

**MEMORANDUM**

August 20, 2013

TO: Board Members

FROM: Terry B. Grier, Ed.D.  
Superintendent of Schools

SUBJECT: **SERVING UP LEMONADE (SUL) PROGRAM EVALUATION, 2012–2013**

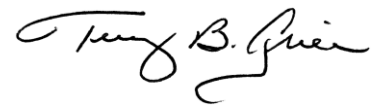
CONTACT: Carla Stevens, (713) 556-6700

Serving Up Lemonade (SUL) was designed to help students establish and operate their own lemonade business, while strengthening life skills related to the 40 Developmental Assets®. SUL has expanded from sixth-grade students during the 2010–2011 academic year to sixth- and seventh-grade students in 2011–2012. In 2012–2013, eighth-grade students were also exposed to the SUL curriculum. SUL was developed through collaboration with HISD Strategic Partnerships, the HISD Middle School Office, and Prepared 4 Life. The HISD Department of Curriculum, Instruction, and Assessment ensured that lessons were aligned to the Texas Essential Knowledge and Skills (TEKS) standards on financial literacy, reading, English language arts, math, and social studies.

Survey data were gathered from a small sample of students regarding engagement in activities related to developmental assets, life skills, character, and career interests before and after SUL. Findings included students' perceptions of increased engagement in goal-setting and financial planning activities after SUL compared to before SUL. Students noted increased financial literacy and financial self-efficacy as well as more interest in careers related to business management, business administration, and finance after SUL.

**Administrative Response:** The HISD Strategic Partnership Department will continue to coordinate SUL program activities with partnering organizations and HISD departments to ensure alignment with TEKS. Future strategies will include alternative training and support methods for teachers through the development of step-by-step procedural manuals, web-based communication forums, and site visits to ensure best practices in program instruction.

Should you have any questions or require any further information, please contact me or Carla Stevens in the Department of Research and Accountability, at 713-556-6700.



TBG

TBG/CS:vh

cc: Superintendent's Direct Reports  
Chief School Officers  
School Support Officers  
Caleen Allen

Nancy Gregory  
Lucy Bremond  
Rachele Vincent  
Rose Adams



# RESEARCH

Educational Program Report

THE IMPACT OF SERVING UP LEMONADE(SUL)  
ON THE DEVELOPMENT OF ASSETS, LIFE SKILLS,  
CHARACTER, AND CAREER INTERESTS AMONG  
MIDDLE-SCHOOL STUDENTS  
2012-2013

DEPARTMENT OF RESEARCH AND ACCOUNTABILITY  
HOUSTON INDEPENDENT SCHOOL DISTRICT



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Hattie Mae White Educational Support Center

4400 West 18th Street

Houston, Texas 77092-8501

[www.houstonisd.org](http://www.houstonisd.org)

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# The Impact of SERVING UP LEMONADE (SUL) on the Development of Assets, Life Skills, Character, and Career Interests among Middle-school Students

2012–2013

## Executive Summary

### Program Description

Lemonade Day began in 2007 by Prepared 4 Life as a community-wide educational initiative to help youth develop entrepreneurship and character as they establish and learn to operate their own lemonade business (Prepared 4 Life<sup>1</sup>, 2013). Students who participate in Lemonade Day retain the money earned to invest as they choose. The event provides opportunities for students to strengthen their life skills related to the 40 Developmental Assets® (Search Institute, 2013). The Houston Independent School District (HISD) has participated in Serving Up Lemonade (SUL) since the 2010–2011 academic year. The program had similar aims as Lemonade Day; but targeted specific subgroups of the middle-school population. Specifically, in 2011–2012, SUL targeted sixth and seventh-grade students. In 2012–2013, the initiative expanded to include eighth-grade students. With support from HISD Strategic Partnerships and the HISD Middle School Office, designated staff coordinated SUL activities with Prepared 4 Life. Students were exposed to SUL lessons from January to April 2013. The HISD Department of Curriculum, Instruction, and Assessment assisted Prepared 4 Life in aligning lessons to the Texas Essential Knowledge and Skills (TEKS) standards on financial literacy and the State of Texas Assessments of Academic Readiness (STAAR) in reading, English language arts, math, and social studies. SUL culminated in May 2013 with students selling lemonade within their communities to align with the mission of Prepared 4 Life. This evaluation will focus on the following:

- Student participation rates in the SUL initiative;
- The impact of SUL on student development of assets, life skills, character, and career interests as measured by pre- and post-survey.

