

## MEMORANDUM

August 14, 2012

TO: Board Members

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

SUBJECT: **SERVING UP LEMONADE (SUL) PROGRAM EVALUATION, 2011–2012**

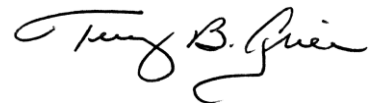
CONTACT: Carla Stevens, (713) 556-6700

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®. During the 2010–2011 academic year, HISD Strategic Partnerships and the HISD Middle School Office collaborated with Prepared 4 Life to target sixth-grade students for participation. SUL was expanded in 2011–2012 to include sixth and seventh-grade students. 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.

Pre- and posttest surveys yielded evidence of students' increased financial literacy and self-efficacy, as well as more interest in activities associated with careers in business-related fields following SUL. There were overall positive changes in the frequency students engaged in activities related to developmental assets, goal-setting, and financial planning. At the same time, students reported notable decreases in ratings on planning to attend college and completing high school. It should be noted that these items were among the highest rated on both pre- and post-surveys. A teacher sample considered the SUL curriculum as relevant and engaging to students. The quality and efficiency of materials distribution received a higher rating on the survey than coordination and adequacy of training.

**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 Improvement Officers  
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# RESEARCH

Educational Program Report

## SERVING UP LEMONADE (SUL)

DEPARTMENT OF RESEARCH AND ACCOUNTABILITY  
HOUSTON INDEPENDENT SCHOOL DISTRICT



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# SERVING UP LEMONADE (SUL)

2011–2012

## Executive Summary

### Program Description

Lemonade Day was launched on May 6, 2007 by Prepared 4 Life as a community-wide educational program that fosters entrepreneurship and character development among Houston's youth (Prepared 4 Life, 2012). The event was designed to help students establish and operate their own lemonade business. Students engage in fun activities that strengthen life skills related to the 40 Developmental Assets® (Search Institute, 2012). Students who participate in Lemonade Day retain the money that they earn from their lemonade ventures because Prepared 4 Life receives support from business leaders and advocates. During the 2010–2011 academic year, the Houston Independent School District (HISD) launched Serving Up Lemonade (SUL). The program had similar aims as Lemonade Day; but targeted sixth-grade students. SUL was expanded in 2011–2012 to include sixth and seventh-grade students. With support from HISD Strategic Partnerships and the HISD Middle School Office, schools with sixth and seventh-grade levels designated staff to coordinate SUL activities with Prepared 4 Life. Students were exposed to SUL lessons from January to April 2012. 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 Texas Assessment of Knowledge and Skills (TAKS) in reading, English language arts, math, and social studies. SUL culminated in May 2012 with students selling lemonade to put into practice what they learned. This evaluation will focus on the following:

- Student participation rates in the SUL initiative;
- The impact of SUL on student perceptions relative to Developmental Assets, Goal-setting and Financial Planning, Financial Literacy, Financial Self-efficacy, and Career Interests in business-related fields; and
- Teacher perceptions of SUL relative to program components (distribution of materials and training) along with teaching and learning.

### Highlights

- During the 2011–2012 academic year, 15,050 sixth and seventh-grade students were registered by teachers to participate in the SUL initiative. Students were provided guided instruction by teachers on building successful businesses and life skills. School coordinators reported to HISD Strategic Partnerships that students used the money to give to charity and save for the future.
- Pre- and post-surveys administered before and after the initiative to a paired sample of 1,455 SUL students revealed statistically significant increases in the frequency students reported engaging in activities related to Developmental Assets, including serving in their community, being optimistic about their future, actively engaging in learning, and being good at planning ahead and making decisions ( $p < .05$ ). Statistically significant decreases in ratings were reflected on the items “planning to attend college after high school” and “planning to complete high school education,” although ratings on these items were

among the highest at both pre- and post-survey administrations. Entrepreneurships have been found to empower youth (Chigunta, 2002). It is possible that students' real-life experiences could have sparked their imaginations to pursue entrepreneurships, lessening their perceptions of the association between education and successful business.

