Applied Learning Student Questionnaire: *Overall Analysis*

Executive Summary

The Applied Learning Student Questionnaire (ALSQ) is designed to measure pre- and post-gains related to student problem solving and communication skills. The ALSQ is a self-report questionnaire that includes 36 items to assess students' attitudes on five survey constructs: *Intrinsic Motivation, Self-Management/Self-Regulation, Intent to Persist, Problem-Solving,* and *Implementation Activities*.[1] In December 2017, 279 students across three Innovation Fund programs completed the Applied Learning Student Questionnaire (ALSQ). The programs include Carroll County Step into STEM and Full STEAM Ahead, Tift County Coding Across Georgia, and Hall County/Technical College System of Georgia (TCSG) Career Pathways for At-Risk Students.

Key findings include:

- Overall, students showed statistically significant increases in *Intrinsic Motivation, Self-Management/Self-Regulation,* and *Intent to Persist*.
- Across all constructs, the largest effect size observed was for *Intrinsic Motivation*, which suggests that the programs were moderately effective at enhancing students' interest in learning and seeing value in the material being taught.
- Each of the four programs showed statistically significant increases in *Intrinsic Motivation* and *Self-Management/Self-Regulation.*
- None of the "now" scores for each construct met the optimal average of 4.00, which means programs may need additional work in supporting student motivation, establishing an inquiry-based learning environment, and increasing student exposure to and interest in STEM.
- The average program rating across all programs just exceeded the optimal 4.00 average, with an average of 4.01, suggesting that the programs were generally viewed positively by students.
- Student ratings indicate that increasing student exposure to STEM professionals and real-world problems may enhance student interest in pursuing STEM education and careers in the future.

[1] *Intent to Persist* refers to aspirations, plans, and goals to pursue additional education and a career in STEM (Science, Technology, Engineering, and Math). *Implementation Activities* refer to hands-on activities designed to increase exposure to STEM topics and real-world application.

Overall Results
December 2017

Participants and Methods

In December 2017, 279 students across three Innovation Fund programs completed the Applied Learning Student Questionnaire (ALSQ). The response rate displayed in Table 1 suggest that 91% of the total number of participating students responded to the survey. The response rates per program ranged from 88% (Tift County Coding Across Georgia) to 100% (Carroll County and Hall County). Although there is no agreed-upon standard for a minimum response rate, Martella, Nelson, Morgan, and Marchand-Martella (2013)[2] suggest that a response rate of 50% is *adequate* for analysis and reporting, 60% is *good*, and 75% or higher is considered *very good*. Overall, the response rate achieved across the Innovation Fund programs is considered *very good* for reporting and analysis.

Table 1. Survey Response Rates

Program	# of Survey Respondents	Total # of Participating Students[1]	Survey Response Rate
Carroll County Step into STEM & Full STEAM Ahead	65	65	100%
Tift Coding Across Georgia	194	221	88%
Hall County/TCSG Career Pathways	20	20	100%
Total	**279**	**306**	**91%**

Note: [1]The number of participating students represent approximations and may not reflect recent changes to the participant population (e.g., dropouts).

The ALSQ is designed to measure pre- and post-gains related to student problem solving and communication skills, self-management, and engagement.[3] The ALSQ is a self-report questionnaire that includes 36 items to assess students' attitudes on the following survey constructs:

1. **Intrinsic Motivation**: motivation stemming from goals of mastery, learning and challenge. Example, "It is important for me to learn what is being taught in this program."
2. **Self-Management/Self-Regulation**: effortful and persistent behaviors that are used to guide, monitor, and direct the success of one's learning and performance. Example, "I turn all my assignments in on time."
3. **Intent to Persist**: aspirations, plans, and goals to pursue additional education and a career in STEM. Example, "I intend to get a college degree in STEM (Science, Technology, Engineering, and Math)."
4. **Problem-Solving**: inquiry-based learning environment that provides higher-order cognitive tasks and real-world application. Example, "I work out explanations on my own."
5. **Implementation Activities**: hands-on activities designed to increase exposure to STEM topics and real-world application. Example, "We learn what scientists/technicians/engineers/mathematicians or other STEM professionals do."

[2] Martella, R., Nelson, J., Morgan, R., & Marchand-Martella, N. (2013). *Understanding and Interpreting Education Research*. New York, NY: The Guilford Press.
[3] See Appendix A for information related to the construct reliabilities of the ALSQ.

