With this method of instruction, the students will gain the financial confidence they need to be successful in the future.

Difficulty in Assessments

Even if a class is taught well, assessing student learning can still be challenging. Researchers had seen difficulty in developing assessment questions that are worthwhile (Spielhofer et al., 2010). Each of the studies had their own set of assessment questions

that could have been used to collect summative data. Subjectively, the students' learning could be assessed, but it is very difficult to standardize across schools (Hagedorn et al, 2012).

Despite the difficulties in assessing learning, what the research had shown through surveys of the students and parents was that the students were much more mindful of their financial decisions after taking the class (Spielhofer, Kerr, and Gardiner 2010). But, because this data was not objective and standardized, it was hard to validate the class based on this information (Mandell & Klein, 2007).

Educational Theory

The University of Chicago Financial Education Initiative (UCFEI) researched and developed the “Theory of How People Learn to Make Financial Decisions.” In a report written in 2019, the UCFEI created an easy-to-read visual model showing how a majority of people learn to make financial decisions. In their findings, people used life experiences, formal instruction, and individual differences to develop knowledge, attitude, and decision-making competencies in the financial world. Using their knowledge, attitude, and decision-making competencies, they faced a real-life financial decision. A level of uncertainty comes with that financial decision. Then, after making a good or bad financial decision, there are long-term financial behavioral trends and outcomes that result. Finally, the effects of those results get put into the feedback loop which affects life experiences, individual differences, and formal instruction (finEdge 2019).

Each student may have a different financial literacy background. Some have to do chores to earn money at home. Some do not earn any income at home. Whatever the case

may be, they bring their own individual experiences with money to *The Checkbook Game* (finEdge 2019). Therefore, they vary in their knowledge of finances.

Students used their life experiences in *The Checkbook Game*. They based their initial financial decisions on what they had learned from their parents. A few students may have purchased items at stores with their own money in the past. Perhaps they had that good feeling that comes from working hard and seeing that hard work pay off with whatever they decided to purchase. Whatever their experiences had been so far in relation to finances, they recalled from those events when they made financial decisions in *The Checkbook Game*.

Students' knowledge, attitudes, and decision-making competencies vary and change throughout the school year. As the game forced them to make decisions, it was the teacher's hope that the students would add to their knowledge and change their attitudes about financial decisions. Their change in attitude was clear in their behavior. For the students that slacked in doing their classroom job in the past, once they received a small paycheck and still had bills to pay, their attitude about doing their classroom job changed the way they looked at the necessity of doing that job. That attitude influenced their behavior. On the days that they do not want to go to work, they recalled from *The Checkbook Game* that working was necessary to receive a paycheck (finEdge 2019).

Using the students' knowledge, attitude, and decision-making competency to make a real-life financial decision, the teacher brought up real-life situations like purchasing a car. Students should buy a car that they can afford to purchase, insure, and maintain. Students learned through *The Checkbook Game* that they could not always buy

their dream item, but use what they learn to make a good real-life financial decision (finEdge 2019).

Summary

In *The Checkbook Game*, students learned to budget, give their firstfruits to God, pay bills, earn income, manage stocks, and pay taxes. *The Checkbook Game* served as a real-life simulation that married earning income and paying bills to real consequences in the classroom. The research showed that students are much more passionate about learning about finances when there are real-life connections (Spielhofer et al., 2010; Varcoe et al., 2005). By connecting directly to the student's experience at school, *The Checkbook Game* used mathematics, reading, language arts, social studies, and real-life skills to prepare students for life with money, which they can use immediately. Programs must relate the course content to goal attainment and demonstrate how understanding and implementing financial principles add significant value to their lives (Mandell & Klein, 2007). Adding a direct instruction session to the simulation deepened the students' knowledge of the "how" and the "why" behind making decisions. Rather than having the students discover the consequences of poor financial decisions in life, it was better to guide them in the right direction in school.

Chapter III: Implementation

Introduction

The Checkbook Game is a curriculum that teaches personal finance and financial competency. *The Checkbook Game* has been taught for ten years in three different schools by two teachers. Over the course of those ten years, it has become clear to the two teachers that teach it, that it is lacking depth. In other words, *The Checkbook Game* teaches students a wide variety of financial terms, but past students have not demonstrated the desired level of evidence of that learning. With the goal that students apply their knowledge from what they have learned in *The Checkbook Game* to their lives at home, twelve direct instruction sessions were developed and implemented over a four-week period at one of the schools where *The Checkbook Game* is currently taught. Two different kinds of assessments were conducted before and after the twelve lessons were taught so that the author could compare before and after results. The hope was that the results from these assessments might support that the direct instruction sessions contributed to adding deeper learning to what is taught in *The Checkbook Game*.

Student Demographics

This study took place in a classroom of eighteen fifth through eighth graders. By grade, there were three fifth graders, seven sixth graders, four seventh graders, and four eighth graders. Six boys and twelve girls make up the classroom. Most students are white Caucasians, but three students are Hispanic. Three students (two different families) would be considered lower class while the others are middle class families. Six students have indicated that they receive allowances at home. All students have said that they have some money for themselves.

Limitations to this study

The original plan for this project was to conduct two different types of assessments for all eighteen of the students in the classroom selected for this study. However, like other schools in the winter of 2019-2020, the classroom was struck with wide-spread illness over the course of the entire four-week study. In addition to the high number of absences due to illness, the government shut down all schools in the state to prevent the spread of the COVID-19 virus. With the mandated shut down, the curriculum was not fully implemented as originally planned. The topics that were taught before the shutdown included budgeting, the basics of banking, credit and credit card basics, and interest.

Procedures

Over the course of teaching *The Checkbook Game* for ten years, it became evident that it was missing something to add depth to the student's financial knowledge. In order to add depth, it was decided that there needed to be a class added to the curriculum. After some discussion and guidance, the author decided that direct instruction sessions were the best course of action. The author decided that over the course of four weeks, twelve direct instruction sessions would add to the learning goals of *The Checkbook Game* greatly. After receiving feedback from colleagues, students' parents, and professionals' research studies, the author picked topics for each direct instruction session to focus on. Those topics included budgeting, banking, credit, insurance, stewardship, and shopping tips.