- All items measuring frequency of participation in Goal-setting and Financial Planning activities reflected gains from students' pre- to post-survey, specifically, discussing money with family, achieving money management goals, writing goals for managing money, repaying money owed, using a spending plan/budget, saving money for future needs/wants, comparing prices when shopping, and keeping track of expenses ( $p < .05$ ).
- Mean ratings on all items measuring financial literacy increased for students after the initiative. Statistical significance was most notable on understanding how to read a profit and loss statement, understanding concepts of profit and loss, comparing items when shopping, and knowing that there is a cost to borrow money ( $p < .01$ ). At the same time, the mean rating on the item understanding the value of money decreased ( $p < .05$ ).
- Students' Financial Self-efficacy ratings reflected a statistically significant positive change relative to the extent they believe money management will affect their future and confidence about making decisions that involve money from pre- to post-survey.
- Ratings on items related to 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 the Marketing and Business, Management, and Administration scales.
- Twenty-four sixth and seventh-grade teachers rated the quality of SUL materials, timeliness and efficiency of receipt of materials, and ease of distribution of materials slightly higher than "met expectations," which is a 2 on a scale of 1 to 3 ( $M=2.13$ ). Adequacy of training and communication of coordinator responsibilities received ratings lower than "met expectations" ( $M=1.63$  and  $M=1.71$ , respectively). Teachers' perceptions about training and coordinator responsibilities could have been influenced by environmental factors (i.e., weather), which led to only 40% of coordinators participating in scheduled follow-up training.
- Mean ratings on items that measured the relevance of the SUL curriculum and whether students were engaged in lessons fell closer to "exceed expectations" than "meets expectations" on a scale of 1 to 3 ( $M=2.79$  and  $M=2.75$ , respectively).

## Recommendations

1. Although students' perceptions regarding plans to attend college and complete high school were among the highest rated items, there were notable decreases in their overall ratings on these items. Therefore, SUL should consider expanding lessons to incorporate links between college, careers, entrepreneurship, and alignment to the State of Texas Assessments of Academic Readiness (STAAR).
2. The initiative has continued to have issues collecting data to assess financial impact of SUL (i.e., amount of lemonade sold, amount of money earned), HISD stakeholders (i.e., HISD Strategic Partnerships, the Middle School Office, and the Department of Curriculum,

Instruction, and Assessment) should consider implementing an accountability measure for reporting program outcomes related to finances and partnerships.

3. There were indications that teachers may benefit from the technology-based resources to aid in the implementation of SUL. Therefore, Prepared 4 Life should consider providing additional training and support options for teachers, such as webinars or web-based community forums. Focus groups and selected site visits could be conducted with school staff and administrators on how best to achieve this strategy.
4. Utilizing previously mentioned recommendations, Prepared 4 Life should collaborate with HISD stakeholders on expanding the program to include lessons for sixth, seventh, and eighth grade students. This will provide additional character-building, community-based, entrepreneurship experiences for more students.

### Administrative Response

HISD Strategic Partnerships will continue to collaborate with Prepared 4 Life and the HISD Middle School Office to promote participation in SUL.

## Introduction

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 and seventh-grade students in 40 HISD middle schools. School administrators assigned staff to assist in the coordination and recruitment of teachers and students at their respective schools. In December 2011, 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 2012. Students were taught the Lemonade Day curriculum that incorporated business concepts and real world activities, during their Advocacy class from January to April 2012. Teachers were provided instructional material, including the *Teacher’s 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 and TAKS content areas.
- A purposive sampling procedure was used to select students to administer web-based pre- and post-surveys designed to measure the impact of the SUL initiative on the following factors: Developmental Assets, Goal-setting, 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™ (National Association of State Directors of Career Technical Education Consortium, 2012). The instrument was reviewed and piloted with Prepared 4 Life administrators and the HISD Strategic Partnerships department to ensure that items represented a reliable measure of concepts covered in the SUL curriculum. Cronbach's alpha was used to measure internal consistency of items for each factor measured in this evaluation (Pavot, Diener, Colvin and Sandvik, 1991).