Results and Discussion

- **ALSQ Survey Constructs**

  Table 2 summarizes students' responses to the ALSQ survey constructs across all programs. In aggregate, students showed statistically significant increases in *Intrinsic Motivation, Self-Management/Self-Regulation,* and *Intent to Persist*. In addition to assessing statistical significance from "before" to "now," effect sizes—a measure of the magnitude of an intervention on students' attitudes—were computed. Specifically, effect sizes were computed using Cohen's *d* and are intended to measure the practical importance of a significant finding.[4] Cohen (1988) classified effect sizes as small, *d*=0.2; medium, *d*=0.5; and large, *d*=0.8.[5] Table 2 suggests medium effect sizes were found for *Intrinsic Motivation, Self-Management/Self-Regulation,* and *Intent to Persist*. The largest effect size observed was for *Intrinsic Motivation* (*d*=0.48). This suggests that the programs were moderately effective at enhancing student interest in learning and deriving value from the material taught. For example, after participating in the programs, 71% of students said they think what they are learning in the programs is interesting, compared to 47% before the programs. See Tables 5-9 for more information.

  To maximize impact, we would expect students' average scores to exceed 4.00 on a 5-point Likert scale (1, *Strongly Disagree* to 5, *Strongly Agree*). The "now" scores for all constructs did *not* reach or exceed the optimal average of 4.00. The construct with the lowest "now" score was *Intent to Persist.* Figure 1 suggests that all constructs need additional focus by the programs, particularly developing student interest in STEM fields.

Table 2. Summary of Results by Construct[6]

Overall - Constructs				
Constructs	**n**	**Mean[1]**	**Paired Samples t-test[2]**	**Effect Size (interpretation)[3]**
Intrinsic Motivation	Before 279	3.40	p<0.001**	0.48 (Medium)
	Now 279	3.82		
Self-Management / Self-Regulation	Before 275	3.62	p<0.001**	0.30 (Medium)
	Now 275	3.84		
Intent to Persist	Before 273	3.12	p<0.001**	0.30 (Medium)
	Now 273	3.40		
Problem Solving	Now 271	3.87	n/a	n/a
Implementation Activities	Now 267	3.90	n/a	n/a

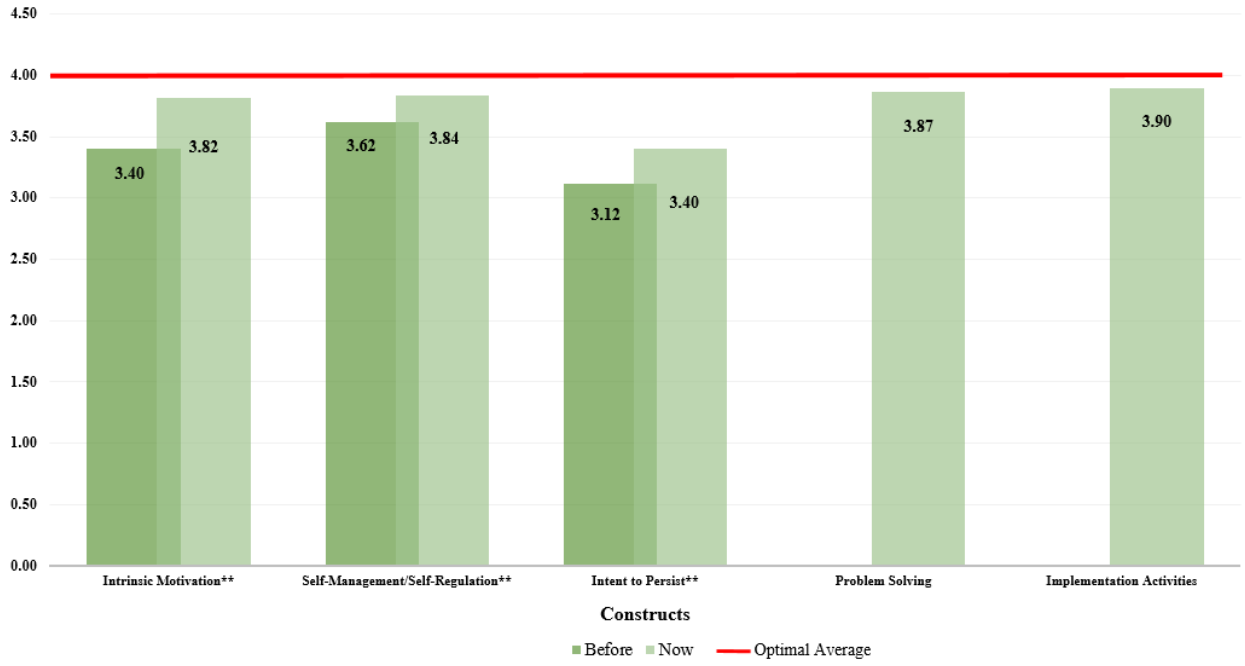
Note. [1]Reference lines are set at 3.5 and 4. [2]Please note that only students with matched Pre and Post data were assessed for significance. Desired statistically significant changes are highlighted in green. Negatively worded statements were reverse coded for mean computations. **p<0.001, *p<0.01, †p<0.05. See Tables 5-9 for more detailed information. [3]Effect size (Cohen's d): Small (<.2); Medium (.2 to .8); Large (>.8). Small effect sizes are highlighted in light red; medium effect sizes are highlighted in dark orange; large effect sizes are highlighted in dark green.