### Highlights

- Reportedly, 19,443 students registered for SUL during the 2012–2013 academic year. Students were represented among 30 out of 40 HISD campuses. Sixth-grade students were the highest subgroup who participated in the program at 37.2 percent, followed by seventh-graders (32.9) and eighth-graders (29.9 percent).
- Overall, SUL student registration increased by 4,393 students from 2011–2012 to the current academic year (15,050 vs. 19,443). However, sixth and seventh-grade student participation decreased by 9.5 percent over the two-year period (15,050 to 13,619). It is possible that student interest in participation may have declined due to the fact that the SUL curriculum content remains the same regardless of grade level.
- The SUL curriculum included seven lessons that encompassed goal-setting, planning and budgeting, finding an investor, building a successful lemonade stand, assessing

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<sup>1</sup> Prepared 4 Life is a non-profit organization founded by Michael and Lisa Holthouse.

cost-effectiveness, effective practices of business operations, as well as accounting, spending, saving, and sharing business results.

- Surveys administered before and after the SUL initiative resulted in a paired student sample of 251, although approximately 6,000 students participated in the pre-survey. A district wide survey administered during the same period of time as the post-survey negatively impacted student participation. Nevertheless, the findings of the paired student sample revealed statistically significant increases in student engagement on activities related to Financial Literacy ( $p < .01$ ) as well as Goal-setting and Financial Planning ( $p < .05$ ). The most notable changes were reflected on the items “I understand how to read a profit and loss statement” and “I keep track of my expenses”.
- Change in mean ratings on items measuring Developmental Assets varied following the SUL initiative, with overall mean ratings not reaching statistical significance at  $p < .05$ . Notably, there was a slight decrease in the mean rating of students who indicated “I plan on attending college after high school” and “I plan on completing my high school education” (.01 and .04 percentage points, respectively). However, students’ pre-survey responses on these items were fairly high, approaching “always”. Therefore, the slight decrease may have been an indication of “regression to the mean”.
- Students’ Financial Self-efficacy ratings reflected a statistically significant increase on the item measuring feeling confident about making decisions that involve money from pre- to post-survey.
- Ratings on items focused on Career Interests (whether they liked to engage in business-related activities) increased from pre- to post-survey, with the highest mean increase on the Finance scale compared to Marketing and Business, Management, and Administration scales.

## Recommendations

1. Although the perceptions of a small sample of students are reflected in the 2012–2013 results, implications for continuation of SUL is promising as these students expressed increased engagement in goal-setting, financial planning, financial literacy, and financial self-efficacy over the course of the program. Therefore, HISD Strategic Partnerships and the HISD Department of Curriculum, Instruction, and Assessment should continue to collaborate with Prepared 4 Life to develop lessons that build on student’s character, financial literacy skills, and business career interests.
2. Students’ views related to developmental assets were not notably impacted among the smaller 2012–2013 student sample. However, results from the 2011–2012 SUL student sample with comparable demographic characteristics indicated positive impact (Holmes, 2012). It is not apparent whether the sample size influenced the findings. Therefore, specific strategies should be developed among the collaboration to improve follow-up survey participation. This will enhance consistency in data collection and may provide more reliable information on program impact.
3. Sixth and seventh-grade student registration declined over the past year. Therefore, Prepared 4 Life should consider ways to enhance the program to accommodate student interests and stages of social-emotional development as they advance to higher grade levels.

### **Administrative Response**

The HISD Strategic Partnership Department will continue to coordinate SUL program activities with partnering organizations and HISD departments to ensure alignment with TEKS. Future strategies will include alternative training and support methods for teachers through the development of step-by-step procedural manuals, web-based communication forums, and site visits to ensure best practices in program instruction.

## Introduction

Over the past decade, there have been increasing efforts to identify factors that influence youth behavior and contribute toward the development of assets to succeed as healthy adults (Blythe, 1999). Serving Up Lemonade (SUL) is “built around life skills, character education and entrepreneurship to help [youth] become contributing members of society” (Raben, 2012, p. 1). Lessons include planning and budgeting, finding an investor, attracting customers, accounting, spending, saving, and sharing. Activities are designed to help youth transition into adulthood by making decisions related to starting businesses, goal-setting, planning, and budgeting within their own communities. Research has also shown that transition from adolescence to adulthood is a pivotal time to “shape and engage [youth] with their developmental contexts in order to develop competencies, skills, and behavioral repertoires that are simultaneously beneficial to self and to society” (Scales and Benson, 2004, p.2). Studies have shown that youth who acquire more developmental assets are “least likely to engage in four different patterns of high-risk behavior, including problem alcohol use, violence, illicit drug use, and sexual activity” (Search Institute, 2012, p.1). Life skills development, that encompasses group involvement in organized, pro-social activities, may also be critical in helping youth achieve positive identity, a sense of purpose, satisfaction, and successful development of self-efficacy in achieving goals in life (Scales & Benson, 2004; Bandura, 1977).

“Financial Literacy means being able to understand money and having the knowledge and skills to make good decisions about using and managing money” (Djakovac, 2010, p.18). School-aged children can benefit from fundamentals of personal finances and information on how to become economically independent once they become adults. Being a successful entrepreneur requires financial literacy, or the ability to use knowledge and skills to manage financial resources effectively. In a school-centered program, teachers can play a key role in helping youth attain these skills. Way and Holden (2010) found that, while the majority of states have K-12 standards for financial literacy instruction; “teachers feel limited in their abilities to design curricula with financial education concepts integrated into their specific discipline, employ instructional strategies, and assess specific learner needs” (p. 17). SUL provides an opportunity to help train teachers to be adequately prepared to meet the competencies required to enhance teaching and learning for students and build on students’ skills to understand business concepts.