- Survey links were distributed to the HISD Middle School Office and forwarded to administrators at middle schools before the initiative (January 2012) and after the initiative (May 2012). Students completed the surveys over a three-week period. A total of 6,916 students completed some portions of the pre-survey (52.7 percent were sixth graders and 47.3 percent were seventh graders). However, at post-survey, only 1,858 students completed some portions of the instrument (64.2 percent were sixth graders and 35.8 percent were seventh graders). Student identification number was used to generate a paired sample, resulting in data for 1,545 students (64.3 percent were sixth graders and 35.7 percent were seventh graders). Listwise analysis yielded 1,455 students who provided responses to all survey items. More than half of HISD middle schools (23 out of 40 middle schools) are represented in the data.
- Sixth and seventh-grade teachers were distributed a web-based teacher survey through the HISD Middle School Office to gather information on the (1) number of SUL student participants, (2) amount of money earned, (3) amount of lemonade sold, (4) number of lemonade stands, and (5) partner organizations. Only 24 teachers responded to these questions, and the data were not consistently reported. These results were not considered reliable and were not included in the evaluation. However, teacher perceptions about program components, including distribution of materials and quality of SUL training and curriculum were included in the evaluation. The results should be reviewed with caution, although they may provide useful information to program administrators.

### 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 and data for the analysis, and resulted in reduced sample sizes. Although, there were 40 middle schools in 2011–2012, only 23 schools were represented, resulting in a 57.5 percent school-level participation rate. Pre- and post-surveys were completed by 10 percent of the served population. Another limitation is data on how much lemonade students sold and money earned were inconsistently reported by teachers. In fact, only 24 teachers submitted data. Thus, this information was not included in the study. This limited the assessment of the financial impact of the SUL initiative.

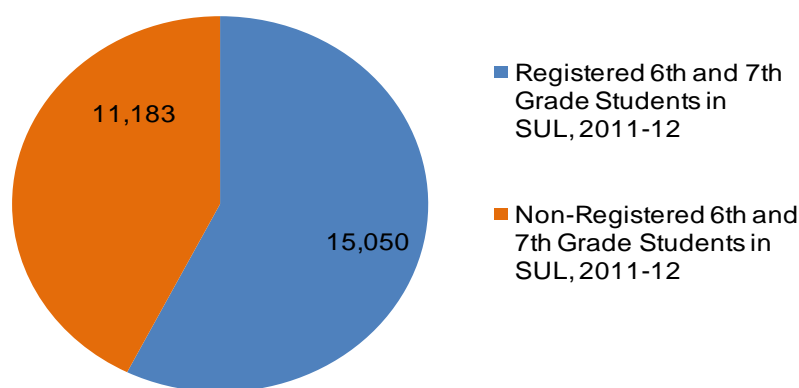


## Results

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

- 15,050 sixth and seventh-grade students were registered by teachers to participate in the 2011–2012 SUL initiative (Correspondence, Prepared 4 Life, 2012). The 2010–2011 academic year targeted only sixth-grade students in the pilot year, registering 4,383.
- **Figure 1** shows the number of sixth and seventh-grade students who registered for SUL compared to all HISD students in comparable grades. SUL students represented 57.4 percent of all sixth and seventh graders.