Before the direct instruction sessions were taught, the author of this study assessed each student in two ways. First, a summative assessment was given to all of the

students at once. This summative assessment was a 32-question multiple choice test that covered the financial topics that would be covered in the direct instruction classes (Appendix H). The other assessment conducted was in an interview format. This assessment was titled “Decision-Making Evaluation.” The author sat down with each student individually and asked them how they would acquire and maintain a car while in high school and still participating in normal high school activities. The students were also asked what role budgeting has in this process. The students were asked to think out loud to the teacher who completed a rubric (Appendix G) on the student’s financial decision-making process. The student’s thoughts were not recorded. They were evaluated on comparative shopping, budgeting, estimates, stewardship, and priorities.

Each direct instruction session was developed to be taught in a twenty-minute period. For each session, online resources were organized to be used. Since each student was equipped with a Chromebook, they could explore those resources in and out of class. The students also used resources like Google Sheets and Google Docs to practice implementing the financial tips they were taught. Each of these sessions was taught for twenty-minutes on Mondays, Tuesdays, and Thursdays.

In each session, the previous material was reviewed. Then the new lesson was introduced. Next, the teacher and the students worked together to either do the topic at hand or the teacher showed them how to research the topic at hand. For example, for the session where the topic was Credit 102, the teacher showed the students how to use online resources to compare credit cards. The teacher discussed that credit cards have different benefits based on what they are used for. In that lesson, the students learned that all credit cards are not the same.

As mentioned before, the four-week study was cut short a week. There were supposed to be three lessons taught that week. They were a lesson on insurance, stewardship, and a review lesson. But, the students did have direct instruction sessions on topics in the table below:

1	Mon, Feb. 24	Budgeting 101	The teacher will introduce budgeting concepts and have the students make a simple balanced budget for a road trip vacation
2	Tue, Feb. 25	Budgeting 102	The teacher will instruct the students on making wise financial decisions when they move out of the house examining how to take wants and needs and make them fit in a balanced budget
3	Thu, Feb. 27	Where should I keep my money?	The teacher will instruct the students on why the bank is the best place to keep their money safe. Students will compare benefits offered by different banks.
4	Mon, Mar. 2	Interest	The teacher will instruct the students on what interest is, how to calculate it, and make students aware of many scenarios where interest is applicable.
5	Tue, Mar. 3	Credit 101	The teacher will instruct the students on the footprint of credit in their lives. The students will compare the benefits and dangers of credit.
6	Thu, Mar. 5	Credit 102	The teacher will instruct the students on how to shop around for credit cards and simulate good credit card use and bad credit card use to show the students the consequences of each.
7	Mon, Mar. 9	Compare when shopping	The teacher will show the students the benefits of comparison shopping versus shopping on impulse. Students will then comparison shop and "buy" a fitness watch.
8	Tue, Mar. 10	Applying for a job	The teacher will show the students how to fill out a job application and the importance of applying at more than one place. The teacher will also discuss appearance and mannerism as a part of the job application process.
9	Thu, Mar. 12	Applying for a loan	The teacher will show the students how to fill out a loan application and discuss the benefits and dangers of loans.

(The Scope & Sequence can be found in Appendix I.)

The students were not given homework that was due at the next class period, but instead participated in a homework activity during class. For example, in Credit 102 where students were asked to compare credit cards, the teacher gave them the task of

finding the credit card that awarded the most cash back while having a low interest rate. Not all of the students' selections were the same, but they got to experience the challenge of comparing credit cards.

On the last day of classes, the students were assessed again using the same assessment tools as before the direct instruction classes were taught. The students took the summative assessment all at once individually. Then, because of special circumstances, students were interviewed in groups of 3 or 4 rather than individually. However, students were still evaluated individually based on their input to the conversation. The assessment results were recorded.

Artifacts

The Checkbook Game, which originated in 2009, has been updated annually to continue to help students grow in their financial literacy. In *The Checkbook Game*, students each have their own bank account. They perform classroom chores to earn income and to pay their bills. They each have bills like a mortgage bill, internet bill, and grocery bill. After entering their income and expenses each week, students roll a dice to determine a chance event. The chance event could be an unexpected income or unexpected expense. At the end of the year, students spend their leftover cash on prizes in an auction. Those that made wise financial decisions and budgeted well earned better prizes.

This study aimed to provide students with a deeper sense of finances. Through twelve direct instruction sessions, students were taught about certain financial topics, rather than have the students learn them through discovery learning or by chance. The

lessons were developed to be short, concise lessons where the students could participate in their learning.

Before and after testing was selected as the best way to measure student growth. Two different kinds of assessments were developed so that a better measurement of student growth could be taken. One assessment, given both before and after the sessions, was a multiple choice summative assessment. Questions were pulled from each of the lesson topics were asked of the students in either true/false or multiple choice. The hope was that the students would score better on the post-assessment than on the pretest to show that the learning sessions added to the students' progress. The other assessment was in the form of an interview where the student was asked to think out loud. In this assessment, students were scored based on a detailed rubric. Again, the hope was that the students would score better on the post-interview than on the first interview to show that the direct instruction sessions helped.

The Summative Assessment (Appendix H) was developed as a multiple choice assessment for a number of reasons. First, to keep track of the answers the students give. The scores can be tracked using simple statistics. It also helps discriminate between students that do not know the material and those who do. Multiple choice assessments can be graded objectively without bias or "half-right" answers. Writing a multiple choice test also allows for inclusion of a broad range of topics assessing the breadth of the student's financial knowledge.

The Decision-Making Evaluation (Appendix G) was developed with a rubric to evaluate so that the students could receive meaningful feedback when they saw their

score. They used the details in each box and change their process of thinking to include what they missed which is clearly written in the higher scored boxes.

It was important to the author to create two types of assessments. Not all students test the same way. Some students are better at writing answers. Some students are better at talking. Either way, to assess them in more than one way gave more evidence of their progress throughout the four-week study.

Foreword about the Results

The final assessments were conducted on the day that school was shut down due to COVID-19. The conditions that the students were dealing with that day of school impacted the assessment scores. A half-day of school was already scheduled that day and the author used most of that day to gather up homework to be assigned and finished at home the first week of the shutdown. The students may have felt frazzled or rushed when taking the Summative Assessment. Then, to save time on the Decision-Making Evaluation, students were interviewed in groups of three or four with others at the same grade level. While the students were not assessed in an ideal manner, the author still believes that enough data was collected to complete the study.