## Methods

### Data Collection and Analysis

- SUL targeted sixth, seventh, and eighth-grade students in HISD’s 40 middle schools. School administrators assigned staff to assist in the coordination and recruitment of teachers and students at their respective schools. In the fall of 2012, participating teachers were given posters and backpacks to distribute to students who agreed to set up lemonade stands during the Lemonade Day event in May 2013. Students were taught the Lemonade Day curriculum that incorporated business concepts and real world activities during their Advocacy class from January to April 2013. Teachers were provided instructional material, including the *Caring Adult Guide* to focus their instruction. Prepared 4 Life collaborated with the HISD Department of Curriculum, Instruction, and Assessment to align teacher guides and student lessons to TEKS.
- Targeted middle-school students were administered web-based pre- and post-surveys



designed to measure the impact of the SUL initiative in the following areas: Developmental Assets, Goal-setting and Financial Planning, Financial Literacy, and Financial Self-efficacy. These factors have been identified by the Search Institute as building blocks to help youth become “healthy, caring, and responsible adults” (Search Institute, 2012, p. 1).

- Items designed to identify Career Interests were adapted from the National Association of State Directors of Career Technical Education Consortium, Student Interest Survey for Career Clusters™. The instrument was reviewed and piloted with Prepared 4 Life administrators and the HISD Strategic Partnerships department in spring 2012 to ensure that items represented a reliable measure of concepts covered in the curriculum. The instrument was administered to students of similar demographic characteristics during the 2011–2012 academic year (Holmes, 2012).

**Table 1: Demographic Characteristics of SUL Paired Student Sample and All HISD 6<sup>th</sup> and 7<sup>th</sup> Grade Students, 2012–2013**

	<b>SUL Student Sample</b>	<b>All HISD 6<sup>th</sup> and 7<sup>th</sup>-graders</b>
	<b>n = 251</b>	<b>N = 26,714</b>
<b>Grade Level</b>	<b>%</b>	<b>%</b>
6th	68.5	50.6
7th	31.5	49.4
<b>Gender</b>		
Male	52.6	51.5
Female	47.4	48.5
<b>Economically Disadvantaged</b>	64.1	80.0
<b>At Risk</b>	20.7	37.1
<b>Gifted/Talented</b>	25.1	16.1
<b>Special Education</b>	5.6	10.0
<b>Ethnicity</b>		
African American	19.9	25.3
Asian	8.0	3.3
Hispanic	56.2	61.7
White	13.5	8.6
Other	2.4	1.1

- The Cronbach’s alpha was used to measure internal consistency of items used in the survey (Pavot, Diener, Colvin and Sandvik, 1991). According to Pavot et al., the factors assessed had good internal consistency, yielding the following Cronbach’s alpha reliability coefficients: Goal-setting and Financial Planning ( $\alpha = .822$ ); Financial Literacy ( $\alpha = .720$ ); Developmental Assets ( $\alpha = .790$ ); Marketing ( $\alpha = .741$ ); Business Management ( $\alpha = .785$ ); and Finance ( $\alpha = .788$ ). Internal consistency was not assessed on Financial Self-efficacy because there were only two items used to measure this factor.
- Surveys links were distributed to the HISD Middle School Office and forwarded to administrators at middle schools before the initiative (January 2013) and after the initiative (May 2013). Pre- and posttest matching yielded a sample of only 251 students who completed both the pre- and post-surveys among the 19,443 HISD sixth, seventh, and eighth-grade students who reportedly registered to participate in SUL during the 2012–2013 academic year. Students who completed both the pre- and posttest surveys were enrolled in 8 out of 40 middle schools, and were sixth and seventh-grade students.
- **Table 1** provides key demographic characteristics of the SUL student sample compared to all sixth and seventh-grade students in HISD. The 19,443 registered SUL students were not used as a comparison group because their HISD identification information was not captured by SUL administrators. Table 1 shows that the SUL student sample was more likely to be a sixth-grade male enrolled in a gifted/talented program compared to the general HISD middle-school population. SUL students who responded to the survey were



less likely to be economically disadvantaged, at risk, or enrolled in special education programs.