**Figure 1. Number of Registered versus Non-Registered Sixth and Seventh-grade Students in SUL, 2011-2012**

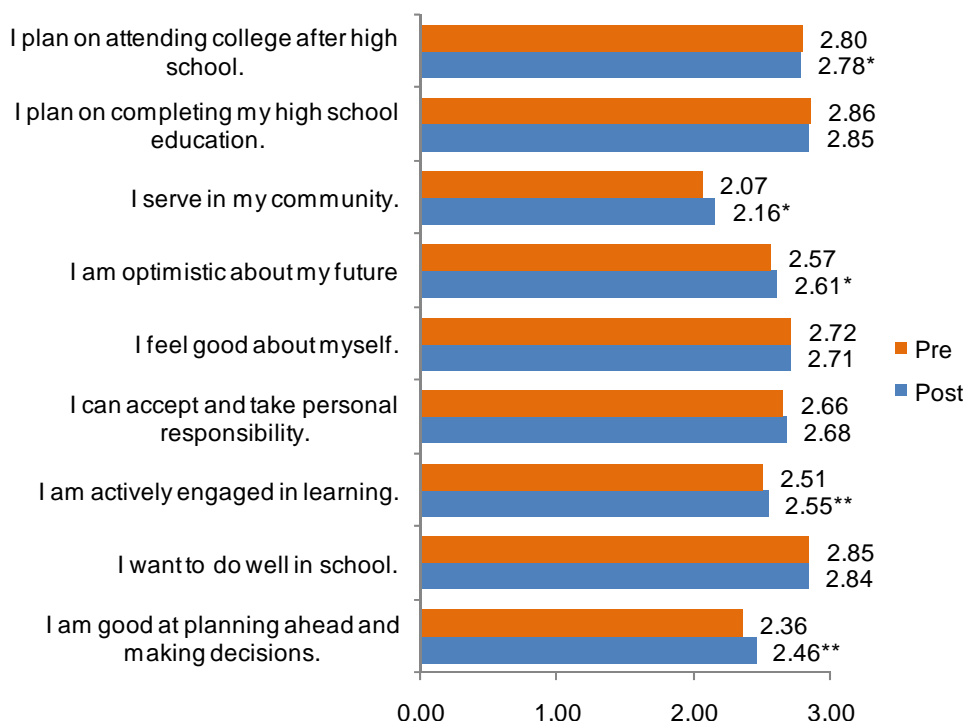


### To what extent were students' perceptions impacted before compared to after the SUL initiative regarding Developmental Assets?

- **Figure 2** depicts results on survey items related to Developmental Assets. The scale had good internal consistency ( $\alpha=.742$  for the 1,455 students completing pre- and post-surveys). The scale used on this factor was: "always"=3, "sometimes"=2, and "never"=1.
- There was a positive change on five out of nine items related to the frequency that students engaged in Developmental Assets activities before compared to after the SUL initiative. The largest mean increase in rating was on the item "I am good at planning ahead and making decisions" (+.1 points,  $p < .01$ ) and "I serve in my community" (+.09 points,  $p < .05$ ).
- The largest decrease in rating from pre- to post-survey was on the item "I plan on attending college after high school" (-.02 points,  $p < .05$ ), although this item was among the three highest rated items in this category at pre- and post-survey administrations.

- The highest mean rating at both pre- and post-survey administrations was on the item “I plan on completing my high school education” ( $M=2.86$  and  $M=2.85$ , respectively). Although a slight decrease in mean rating on this item was indicated over the time span ( $-.01$ ), it was not statistically significant.

**Figure 2. Paired Student Sample Pre- and Post-Survey Mean Ratings on Items Measuring Frequency of Engaging in Activities Related to Developmental Assets, Spring 2012 (n=1,455)**



**Note: \* $p < .05$ ; \*\* $p < .01$**

#### **Were there changes in students' perceptions relative to Goal-setting and Financial Planning before compared to after the SUL initiative?**

- The Goal-setting and Financial Planning scale yielded a Cronbach's alpha coefficient of .77, indicating good internal consistency on the pre-survey. The rating used on this scale was “always”=3, “sometimes”=2, and “never”=1.
- **Figure 3** reflects statistically significant increases in the mean ratings on all survey items measuring the frequency that students engaged in Goal-setting and Financial Planning activities before compared to after the SUL initiative. The largest mean increase in rating was reflected on the item “I use a spending plan/budget” (+.17 points). The increase was statistically significant at  $p < .01$ .
- Students' positive change in ratings on the items “I write goals for managing my money”

and “I compare prices when I shop” were comparable (+.13 points,  $p < .01$ ).

- Although the change in rating was positive, students were least likely to change their perceptions about frequency discussing money management with their family, as reflected by the lowest increase in rating of students among all items on this scale (.05-point increase from pre- to post-survey ( $p < .05$ ).

**Figure 3. Paired Student Sample Pre- and Post-Survey Mean Ratings on Items Measuring Frequency of Engaging in Activities Related to Goal-setting and Financial Planning, Spring 2012 (n=1,455)**