It should also be noted that two students were absent the day the first round of assessments were taken. Those two students missed the first three direct instruction classes due to illness. The author of the study did not believe it would be fair to the study if their assessments scores would count since they missed those three sessions. Then, on the last day of school before the shutdown, four of the eighteen students were absent. Only twelve of the eighteen students participated in both the pretests and posttests. The

data below includes only the scores of the twelve students that participated in the assessments before and after the study period.

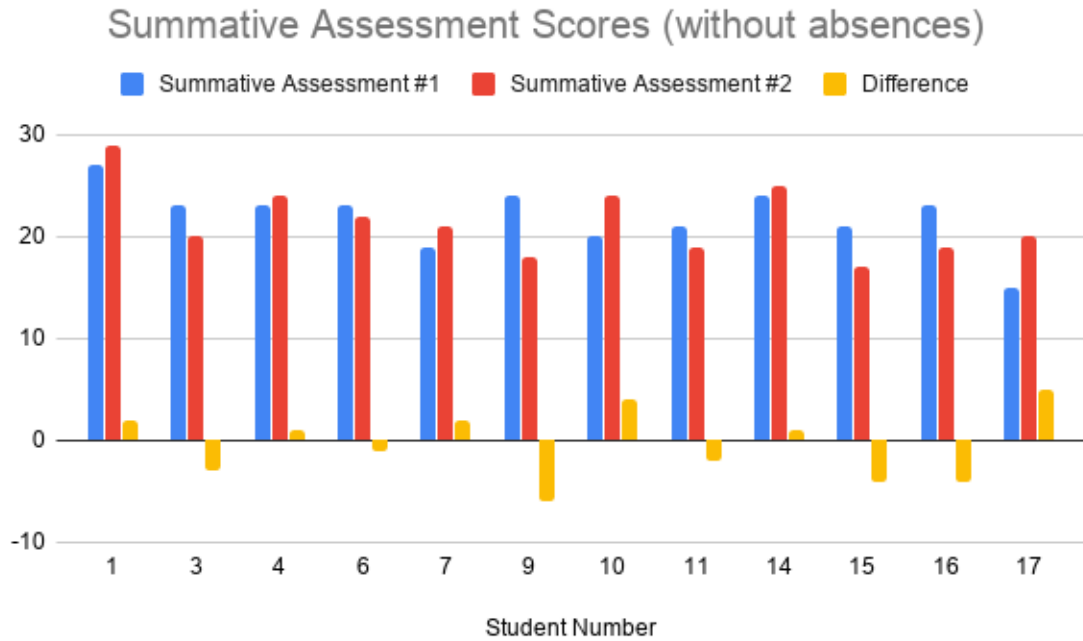
Results

The Summative Assessment was written with 32 questions true/false or multiple choice questions. Thirteen of the questions had to do with the last three lessons that were cut out with the school closure. Despite that, the average score for the fifth through eighth grade class on the pretest was 21.9 correct answers. The eighth graders averaged a score of 24.3 correct answers. The seventh graders averaged a score of 21.0. The sixth graders averaged a score of 22.0 on the pretest. The fifth graders scored the lowest of the class with an average of 19.0 correct on the pretest.

On the post-test, the class averaged a score of 21.5 which was 0.4 less than the pre-test. The eighth graders showed no change averaging 24.3 again. The seventh graders' scores averaged 0.5 points higher to go to 21.5. The sixth graders showed a drop in scores with a 1.4 average going to 20.6. The fifth graders showed improvement with their average score going up 0.5 to 19.5.

If the scores are examined individually, one fifth grader's score improved by 5, which was the greatest improvement of the class. One student's score improved by 4 points, two improved by 2 points, and two improved by 1 point. One sixth grade student's score was 6 points lower, two were 4 points lower, one was 3 points lower, one was 2 points lower, and one was one point lower.

Figure 2:
Summative Assessment Scores

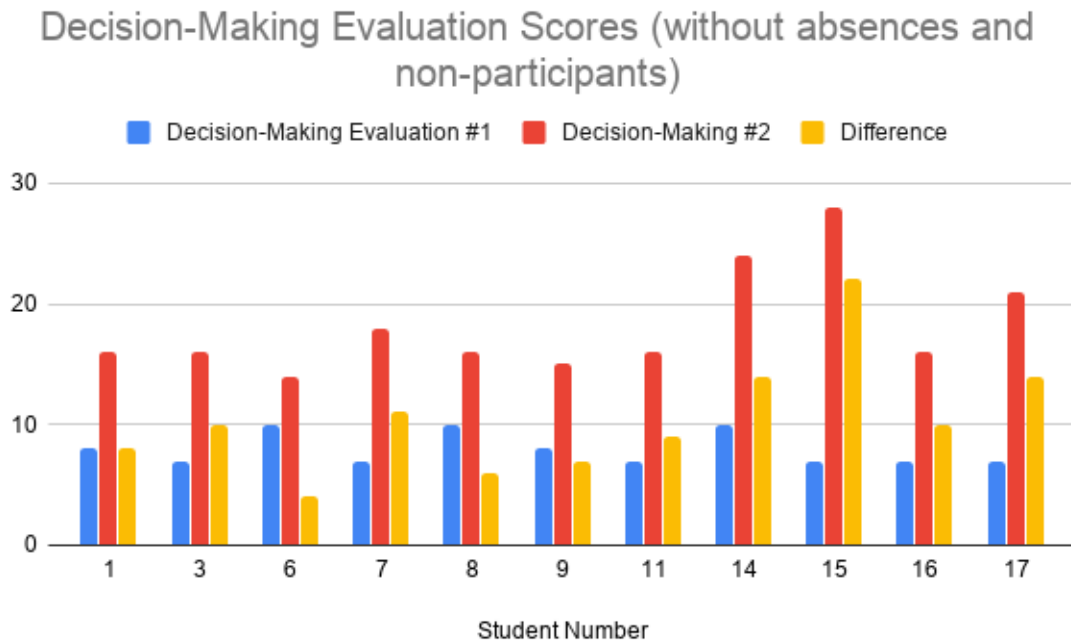


The highest overall score the second time taking the test was an eighth grade student with 29 of 32 correct. The second highest score was a sixth grader with 25 correct. The lowest score was a sixth grader with a score of 17 and the second lowest score was also a sixth grader at 18 correct.