### Data Limitations

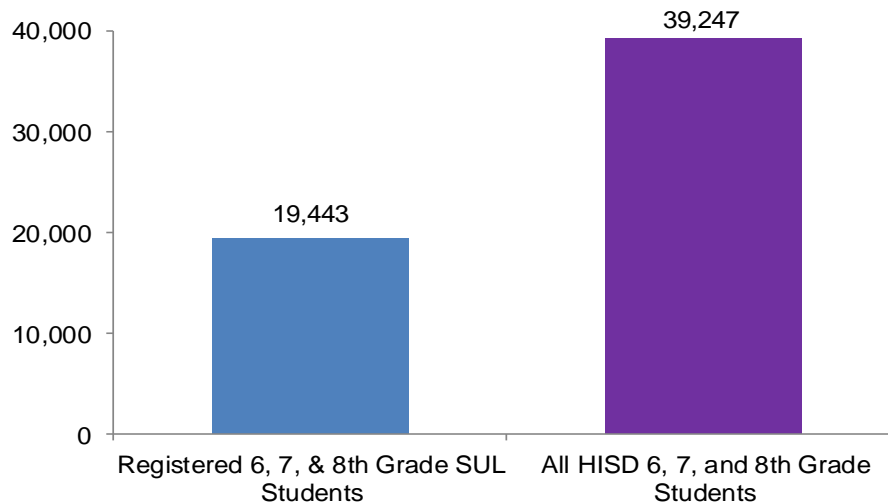
- There were several limitations to the study. Data used in this evaluation were gathered through web-based survey links forwarded to administrators, then to teachers to distribute to students. This method of distribution could have limited student and teacher access to the survey, and resulted in reduced sample sizes. Although, there were 40 HISD middle schools in 2012–2013, 30 schools were represented among students who registered for SUL (75.0 percent), and only 8 schools were represented in the survey results among schools with registered students (27.0 percent).
- Student survey results reflected the perceptions of a small sample of sixth and seventh-grade students in HISD that were not representative of this subgroup of the HISD population at large relative to key demographic characteristics, such as at risk, economic, and gifted and talented status. Therefore, the survey results should be viewed with caution due to possible sampling bias.
- Approximately 6,000 students participated in the pre-survey; however, the results of only 251 students could be used in the paired sample design. These students were either sixth or seventh graders, although the program was also exposed to eighth graders. It is believed that a district wide survey administered in HISD at posttest negatively impacted student participation in the SUL post-survey.

## Results

### What were the participation rates of students in the SUL initiative?

- 19,443 sixth, seventh, and eighth-grade students were registered by teachers to participate in the 2012–2013 SUL initiative (Boeker, personal communication, July 1, 2013). During the previous school year, 15,050 students were registered participants in SUL. The 29.2 percent increase in registration may be partly due to program expansion from sixth and seventh grades to include eighth-grade students.
- **Figure 1** shows the number of registered SUL students compared to all HISD students in comparable grade levels. SUL students represented 49.5 percent of all sixth through eighth graders in HISD.

**Figure 1. Number of Registered SUL Students compared to All HISD Sixth through Eighth-grade Students, 2012–2013**



### To what extent was student engagement in activities related to life skills, character-building, and developmental assets impacted by the SUL initiative?

- **Table 2** depicts mean pre- and post-survey results of a paired sample of 251 students who completed the instrument before SUL in January 2013 and after SUL in spring 2013. (The profile of the paired student sample was previously shown in Table 1.) The survey was designed to measure student developmental assets, engagement in life skills, and engagement in character-building activities needed for youth to be successful adults.
- There was a statistically significant increase in the overall mean rating on Goal-setting and Financial Planning (+.06 points) and Financial Literacy (+.11 points). An increase

was also noted in the mean rating on items measuring Financial Self-efficacy (+.10 points). Financial Self-efficacy results approached statistical significance at  $p = .055$ .

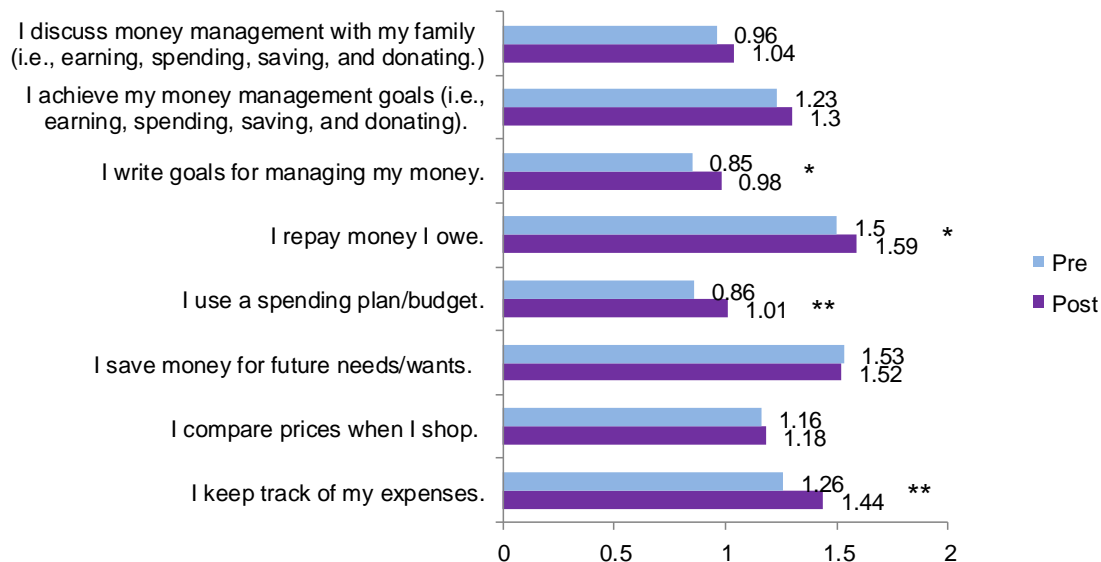
- Pre- and post-survey means of items measuring frequency engaging in Goal-setting and Financial Planning activities are presented in **Figure 2**. Statistically significant increases were noted on the items: “I keep track of my expenses” (*Mean Difference (MD)* = .18 points); “I use a spending plan/budget” (*MD* = .15); “I repay money I owe” (*MD* = .09); and “I write goals for managing my money” (*MD* = .13). There was a decrease in the mean rating on “I save money for future needs/wants” by .01 points. This finding was not statistically significant at the  $p < .05$  level.