**Note: \* $p < .05$ ; \*\* $p < .01$**

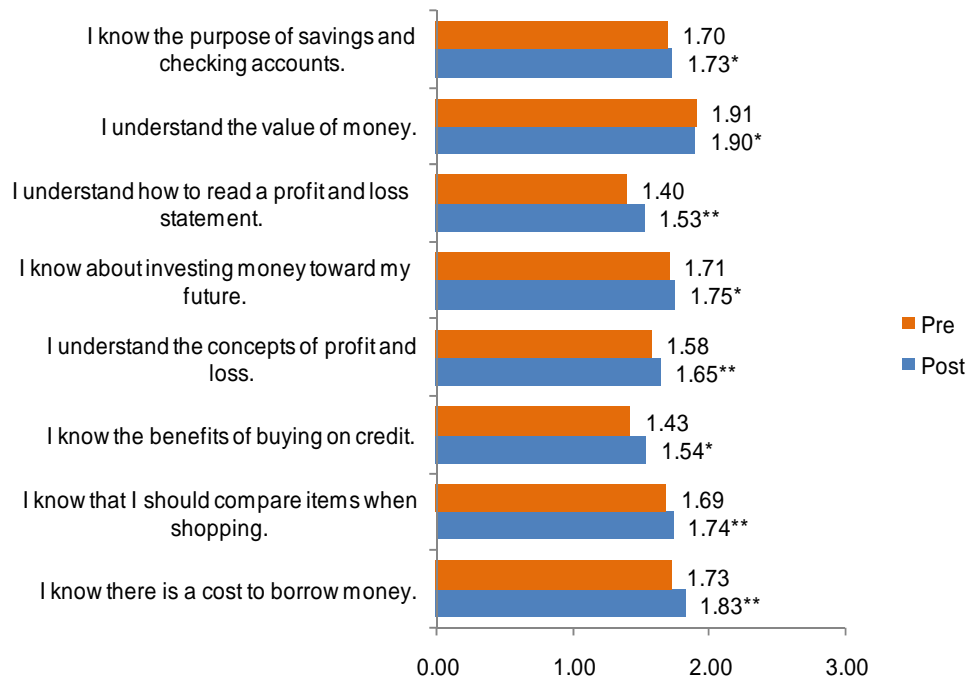
#### How did students perceive their financial literacy abilities before and after the SUL initiative?

- Figure 4** shows mean ratings before and after the SUL initiative on items measuring Financial Literacy (“yes”=3, “not sure”=2, and “no”=1). Positive increases in students’ ratings were most evident on “I understand how to read a profit and loss statement” (+.13 points,  $p < .01$ ), “I know the benefits of buying on credit” (+.11 points,  $p < .05$ ), followed

by “I know there is a cost to borrow money” (+.10 points,  $p < .01$ ).

- A statistically significant decrease in the mean rating was noted on one out of eight items, which was “I understand the value of money” (-.01 points,  $p < .05$ ).

**Figure 4. Paired Student Sample Pre- and Post-Survey Mean Ratings on Items Measuring Financial Literacy, Spring 2012 (n=1,455)**

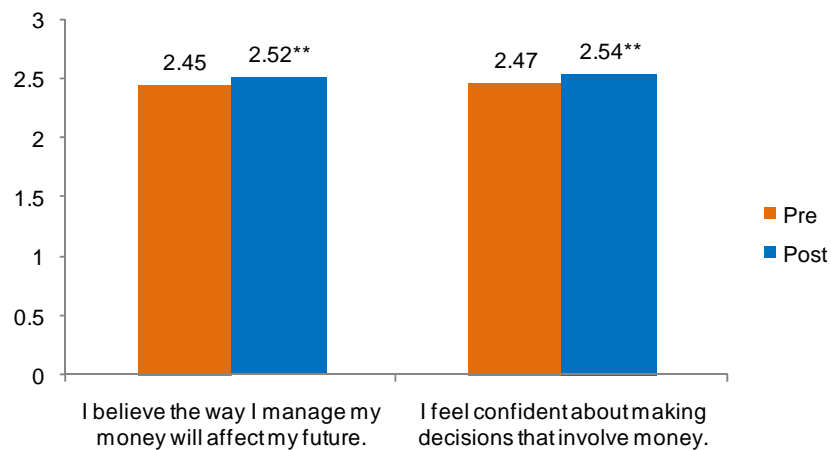


**Note: \* $p < .05$ ; \*\* $p < .01$**

#### Did students' perceptions relative to Financial Self-efficacy change before and after the SUL initiative?

- **Figure 5** shows results on items used to measure Financial Self-efficacy before and after the SUL initiative. The scale used on this item was: “always”=3, “sometimes”=2, and “never”=1. Internal consistency was not measured due to the small number of items related to this factor.
- There was a .07-point increase in mean ratings on “I believe the way I manage my money will affect my future” and “I feel confident about making decisions that involve money.” The findings were statistically significant ( $p < .01$ ).