In the Decision-Making Evaluation, students were scored according to a rubric that was divided into 7 categories. In each category, a student could earn up to 4 points and as little as 1 point. After each student was evaluated, the points from the rubric were added together. For example, a student’s maximum score was 28, while the minimum score was 7.

Figure 3:

Decision-Making Evaluation 1



The first round of the Decision-Making Evaluation students were interviewed individually. For the second round, students were interviewed in groups of three or four as mentioned above. Thirteen of the eighteen students were able to participate in the Decision-Making Evaluation both before the direct instruction classes were taught and on the last day before the shutdown.

The scores on the first round of interviews were very low. Out of the thirteen interviewed, seven scored 7 points on the rubric. Three students, two seventh graders and a sixth grader, tied with the highest score of 10. The classroom averaged a score of 8. In this assessment, the seventh graders, scored the highest with an average of 9 points. The fifth graders scored the lowest with an average score of 7.

The scores were vastly improved for the second round of testing. The classroom average was 16.5. There were two students who clearly showed that they did not care

about this testing by answering their interview questions with short, vague answers or by flat out saying that they do not care. If those two interviews are not counted towards the study, then the classroom average score was 18.2. That is a 10.2 difference from the first round of testing.

The eighth grade students improved their scores by an average of 8.5 points. The seventh graders improved by an average of 7 points. The sixth graders improved by 12.8 points. The fifth graders improved by 11.5 points. The greatest improvement, by far, was a sixth grader who improved his/her score by 21 points. This student also scored the highest with the maximum score of 28 points. The same student scored the minimum at the beginning. The second highest score was a sixth grader with a score of 24. This same student scored a 10 which was tied for the highest score in the first round.

The seventh and eighth grade classes each averaged 16 points while the sixth graders averaged 20.8 points and the fifth graders averaged 18.5 points. Only three students scored higher than an 18. In contrast, no one scored lower than 14 points the second time taking the test.

Chapter IV: Reflective Essay

Introduction

The purpose of this study was to show that direct instruction sessions added to *The Checkbook Game* curriculum would add to the depth of the students' financial knowledge as evidenced through two different types of assessments. *The Checkbook Game* is a curriculum that teaches personal finance and financial competency. *The Checkbook Game* has been taught for ten years in three different schools by two teachers. Over the course of those ten years, it has become clear to the two teachers that teach it, that it is lacking depth. In other words, *The Checkbook Game* teaches students a wide variety of financial terms, but the students have not demonstrated the next level of evidence of that learning. With the goal that students would apply their knowledge from what they have learned in *The Checkbook Game* to their lives at home, twelve direct instruction sessions were developed and implemented over a four-week period at one of the schools where *The Checkbook Game* is currently taught. Two different kinds of assessments were conducted before and after the twelve lessons were taught so that the author could compare before and after results. The hope was that the results from these assessments might support that the direct instruction sessions contributed to adding deeper learning to what is taught in *The Checkbook Game*.

Conclusions

When looking at the results, there are many things to consider. The number of absences was the biggest concern of the author. Throughout the three weeks of the study, there were only a handful of days where all students were present. Ideally, all eighteen students would have taken both assessments before and after the direct instruction

sessions and would have been present in class for all nine sessions. In addition to the number of absences, the testing conditions were not ideal on the last day of the study. The students were not focused on the assessments, but rather on the bizarre events happening around them with school closing for at least three weeks and the threat of COVID-19 going around. Also, the last three sessions had to be cut. In those lessons, students were going to be taught about insurance, stewardship, and review the previous 11 lessons. The fact that 13 of the 32 questions on the Summative Assessment had to do with the last three lessons and the fact that there was no review session, the second Summative Assessment scores were lower than if the study was carried out in different conditions. Regardless, the author feels as if the study still succeeded and was a beneficial addition to *The Checkbook Game*.

The eighth graders showed that they had more financial background knowledge by averaging a score of 24.3 correct answers on the first summative assessment. This eighth grade class is in their third year of *The Checkbook Game* and participated in five stock market simulations associated with *The Checkbook Game*. Their prior knowledge led to their higher scores. The fifth graders, who are in their first year of *The Checkbook Game* and have participated in one stock market simulation, scored the lowest of the class with an average of 19 correct on the first summative assessment.

When the students took the same test three weeks and nine Checkbook Game direct instruction sessions later, the Summative Assessment scores were lower than the first assessment. This is not surprising given the testing conditions for the posttest. The eighth graders showed no improvement. The seventh and fifth graders' scores went up an

average of half a point. The sixth graders averaged one and a half points lower than their pre-test.

The direct instruction sessions appeared to be a positive experience for the students. The sessions required student participation. The students used their Chromebooks to participate in most sessions. The students thought that it was exciting because they were budgeting, shopping, planning trips, and, as one sixth grader put it, “doing adult things.” The students’ eyes were opened to the world of travel, credit cards, banking, and why their parents take their time shopping, rather than impulse buying.

The evidence of the success of the sessions came to light in the Decision-Making Evaluations. Students were asked how they would budget for and purchase a car in high school while still participating in regular high school events and anything else for which they need money. During the first round of interviews, students often answered with the phrase, “I don’t know”. They did, however, all mention that they thought they would need to buy a spare tire for a car, but failed to mention gas to make it go or insurance. This goes to show that *The Checkbook Game* alone does not do a sufficient enough job when it comes to teaching the students how to budget, seek out a job, what working a job in high school looks like, and estimating how much income they will earn and the expenses of a car. Throughout the direct instruction sessions, students were taught how to budget, apply for a job, when they could reasonably work during high school, what kinds of costs come with purchasing a car, and estimating those costs. During the sessions, there was good discussion from the class about these things. The students were able to go online and shop and compare for themselves. By actually doing these things, it helped the students realize that budgeting is vitally important.