**Table 2: Paired Student Sample Pre- and Post-survey Results on Student Engagement in Activities Related to Life Skills, Character-building, and Developmental Assets, 2012–2013**

n= 251	Pre-survey		Post-survey		p
	M	SD	M	SD	
Goal-setting and Financial Planning	1.17	.407	1.23	.467	.027*
Financial Literacy	1.41	.470	1.52	.473	.002**
Financial Self-efficacy	1.59	.440	1.69	.428	.055
Developmental Assets	1.66	.252	1.66	.297	.901

\*\* $p < .01$ ; \* $p < .05$ ; Coding: 2 = always; 1 = sometimes; 0 = never.

**Figure 2. Paired Student Sample Pre- and Post-Survey Mean Ratings on Items Measuring Engagement in Activities Related to Goal-setting and Financial Planning, 2012–2013**



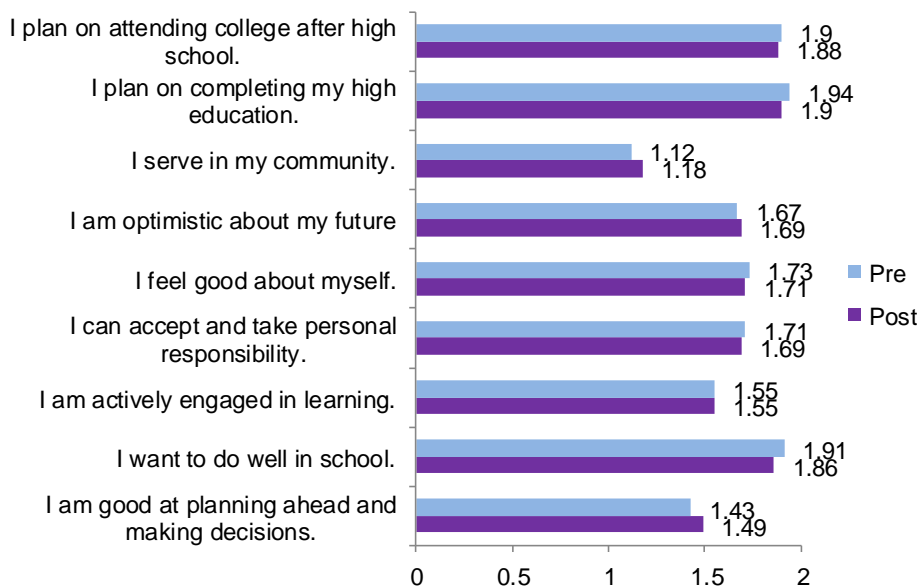
Note: \* $p < .05$ ; \*\* $p < .01$ ; Coding: 2 = always; 1 = sometimes; 0 = never

- Items measuring engagement in activities related to Developmental Assets are found in **Figure 3**. Among the nine items, slight increases were indicated in “I serve in my community” and “I am good at planning ahead and making decisions” (*MD* = .06 on both

items). An increase was also noted on “I am optimistic about my future” ( $MD = .02$ ). No change was noted in “I am actively engaged in learning” ( $M = 1.55$ ). In addition, no statistically significant differences were observed among any of these items from pre- to post-survey.

- Decreases in mean ratings were noted on items measuring students’ perceptions regarding plans to go to college after high school and plans to complete their high school education ( $-.02$  and  $-.04$ ). Ratings on these items were relatively high at pre-survey and may be reflective of regression to the mean. The decreases were not statistically significant at  $p < .05$ .