**Figure 5. Paired Student Sample Pre- and Post-Survey Mean Ratings on Items Measuring Financial Self-efficacy, 2012 (n=1,455)**

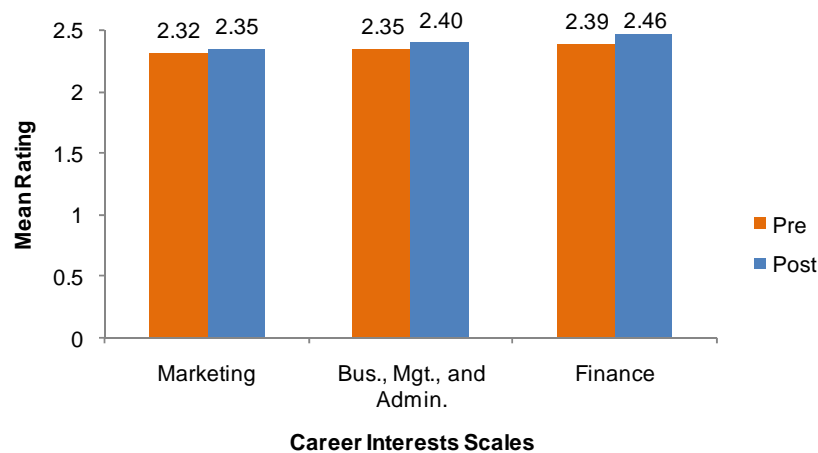


**Note: \*\* $p < .01$**

#### **To what extent did students' perceptions regarding Career Interests change after the SUL initiative?**

- Number and percent of student responses on survey items measuring Career Interests and the activities related to the three Career Interests scales [(1) Marketing, (2) Business, Management, and Administration; and (3) Finance] can be found in **Appendix A**. The study group included all students identified in the paired sample (n=1,545). Each Career Interests scale had good internal consistency, with Cronbach's alpha coefficients found to be .70 for Marketing, .78 for Business, Management, and Administration, and .78 for Finance on the pre-survey.
- The mean ratings on the Career Interest scales are shown in **Figure 6**. A Likert-type rating scale was used: "a lot"=3, "very little"=2, and "not at all"=1. Overall mean ratings, from before to after SUL, increased on the three Career Interests scales. The highest increase was noted on how much students liked engaging in Finance-related activities (+.07 points). Significance testing was not conducted on the Career Interest scales.

**Figure 6. Paired Student Sample Pre- and Post-Survey Mean Ratings on Scales Measuring Career Interests, Spring 2012 (n=1,545)**

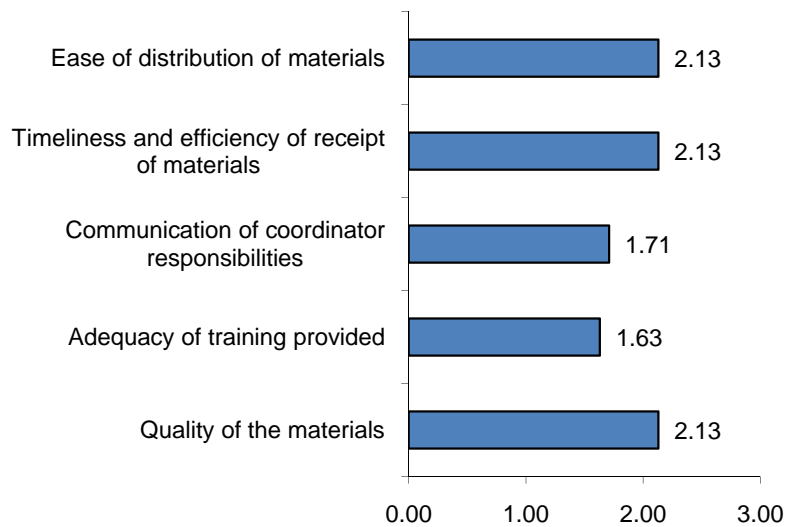


#### What were teacher perceptions regarding SUL program components (materials, training)?

- Figure 7** provides data from a survey of sixth and seventh-grade teachers on specific SUL program components. Twenty-four (24) teachers responded to the survey. The scale used in the survey ranged from “above expectations”=3 to “below expectations”=1. The mean rating for (1) quality of materials, (2) timeliness and efficiency of receipt of materials, and (3) ease of distribution of materials fell closer to “met expectations” than “above expectations” ( $M=2.13$ ).
- Teacher survey respondents rated (1) adequacy of training and (2) communication of coordinator responsibilities among the lowest of items related to the program components ( $M=1.63$  and  $M=1.71$ , respectively). Teachers’ perceptions about training and coordinator responsibilities could have been influenced by environmental factors (i.e., weather), which led to only 40% of coordinators participating in scheduled follow-up training.