During the second round of interviews, the students were much more prepared. They gave answers that were much better than the first round, but could still be improved upon. During the second round, most students were able to come up with a rough budget of income and expenses for a car. They were able to list most of the extra things that come with owning a car like paying for gas, insurance, and repairs. Some also remembered to set money aside for an offering. It became clear that the students benefited from direct instruction classes that taught them a deeper sense of finances that *The Checkbook Game* by itself cannot offer.

The Checkbook Game along with the supplemental direct instruction sessions may improve student learning through faithful teaching, class participation, and real-life simulations. Through a three-week study, the interviews indicated that students add to their depth of financial competency by participating in direct instruction sessions. These 20-minute sessions use real-world resources and bring finances to life for the students. It should be concluded that a curriculum like *The Checkbook Game* along with direct instruction sessions may improve a student's financial knowledge, vocabulary, and competency to live in financial freedom and as good stewards of the blessings God has given them.

Recommendations

This short study provides anecdotal and qualitative evidence that students may benefit from a longer exposure to this curriculum. If the curriculum is taught for the whole school year, then the direct instruction sessions would take place all year long. The author recommends twenty minutes for each session. The topics in the Scope & Sequence (Appendix I) provide a good basic structure to the classes. More topics could be added

throughout the school year. No matter which topic is being taught, the students should participate in the activity. The teacher needs to be passionate about personal finances.

The Checkbook Game can get very involved with everything that happens in the classroom. If the game is not a high priority, then it can fall by the wayside and students will fail to see the importance of personal finance. Perhaps the biggest recommendation that this author has is that the teacher teaches good stewardship in the students' lives. One way to do that is to be a good example. Another way is to discuss what good stewardship is, not just when that is the topic of the lesson, but throughout the school year in devotions, prayers, and during chapel. After all, the money they have is a blessing and gift from God. The least they can do to say thanks is to give some back to him.

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Appendix A: Consent Form

St. Paul Lutheran School
718 Arbor Ct.
South Haven, MI 49090
(269) 637-4459
whitesk630@gmail.com

Curriculum Study Consent Form

I am informed that my child’s instructor, Mr. Steven K. White, is conducting a study of The Checkbook Game in my child’s classroom at St. Paul Lutheran School. This study is part of his work in the Martin Luther College Master’s of Administration program. The study will be conducted during the 2019-2020 school year.

Samples of my child’s work will be collected as a part of this study and used for curriculum analysis. These samples will include:

- Assessments, both formative and summative
- Student work samples from The Checkbook Game collected throughout the 2019-2020 school year

My child’s name will not be used at any time in any study reports. Assessment scores and student work samples will only be used as part of the statistical analysis in this report. All confidentiality policies of St. Paul Lutheran School’s Handbook will be followed at all times during the study.

I may remove my child from this study by my written notice at any time.

I give my consent to my child participating in this study with my signature below.

Parent Signature Date

Mr. Steven K. White, Principal and Teacher Date

Appendix B: The Checkbook Game Curriculum

Checkbook Game Guidelines

- Students will keep their own checkbooks on a Google Sheet
- Students are responsible for entering in their data correctly and accurately
- Students are responsible to enter data if they were gone on a Checkbook Game day (Usually Monday)
- Students earn their weekly paycheck by completing their classroom jobs every day
- Their pay is based on a survey that is conducted before the school year
- Students will earn:
 - \$650 if they plan to work right away after high school at a non-skilled position job
 - \$800 if they plan to:
 - work a skilled position (plumbing, welding, etc.) out of high school
 - graduate from a 2 year college
 - \$950 if they plan to graduate from a 4 year college or MLC
 - \$1100 if they plan to earn a Master's right away after college
 - \$1250 if they plan to earn a Doctorate's right away after college
 - \$500 if they are fired
- Students may buy up to 2 college credits each month to get a higher degree (raise of \$250 every time they get to 8 credits)
- Students will be docked 20% for each day of their paycheck if they were present but did not complete their job
- Students will be fired if they do not complete their job 5 times in 2 consecutive weeks
- In order to be re-hired, students will have to write an essay on their own work ethic and why I should hire them back
- If a student is sick, it will not count as a day against them
- If a student is sick, the Big Cheese is the first one in line to do the job, Supervisor second, Personal Assistant third, a volunteer selected by the teacher fourth

Checkbook Game Day Procedures

- First, students will login to their chromebooks and open up their checkbook sheet
- The teacher pays them (keeping in mind who didn't do their job last week or who did extra jobs)
- The students enter in the payment under the deposit column
- Then the teacher informs the students of their bills for the week. The students enter that information into their checkbook.
- Their running balance should change automatically so there is no adding or subtracting errors
- After that week's bills are paid, each student rolls 2 dice and add up the total
- If they roll doubles, then they have an unexpected expense. They would then roll a 10-sided dice to determine their fate.

- If they roll a 3 or an 11, then they have an unexpected income! They would then roll a 10-sided dice to determine their fate.
- If they have a “junker” car, one where they have no car loan, and they roll a 7 on their roll, they have car repairs and have to pay \$50 times a 10-sided die.
- After everyone rolls, then the checkbook session is over for the week.

Earning Extra Money

- If a student fills in, they receive a \$100 bonus
- Students may walk laps: \$50/parking lot (walking), \$75/parking lot (running), \$10/gym (walking), \$15/gym (running)

Housing Guidelines

- The classroom is divided into 3 sections: The Ghetto, Suburbs, and Beverly Hills
- Prices of each area are proportionate to real-life (\$500/month, \$900/month, \$1500/month respectively)
- Students will start with monthly housing payments
- Students may purchase the house outright for 15x the monthly payment minus any monthly payments that the student has already made

Foreclosure

- If students are unable to pay their mortgage for two consecutive months, their house will go up for foreclosure
- During foreclosure, the student loses their desk and will sit at an area provided for them (a folding chair) in the Ghetto and pay \$300/month as long as they are seated there
- If the foreclosed house has not been recovered within the first week it was lost, it will go on the auction block during the next Checkbook game session
 - The house’s price starts at half the full cost of where the house was located
 - The purchased house starts in the same area where it was foreclosed
 - Anyone may bid on the house, including the one who lost it
 - After purchasing the house, the student may offer it to the student who lost it to rent
 - A renter must pay the normal monthly price to the landlord

Moving

- Students may move to a new area, but must pay 2 month’s worth of payments to complete the move
- There is no fee to move within the same area of the classroom

Selling

- Students may sell their house or houses to other students if they own it outright
 - When selling a house, the price is the full cost of the house (15 times the monthly payment)
- If homeless, students will sit in the provided area in the Ghetto paying \$300/month

- Students may only purchase another desk if a desk has been foreclosed or a student is willing to sell

Why own a home?