**Figure 3. Paired Student Sample Pre- and Post-Survey Mean Ratings on Items Measuring Engagement in Activities Related to Developmental Assets, 2012–2013**

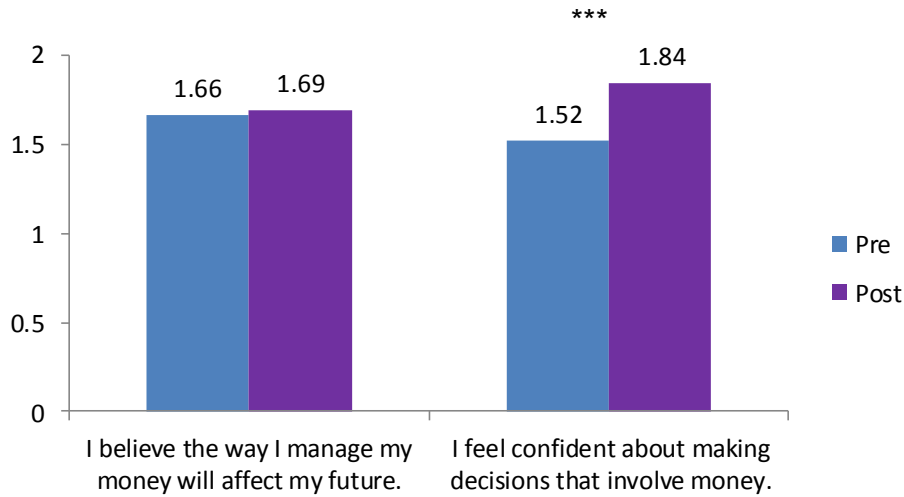


**Note: Coding: 2 = always; 1 = sometimes; 0 = never**

- Self-efficacy survey results depicted in **Figure 4** show highly statistically significant positive changes in students’ response to feeling confident about making decisions that involve money ( $MD = .32$ ).
- **Figure 5** shows the student sample’s engagement in activities related to Financial Literacy. An increase in the mean response was highly statistically significant on the items: “I understand how to read a profit and loss statement” ( $MD = .33$ ) and “I know there is a cost to borrow money” ( $MD = .15$ ). In addition, significant positive results were noted on “I understand the concepts of profit and loss” ( $MD = .17$ ) and “I know that I should compare prices when shopping” ( $MD = .14$ ). A slight decrease (which was not

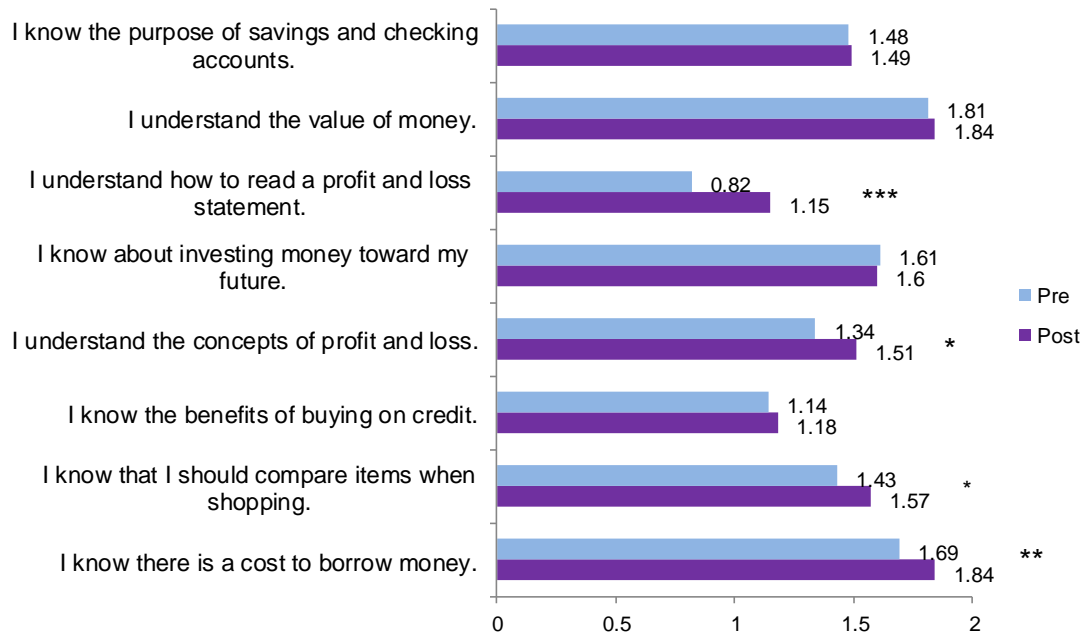
statistically significant) in the mean rating was found on the item “I know about investing money toward my future” ( $MD = .01$ ).

**Figure 4. Paired Student Sample Pre- and Post-Survey Mean Ratings on Items Measuring Financial Self-efficacy, 2012–2013**



**Note:** \*\*\* $p < .01$ ; Coding: 2 = always; 1 = sometimes; 0 = never

**Figure 5. Paired Student Sample Pre- and Post-Survey Mean Ratings on Items Measuring Financial Literacy, 2012–2013**



**Note:** \*\* $p < .01$ ; \*\*\* $p < .001$ ; Coding: 2 = always; 1 = sometimes; 0 = never

**To what extent were students' perceptions regarding finance-related career interests impacted by the SUL initiative?**

- Survey results on items measuring Career Interests in (1) Marketing, (2) Business, Management, and Administration; and (3) Finance can be found in **Appendix A**.