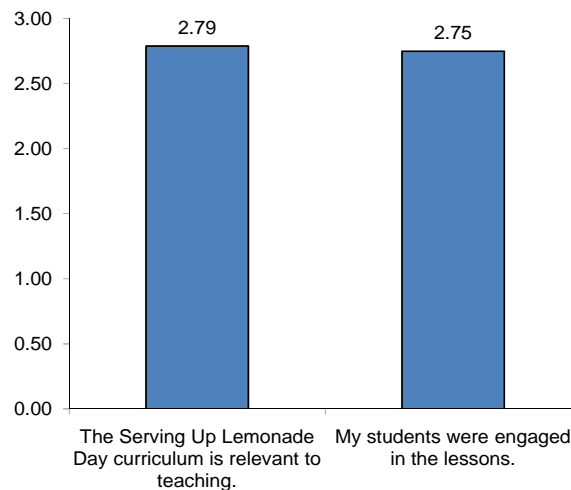
**Figure 7. Mean Ratings of Teacher Sample on SUL Program Components, Spring 2012 (n=24)**



**What were teacher perceptions regarding SUL on teaching and learning?**

- **Figure 8** shows the perceptions of the 24 teachers regarding SUL relative to teaching and learning. The scale used in the survey was: “above expectations”=3, “meets expectations”=2, and “below expectations”=1. Both items received ratings that were closer to “above expectations” than “meets expectations.”
- The mean rating on the item relevance of the SUL curriculum differed by only +.04 points from the item students being engaged in lessons ( $M=2.79$  and  $M=2.75$ ).

**Figure 8. Mean Ratings of Teacher Sample on SUL relative to Teaching and Learning, Spring 2012 (n=24)**



## Discussion

During the 2011–2012 academic year, HISD sixth and seventh-grade students were targeted to participate in the SUL initiative. From January to April 2012, SUL exposed students to activities related to business and finance, while promoting character-building skills for healthy development as adults (Scales, & Benson, 2004). Lessons were aligned to financial literacy components of TEKS as well as TAKS content areas. Through the support of schools and the community, SUL culminated in students setting up lemonade stands and selling lemonade in May 2012. Students reportedly used the money to support charity and save for the future.

To that end, this study sought to measure the financial and behavioral impact of SUL on students using web-based surveys distributed to schools. The evaluation also examined data from teachers on SUL training, materials, and impact on teaching and learning. Efforts were made to collect data on students' lemonade sales, money earned, and partners. Although more than half of HISD middle schools were represented in the data, there were several limitations to the study. While the majority of students were, reportedly, exposed to the program, only about ten percent was represented in pre- and post-survey results. The number of cases is too limited for broad generalizations. Also, the purposive sampling procedure limits the extent to which the findings can be generalized beyond the cases studied. The financial impact of the SUL initiative was not realized due to inconsistent and lack of reporting of the data by teachers.

Based on the sample, there was evidence of students' increased Financial Literacy and enhanced Financial Self-efficacy beliefs in managing money and making decisions about money. The data suggest that students showed more interest in activities associated with careers in business-related fields, particularly finance, following their participation in the SUL initiative. There were overall positive changes observed in the data regarding the frequency that students engaged in activities related to Developmental Assets, Goal-setting, and Financial Planning. At the same time, students reported notable decreases in ratings on planning to attend college and completing high school. Although these items were among the highest rated on both pre- and post-surveys, the results are surprising, considering HISD's focus on college and career readiness. While the experience of entrepreneurship could have empowered students, Prepared 4 Life and district partners should consider this as an opportunity to apply SUL's aims to help students realize how high school and college can enhance their business and finance skills, while increasing career opportunities.

The limited number of teachers sampled considered the SUL curriculum as relevant and engaging to students. In addition, the quality and efficiency of distribution of materials received higher ratings relative to meeting teachers' expectations than coordination of activities and adequacy of training. Although the sample size was relatively small, these results may be important to program developers as preparations are made for future expansion of the program. The organization should consider developing alternative training and support methods for teachers through the development of step-by-step procedural manuals and web-based communication forums, and site visits to ensure best practices in program instruction. Focus groups with school coordinators and administrators might provide strategies on how to meet this challenge.