- So why own a house? Don't you lose money if you pay full price?
 - You don't have a monthly payment any more
 - You own something that is worth a lot of money
 - You never know when a buyer will ask you to sell (NEW special dice combination triggers this)
 - At the end of the year, the teacher will purchase your house or houses at 125% of its cost

Why does keeping track of money matter?

- At the end of the year, you lose all of your money
- But, before that happens, the teacher will hold an auction with prizes ranging from bottles of soda, pens, stress balls, drawstring bags, high school apparel prizes, anything that the teacher can collect over the year or whatever was donated.
- The whole point is to show the students that managing money is important. They need to see that they have to be mindful of what they spend their money on.

Appendix C: Home Visit Quiz

All About Your Child

This is a list of questions that I'd like you to answer concerning your child. The answers will be used in something very important, so I'd like you to be as truthful as possible.

1. Rank the top 4 things your child likes to do in their free time (1-favorite, 2-2nd favorite, etc.).
____ Read books
____ Play video games
____ Play outside
____ Eat snacks
____ Watch movies
____ Work on the computer
____ Other, explain _____
2. Does your child have a smart phone?
 - A. Yes and is on it a lot
 - B. Yes and only uses it when needed
 - C. No, but "borrows" the parents' phones all the time
 - D. No and hardly ever uses one
3. What are your child's future plans? (Best guess, nothing laid in stone)
 - A. To start working at a full time job out of high school
 - B. To go to a 2 year college
 - C. To go to Martin Luther College
 - D. To go to a different 4 year college
 - E. To go to grad school
 - F. We have no idea yet, haven't even talked about it.
4. Does your child like to shop (either online or in-person)?
 - A. Yes
 - B. Indifferent
 - C. No
5. How much does your child eat at home?
 - A. My child is a bottomless pit
 - B. Quite a bit
 - C. Not anything more than normal
 - D. Hardly at all
6. Would your child survive without the internet?
 - A. Yes, they hardly use it
 - B. Yes, but they do use it often
 - C. Maybe for a day or two
 - D. No, the world would end

7. What kind of car (again, best guess) will your child have for high school/college?
 - A. They'll have to work and buy their own car
 - B. We'll probably buy them a cheap car
 - C. We'll probably let them use one of ours
 - D. We'll probably buy them a newer car
 - E. They'll have to rely on public transportation

 8. Does your child save energy?
 - A. Yes, they shut lights off when leaving the room, close outside doors, and take quick showers without being told.
 - B. Sort of, but have to be reminded often to shut lights off, shut doors, and/or take faster showers.
 - C. No, they never shut lights off, close doors, and/or take long showers

 9. What kind and how many pets do you think your child will have when they are living on their own?
-

Appendix D: Example of Teacher's Dashboard

	Student 1	Student 2	Student 3	Student 4	Student 5	Student 6	Student 7	Student 8	Student 9
Weekly Income	\$1,100.00	\$1,100.00	\$1,254.45	\$950.00	\$1,100.00	\$1,100.00	\$1,030.00	\$950.00	\$1,100.00
Monthly Income	\$4,400.00	\$4,400.00	\$5,057.80	\$3,800.00	\$4,400.00	\$4,400.00	\$4,120.00	\$3,800.00	\$4,400.00
Monthly expenses	\$3,180.00	\$2,940.00	\$2,856.45	\$3,115.00	\$2,680.00	\$2,600.00	\$3,733.00	\$2,825.00	\$2,800.00
Balance	\$1,220.00	\$1,460.00	\$2,201.35	\$685.00	\$1,720.00	\$1,800.00	\$380.00	\$975.00	\$1,600.00

Appendix E: Example of Student Account

Checkbook Template ☆

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fx =SUM(E2+(D3-C3))

	A	B	C	D	E	F
1	Date	Event	Withdrawal	Deposit	Running Balance	
2	8/27/18	Gift		500	500	
3					500	
4					500	
5					500	
6					500	
7					500	
8					500	
9					500	
10					500	
11					500	
12					500	
13					500	
14					500	
15					500	
16					500	
17					500	
18					500	
19					500	
20					500	
21					500	
22					500	
23					500	
24					500	
25					500	
26					500	
27					500	
28					500	
29					500	
30					500	

+ Sheet1

Appendix F: Classroom Duty Chart

Job Chart ☆

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	A	B	C	D	E	F	G
1	Job	Student	Monday	Tuesday	Wednesday	Thursday	Friday
2	Supervisor	1					
3	AM Color Guard	2					
4	Photographer	3					
5	Mailman	4					
6	PM Color Guard	5					
7	Chairman	6					
8	Dustbuster	7					
9	Big Cheese	8					
10	Technician	9					

Sheet1

Job Chart ☆

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	A	B	C	D	E	F	G
11	Athletic Closet Supervisor	10					
12	AM Color Guard	11					
13	Chairman	12					
14	Dustbuster	13					
15	PM Color Guard	14					
16	Personal Assistant	15					
17	Microwave Cleaner	16					
18	Big Cheese	17					
19	Journalist	18					

Appendix G: Decision-Making Evaluation

The Checkbook Game
Decision-Making Evaluation

Name: _____ Date: _____

The following rubric is to be used as an assessment in a one on one student and teacher setting. The teacher should ask the student the following questions and assess the student as they think and process financial decisions aloud. The teacher will not assess just the final decision, but the process as to how that student got to the decision as well.

1. Imagine you are in high school. Explain your thought process on how you will go about acquiring a car while still participating in school events, such as going to sporting events, hanging out with friends, purchasing school apparel, purchasing Christmas presents for your family, etc.
2. After you acquire a car, how will you continue to pay for it?
3. What role does budgeting play in the whole process?