- The overall mean ratings on the Career Interest scales are shown in **Table 3**. An increase was noted in the extent the paired student sample liked engaging in activities included in the three Career Interests scales. The highest increase was noted on items related to Finance (+.06 points).

**Table 3: Pre- and Post-survey Results on the Paired Student Sample Career Interests, 2012–2013**

	Pretest		Posttest		p
	M	SD	M	SD	
Marketing	1.35	.389	1.37	.410	.364
Business Management, and Administration	1.38	.431	1.43	.426	.046*
Finance	1.47	.448	1.53	.424	.030*

**Note: \*p < .05; Coding - 2 = a lot; 1 = very little; 0 = not at all**

## Discussion

HISD partnered with Prepared 4 Life to expand SUL from sixth and seventh-grade students to include eighth-grade students. Students were exposed to curriculum and activities related to character-building, business, and finance through their Advocacy class over a three-month period. The development of skills in these areas is believed to help youth develop assets needed to become healthy and successful adults (Scales, & Benson, 2004). Lessons were aligned to financial literacy components of TEKS as well as STAAR content areas. Through the support of schools and the community, SUL culminated in students setting up lemonade stands in May 2013. Students reportedly used the money to support charity and save for the future.

This study sought to measure the impact of SUL on the development of life skills, character-building assets, and career interests among students who participated in the program. There were several limitations to the evaluation. Specifically, approximately 75.0 percent of HISD middle schools were reportedly exposed to the program as indicated by student registration; however, only 20 percent was represented in pre- and post-survey results. The number of cases is too limited for broad generalizations. In addition, the sampling procedure limits the extent to which the findings can be generalized beyond the cases studied.

Among the small student sample responding, there was evidence of increased Goal-setting and Financial Planning perceptions related to managing money and making decisions about money. There were overall positive changes regarding student engagement in activities related to Financial Literacy. The data also suggest that the limited student sample perceived more enjoyment participating in activities associated with careers in business-related fields, particularly finance, following their participation in the SUL initiative compared to before the initiative.

Although the sample size was extremely small relative to the number of students who were exposed to SUL and not generalizable to the population, the results may be important to program developers as considerations for future expansion of SUL are discussed. HISD and Prepared 4 Life administrators should continue to explore the benefits of training and support methods used to deliver the SUL curriculum to students. Modifications of the program should continue to occur, as needed, to reflect alignment to Texas state standards, student interest, and social-emotional development. While pre-survey student participation was exceptional, additional focus should include strategies to improve follow-up at post-survey. This will increase the likelihood of



assessing SUL program impact on a more representative sample of HISD middle-school students.

## References

- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review* 84: 191-215.
- Boeker, R. Prepared 4 Life. Personal communication. July 1, 2013
- Blythe, D. (1999). Reflections on Evaluating Strength-based Approaches to Youth Development. Evaluation Brief Vol. 1, No. 8). Cambridge, MA: Harvard Family Research Project.
- Djakovac, L. (2010). Financial Literacy. South Australian Association of State School Organisations. *School Post*. Retrieved from, <http://www.saasso.asn.au/media/files/7150.pdf>. National Association of State Directors of Career Technical Education Consortium.(2012). Student Interest Survey for Career Clusters™ Retrieved from, <http://www.careertech.org/resources/clusters/interest-survey.html>.
- Holmes, V. Serving Up Lemonade (SUL) Program Evaluation, 2011–2012 (2012). [http://www.houstonisd.org/cms/lib2/TX01001591/Centricity/Domain/8269/PE\\_DistrictPrograms/Serving%20Up%20Lemonade%20Evaluation%202012%20FINAL%20082012.pdf](http://www.houstonisd.org/cms/lib2/TX01001591/Centricity/Domain/8269/PE_DistrictPrograms/Serving%20Up%20Lemonade%20Evaluation%202012%20FINAL%20082012.pdf)
- Pavot, W., Diener, E., Colvin, C.R. & Sandvik, E. (1991). Further validation of the Satisfaction with Life scale: Evidence for the cross method convergence of well being measures. *Journal of Personality Assessment*, 75,2, 308–37.
- Raben, T. (2012) Prepared 4 Life: Inspiring Entrepreneurs, One Lemonade Stand at a Time Retrieved from, <http://lemonadeday.org/wp-content/uploads/2012/04/AOL-111.pdf>
- Scales, P., and Benson, P. (2004). Successful Young Adult Development. Retrieved from, <http://www.search-institute.org/system/files/GatesFdnReport-EmergingAdulthood2004.pdf>
- Search Institute (2012). 40 Developmental Assets for Adolescents. Retrieved from, <http://www.search-institute.org/content/40-developmental-assets-adolescents-ages-12-18>.
- Search Institute (2013). What are Developmental Assets? Retrieved from, <http://www.search-institute.org/developmental-assets>.
- Way, W. and Holden, K. (2010) Teachers' Background & Capacity to Teach Personal Finance. National Endowment for Financial Education. Retrieved from, <http://www.nefe.org/tntfinalreport>.