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## APPENDIX A

### PRE-SURVEY RESULTS ON CAREER INTERESTS, SPRING 2012

How much do you like doing the following?*	Not at All		Very Little		A lot		
	n	%	n	%	n	%	Mean Rating
<b><i>Careers in Marketing</i></b>							
Shop and go to the mall.	81	5.3	663	43.7	774	51.0	2.46
Be in charge.	116	7.6	644	42.4	758	49.9	2.42
Make displays and promote ideas.	175	11.5	733	48.3	610	40.2	2.29
Give presentations and enjoy public speaking.	446	29.4	676	44.5	396	26.1	1.97
Persuade people to buy products or to participate in activities.	312	20.6	628	41.4	578	38.1	2.18
Communicate ideas to other people.	171	11.3	595	39.2	752	49.5	2.38
Take advantage of opportunities to make extra money.	123	8.1	399	26.3	996	65.6	2.58
<b><i>Career Interest in Business, Management, and Administration</i></b>							
Perform routine, organized activities	143	9.5	671	44.4	696	46.1	2.37
Work with numbers and detailed information	189	12.5	683	45.2	638	42.3	2.30
Be the leader in a group	156	10.3	596	39.5	758	50.2	2.40
Make contact with people to buy and sell things	308	20.4	562	37.2	640	42.4	2.22
Work with computer programs	209	13.8	567	37.5	734	48.6	2.35
Create reports and communicate ideas	313	20.7	665	44.0	532	35.2	2.15
Plan my work and follow instructions	89	5.9	459	30.4	962	63.7	2.58
I plan to have my own business.	176	11.7	450	29.8	884	58.5	2.47
<b><i>Career Interest in Finance</i></b>							
Work with numbers	119	7.9	587	39.0	800	53.1	2.45
Work to meet a deadline	245	16.3	668	44.4	593	39.4	2.23
Make predictions based on fact	149	9.9	573	38.0	784	52.1	2.42
Have a set of rules by which to work	152	10.1	560	37.2	794	52.7	2.43
Analyze financial information and interpret it to others	249	16.5	699	46.4	558	37.1	2.21
Handle money with accuracy	105	7.0	411	27.3	990	65.7	2.59

**Note:** Sample size included 1,545 students; percentages were calculated based on number of students who responded to the survey item.

**APPENDIX A CONT'D**  
**POST-SURVEY RESULTS ON CAREER INTERESTS, SPRING 2012**

How much do you like doing the following?*	Not at All		Very Little		A lot		
	n	%	n	%	n	%	Mean Rating
<b><i>Careers in Marketing</i></b>							
Shop and go to the mall.	92	6.1	559	37.2	850	56.6	2.50
Be in charge.	87	5.8	587	39.1	827	55.1	2.49
Make displays and promote ideas.	178	11.9	665	44.3	658	43.8	2.32
Give presentations and enjoy public speaking.	420	28.0	636	42.4	445	29.6	2.02
Persuade people to buy products or to participate in activities.	319	21.3	566	37.7	616	41.0	2.20
Communicate ideas to other people.	196	13.1	546	36.4	759	50.6	2.38
Take advantage of opportunities to make extra money.	116	7.7	410	27.3	975	65.0	2.57
<b><i>Career Interest in Business, Management, and Administration</i></b>							
Perform routine, organized activities	125	8.4	615	41.1	755	50.5	2.42
Work with numbers and detailed information	144	9.6	624	41.7	727	48.6	2.39
Be the leader in a group	151	10.1	522	34.9	822	55.0	2.45
Make contact with people to buy and sell things	266	17.8	563	37.7	666	44.5	2.27
Work with computer programs	178	11.9	499	33.4	818	54.7	2.43
Create reports and communicate ideas	283	18.9	591	39.5	621	41.5	2.23
Plan my work and follow instructions	81	5.4	435	29.1	979	65.5	2.60
I plan to have my own business.	188	12.6	445	29.8	862	57.7	2.45
<b><i>Career Interest in Finance</i></b>							
Work with numbers	94	6.3	533	35.7	868	58.1	2.52
Work to meet a deadline	180	12.0	603	40.3	712	47.6	2.36
Make predictions based on fact	119	8.0	517	34.6	859	57.5	2.49
Have a set of rules by which to work	126	8.4	510	34.1	859	57.5	2.49
Analyze financial information and interpret it to others	210	14.0	621	41.5	664	44.4	2.30
Handle money with accuracy	94	6.3	411	27.5	990	66.2	2.60

**Note:** Sample size included 1,545 students; percentages were calculated based on number of students who responded to the survey item.