Topic	4	3	2	1
Understanding the Concept of Money	The student clearly understands the meaning of a dollar and protects their money. The student can correctly place a money value on an item when making a purchase.	The student understands the meaning of a dollar, but doesn't protect their money carefully. The student can estimate an item's value close to the exact amount.	The student understands the meaning of a dollar, but does not realize its value. The student is able to place an estimated money value to an item when making a purchase.	The student clearly does not understand the meaning of a dollar and is careless with they money. The student shows that they have no clue how much an item costs and puts full trust into the other party when making a purchase.
Financial Competency	The student can accurately add, subtract, multiply, and divide money accordingly. The	The student can estimate when adding, subtracting, multiplying, or dividing money.	The student can estimate when adding and subtracting money. The student can	The student can only add and subtract round numbers. The student is unable to talk

	student can correctly discuss benefits and consequences of past, future, and present financial decisions.	The student can discuss the benefits and consequences of past and present financial decisions.	discuss the benefits of present financial decisions.	through the benefits of any financial decisions they have made.
Budgeting	The student has shown that they can accurately balance a budget of incomes and expenses over the course of a year.	The student has shown that they can estimate a balanced budget of incomes and expenses over the course of a year.	The student has shown that they can estimate a balanced budget of incomes and expenses over the course of a month.	The student has great difficulty in weighing incomes and expenses. The student does not acknowledge having enough money to pay for their expenses.
Decision-Making Process	When asked to think aloud while making a financial decision, the student showed excellent long-term thinking along with weighing options, rather than being focused on one option. The student made a positive financial decision for the right reasons.	When asked to think aloud while making a financial decision, the student showed some long-term thinking along with weighing options, rather than being focused on one option. The student made a positive financial decision.	When asked to think aloud while making a financial decision, the student showed no long-term thinking. The student focused only on one option rather than expanding and shopping around. The student made a positive financial decision for the wrong reasons.	When asked to think aloud while making a financial decision, the student showed no long or short-term thinking and focused only on one option. The student made a poor financial decision.
Estimations	The student accurately estimates prices of items before doing research.	The student accurately estimates prices of items only after doing research.	The student's estimates are close on some items, but incorrect on the others.	The student doesn't estimate before budgeting or considering to purchase an

				item.
Stewardship	The student shows excellent Christian stewardship by giving their firstfruits to God.	The student begrudgingly gives their offering to the church.	The student has to be reminded to give an offering to the church.	The student has no intentions on giving an offering to the church.

Appendix H: Summative AssessmentThe Checkbook Game
Summative Assessment

Name: _____ Date: _____

Directions: Circle True if the sentence is true. Circle False if the sentence is false.

True/False: All of the money I have is mine.

True/False: I have to give 10% of my earnings to church.

True/False: The real reason that I give an offering to church is because I want to show God my love for him.

True/False: I also give money to church to look good.

True/False: Most everyone can find at least one easy way to save money.

True/False: You always have a choice on how to use money.

True/False: All advertisements are true; no one would purposely try to trick me out of my money.

True/False: You can get lower car insurance rates if you have good grades.

True/False: Car insurance costs more for females because they have more car accidents than males.

True/False: Your values will change over time.

True/False: A planned purchase is an impulse buy.

True/False: If I buy something then decide that I don't want it, the store has to give me a refund.

True/False: Liability insurance pays for injury or damage you cause to other people and their property.

True/False: Paying the minimum on a credit card bill is a good money management practice.

True/False: You will buy less food if you shop when you are not hungry.

True/False: Your beliefs and values have little influence on how you spend your money.

True/False: If you damage your car, your insurance company will pay for all of the costs to have it repaired.

True/False: If you put 15 gallons of gas in your car, and gas costs \$1.75/gallon, you will pay more than \$25 to fill up your tank.

True/False: If your car gets 20 miles to the gallon, and your car holds 15 gallons, you will be able to drive about 300 miles on a full tank of gas.

True/False: In the grocery store, the food displays at the end of aisles have the best buys.

True/False: Most people find it hard to start a savings plan.

True/False: The biggest expense for a new car is depreciation.

True/False: New car warranties are always free.

Directions: Circle the correct answer for the questions below.

What is an interest rate?

- A. A percentage that gets attached to a loan for borrowing money
- B. The rate at which a loan is taxed
- C. A deposit amount on a house that you are interested in buying
- D. None of the above

Where would an interest rate be applicable?

- A. When purchasing car parts from Wal-mart
- B. When taking out a loan to purchase a house
- C. Paying for a new boat in cash
- D. Filling up the car with gas

What is 'inflation'?

- A. The increase of only gas prices
- B. The increase of value of money and the fall of prices
- C. The increase of prices and fall of the value of money
- D. Higher loan amounts

Where does money come from?

- A. It is given out to everyone for free from the government
- B. When people graduate college, money starts appearing in their checking accounts
- C. No one knows where it comes from, it just is.
- D. Working and earning a paycheck

Why do you need money?

- A. To buy the things I want

- B. To buy the things I need
- C. To show my love for God
- D. All of the above

Where is the best place to keep your extra money?

- A. In stocks
- B. In the bank
- C. Giving it to my parents to keep safe for me
- D. Loan it to a friend who will pay it back when I need it

What is insurance?

- A. A safety net that pays for sudden, major expenses that could happen
- B. Protection from loans
- C. A way for companies to help me pay for college
- D. None of the above

What kinds of things require insurance?

- A. Cars, boats, motorcycles
- B. House, apartment, my toys
- C. The money at my bank
- D. My life
- E. All of the above
- F. Just A and B

How should you go about the Stock Market?

- A. Seek an expert to help and guide my investments
- B. Rely on what I learned in school and invest small amounts myself
- C. Rely on what I learned in school and invest large amounts myself
- D. Stay as far away from the Stock Market as you can

Appendix I: Scope & Sequence

(The original document is in a Google Sheet. The author found it difficult to translate to this document. Screenshots are evidence of the original document.)