## APPENDIX A

### PRE-SURVEY RESULTS ON CAREER INTERESTS, SPRING 2013

How much do you like doing the following?*	A Lot		Very Little		Not at All		Mean Rating
	n	%	n	%	n	%	
<b><i>Careers in Marketing</i></b>							
Shop and go to the mall.	112	45.0	125	50.2	12	4.8	1.40
Be in charge.	122	49.0	109	43.8	18	7.2	1.42
Make displays and promote ideas.	104	41.8	117	47.0	28	11.2	1.31
Give presentations and enjoy public speaking.	70	28.1	110	44.2	69	27.7	1.00
Persuade people to buy products or to participate in activities.	105	42.2	96	38.6	48	19.3	1.23
Communicate ideas to other people.	132	53.0	92	36.9	25	10.0	1.43
Take advantage of opportunities to make extra money.	173	69.5	92	26.5	25	4.0	1.65
<b><i>Career Interest in Business, Management, and Administration</i></b>							
Perform routine, organized activities	127	51.0	101	40.6	21	8.4	1.43
Work with numbers and detailed information	122	49.0	104	41.8	23	9.2	1.40
Be the leader in a group	125	50.2	97	39.0	27	10.8	1.39
Make contact with people to buy and sell things	116	46.6	85	34.1	48	19.3	1.27
Work with computer programs	119	47.8	98	39.4	32	12.9	1.35
Create reports and communicate ideas	95	38.2	106	42.6	48	19.3	1.19
Plan my work and follow instructions	163	65.5	76	30.5	10	4.0	1.61
I plan to have my own business.	137	55.0	70	28.1	42	16.9	1.38
<b><i>Career Interest in Finance</i></b>							
Work with numbers	140	56.5	89	35.9	19	7.7	1.49
Work to meet a deadline	120	48.4	98	39.5	30	12.1	1.36
Make predictions based on fact	152	61.3	77	31.0	19	7.7	1.54
Have a set of rules by which to work	152	61.3	76	30.6	20	8.1	1.53
Analyze financial information and interpret it to others	103	41.5	99	39.9	46	18.5	1.23
Handle money with accuracy	178	71.8	57	23.0	13	5.2	1.67

**Note:** Sample size included a paired sample of 251 students; percentages were calculated based on number of students who responded to the survey item. Coding: 2 = a lot; 1 = very little; 0 = not at all

**APPENDIX A CONT'D**  
**POST-SURVEY RESULTS ON CAREER INTERESTS, SPRING 2013**

How much do you like doing the following?*	A lot		Very Little		Not at all		Mean Rating
	n	%	n	%	n	%	
<b><i>Careers in Marketing</i></b>							
Shop and go to the mall.	118	47.0	124	49.4	9	3.6	1.43
Be in charge.	133	53.0	107	42.6	11	4.4	1.49
Make displays and promote ideas.	105	41.8	118	47.0	28	11.2	1.31
Give presentations and enjoy public speaking.	74	29.5	111	44.2	66	26.3	1.03
Persuade people to buy products or to participate in activities.	107	42.6	96	38.2	48	19.1	1.24
Communicate ideas to other people.	137	54.6	88	35.1	26	10.4	1.44
Take advantage of opportunities to make extra money.	175	69.7	63	25.1	13	5.2	1.65
<b><i>Career Interest in Business, Management, and Administration</i></b>							
Perform routine, organized activities	131	52.4	106	42.4	13	5.2	1.47
Work with numbers and detailed information	132	52.8	100	40.0	18	7.2	1.46
Be the leader in a group	136	54.4	91	36.4	23	9.2	1.45
Make contact with people to buy and sell things	111	44.4	107	42.8	32	12.8	1.32
Work with computer programs	136	54.4	77	30.8	37	14.8	1.40
Create reports and communicate ideas	117	46.8	93	37.2	40	16.0	1.31
Plan my work and follow instructions	169	67.6	70	28.0	11	4.4	1.63
I plan to have my own business.	131	52.4	77	30.8	42	16.8	1.36
<b><i>Career Interest in Finance</i></b>							
Work with numbers	146	58.9	95	38.3	7	2.8	1.56
Work to meet a deadline	131	52.8	95	38.3	22	8.9	1.44
Make predictions based on fact	154	62.1	85	34.3	9	3.6	1.58
Have a set of rules by which to work	157	63.3	76	30.6	15	6.0	1.57
Analyze financial information and interpret it to others	116	46.8	100	40.3	32	12.9	1.34
Handle money with accuracy	173	69.8	61	24.6	14	5.6	1.64

**Note:** Sample size included 251 students; percentages were calculated based on number of students who responded to the survey item. Coding: 2 = a lot; 1 = very little; 0 = not at all