	A	B	C	D	E
1	Session	Anticipated Date (Flexible)	Topic of Direct Instruction Period	Materials Needed	Further Details
2	-	Mon, Feb. 24	N/A	Summative Assessment	Students will take the Summative Assessment in the morning.
3	-	Mon, Feb. 24	N/A	Decision-Making Evaluation	Throughout the day as time allows, the teacher will perform the Decision-Making Evaluation with each student. (~5 minutes)
4	1	Mon, Feb. 24	Budgeting 101	Chromebooks, Access to the Internet, Calculators	The teacher will introduce budgeting concepts and have the students make a simple balanced budget for a road trip vacation
5	2	Tue, Feb. 25	Budgeting 102	Chromebooks, Access to the Internet, Calculators	The teacher will instruct the students on making wise financial decisions when they move out of the house examining how to take wants and needs and make them fit in a balanced budget
6	3	Thu, Feb. 27	Where should I keep my money?	Chromebooks, Access to the Internet, Calculators	The teacher will instruct the students on why the bank is the best place to keep their money safe. Students will compare benefits offered by different banks.
7	4	Mon, Mar. 2	Interest	Chromebooks, Access to the Internet, Calculators	The teacher will instruct the students on what interest is, how to calculate it, and make students aware of many scenarios where interest is applicable.
8	5	Tue, Mar. 3	Credit 101	Chromebooks, Access to the Internet, Calculators	The teacher will instruct the students on the footprint of credit in their lives. The students will compare the benefits and dangers of credit.
9	6	Thu, Mar. 5	Credit 102	Chromebooks, Access to the Internet, Calculators	The teacher will instruct the students on how to shop around for credit cards and simulate good credit card use and bad credit card use to show the students the consequences of each.
9	6	Thu, Mar. 5	Credit 102	Chromebooks, Access to the Internet, Calculators	The teacher will instruct the students on how to shop around for credit cards and simulate good credit card use and bad credit card use to show the students the consequences of each.
10	7	Mon, Mar. 9	Compare when shopping	Chromebooks, Access to the Internet, Calculators	The teacher will show the students the benefits of comparison shopping versus shopping on impulse. Students will then comparison shop and "buy" a fitness watch.
11	8	Tue, Mar. 10	Applying for a job	Job Application from a resource book or from a real business	The teacher will show the students how to fill out a job application and the importance of applying at more than one place. The teacher will also discuss appearance and mannerism as a part of the job application process.
12	9	Thu, Mar. 12	Applying for a loan	Loan Application from a resource book or from a real bank	The teacher will show the students how to fill out a loan application and discuss the benefits and dangers of loans.
13	10	Mon, Mar. 16	Insurance	Chromebooks, Access to the Internet, Calculators	The teacher will instruct the students as to what insurance is and why it is necessary
14	11	Tue, Mar. 17	Stewardship	A copy of the Church Budget	The teacher will remind the students of what good stewardship is and why God commands us to be good stewards. The teacher will discuss the benefit of good stewardship in the church budget.
15	12	Thu, Mar. 19	Review	Chromebooks, Access to the Internet, Calculators	The teacher will review the topics by simulating a decision-making process for buying a house.
16	-	Fri, Mar. 20	N/A	Summative Assessment	Students will take the Summative Assessment in the morning.
17	-	Fri, Mar. 20	N/A	Decision-Making Evaluation	Throughout the day as time allows, the teacher will perform the Decision-Making Evaluation with each student. (~5 minutes)

Appendix J: Summative Assessment Scores (all scores)

Summative Assessment Scores (all scores)			
Student Number	Summative Assessment #1	Summative Assessment #2	Difference
1	27	29	2
2	23	absent	
3	23	20	-3
4	23	24	1
5	absent	23	
6	23	22	-1
7	19	21	2
8	absent	25	
9	24	18	-6
10	20	24	4
11	21	19	-2
12	20	absent	
13	25	absent	
14	24	25	1
15	21	17	-4
16	23	19	-4
17	15	20	5
18	21	absent	
Average score and total difference	21.9	21.5	-5
8th grade Average score and total difference	24.3	24.3	0
7th grade Average score and total difference	21.0	21.5	0.7
6th grade Average score and total difference	22.0	20.6	-1.4
5th grade Average score and total difference	19.0	19.5	0.5

Appendix K: Summative Assessment Scores (without absences)

Summative Assessment Scores (without absences)			
Student Number	Summative Assessment #1	Summative Assessment #2	Difference
1	27	29	2
2			
3	23	20	-3
4	23	24	1
5			
6	23	22	-1
7	19	21	2
8			
9	24	18	-6
10	20	24	4
11	21	19	-2
12			
13			
14	24	25	1
15	21	17	-4
16	23	19	-4
17	15	20	5
18			
Average score and total difference	21.9	21.5	-5
8th grade Average score and total difference	24.3	24.3	0
7th grade Average score and total difference	21.0	21.5	0.7
6th grade Average score and total difference	22.0	20.6	-1.4
5th grade Average score and total difference	19.0	19.5	0.5

Appendix L: Decision-Making Evaluation Scores (all scores)

Decision-Making Scores (all scores)			
Student Number	Decision-Making Evaluation #1	Decision-Making #2	Difference
1	8	16	8
2	8	absent	
3	6	16	10
4	Absent	14	
5	9	9	0
6	10	14	4
7	7	18	11
8	10	16	6
9	8	15	7
10	7	6	-1
11	7	16	9
12	6	absent	
13	12	absent	
14	10	24	14
15	6	28	22
16	6	16	10
17	7	21	14
18	6	absent	
Average score and total difference	7.8	16.4	114
8th grade Average score and total difference	7.3	15.3	9
7th grade Average score and total difference	9	14.3	5.3
6th grade Average score and total difference	8	17.8	10.2
5th grade Average score and total difference	6.3	18.5	12

Appendix M: Decision-Making Evaluation Scores (without absences and non-participants)

Decision-Making Scores (without absences and non-participants)			
Student Number	Decision-Making Evaluation #1	Decision-Making #2	Difference
1	8	16	8
3	7	16	10
6	10	14	4
7	7	18	11
8	10	16	6
9	8	15	7
11	7	16	9
14	10	24	14
15	7	28	22
16	7	16	10
17	7	21	14
Average score and total difference	8.0	18.2	115
8th grade Average score and total difference	7.5	16.0	9
7th grade Average score and total difference	9	16.0	7.0
6th grade Average score and total difference	8	20.8	13
5th grade Average score and total difference	7.0	18.5	12