[4] Effect sizes were calculated using Stata.

[5] Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed). Hillsdale, NJ: Lawrence Earlbaum Associates.

[6] As indicated by the n size, all students did not answer all questions in the constructs and demographics sections.

Figure 1. Constructs



Note. A paired samples t-test was used to compute the p-value. **p<0.001, *p<0.01, †p<0.05.

- **ALSQ Survey Constructs by Program**
  After disaggregating the data by program, all of the programs showed statistically significant increases in *Intrinsic Motivation* and *Self-Management/Self-Regulation*. Carroll County and Tift County showed statistically significant increases in *Intent to Persist*. Examining effect sizes, all programs exhibited either medium or large effect sizes across *Intrinsic Motivation* and *Intent to Persist*. Two programs had a small effect size for *Self-Management/Self-Regulation*. These data suggest that the individual programs were moderately effective at enhancing students' motivations to succeed and their intent to persist in STEM education and careers.

Table 3. Summary of Results by Constructs per Program

Overall - Constructs per Program										
Constructs		**Carroll County (Step into STEM & Full STEAM Ahead) (n=65)**			**Tift County Coding Across Georgia (n=194)**			**TCSG/Hall County Career Pathways (n=20)**		
		Mean	***t-test***	**Effect Size**	**Mean**	***t-test***	**Effect Size**	**Mean**	***t-test***	**Effect Size**
Intrinsic Motivation	Before	3.29	p<0.001**	1.13 (L)	3.37	p<0.001**	0.33 (M)	4.08	p=0.019†	0.61 (M)
	Now	4.06			3.67			4.50		
Self-Management / Self-Regulation	Before	3.32	p<0.001**	0.89 (L)	3.68	p<0.001**	0.16 (S)	4.08	p=0.023†	0.18 (S)
	Now	3.84			3.80			4.18		
Intent to Persist	Before	3.04	p<0.001**	0.72 (M)	3.08	p<0.001**	0.21 (M)	3.78	p=0.175	0.25 (M)
	Now	3.55			3.29			4.00		
Problem Solving	Now	3.88	n/a	n/a	3.82	n/a	n/a	4.25	n/a	n/a
Implementation	Now	3.91			3.86			4.18		

Note. Please note that only students with matched Pre and Post data were assessed for significance. Desired statistically significant changes are highlighted in green. Negatively worded statements were reverse coded for mean computations. **p<0.001, *p<0.01, †p<0.05. See Tables 5-9 for more detailed information. Effect size (Cohen's d): Small (<.2); Medium (.2 to .8); Large (>.8). Small effect sizes are highlighted in light red; medium effect sizes are highlighted in dark orange; large effect sizes are highlighted in dark green.

For programs to maximize their effectiveness, "now" scores should reach or exceed the optimal average of 4.00 on a 5-point Likert scale (1, *Strongly Disagree* to 5, *Strongly Agree*). Figures 2-6 display "now" scores for each program and construct. For example, Figure 2 indicates that two programs met or exceeded the optimal average for *Intrinsic Motivation*, but one program fell short of the optimal average. In general, programs not reaching or exceeding the red horizontal line may need additional attention. For instance, two programs did not reach the optimal average for *Self-Management/Self-Regulation* (Figure 3), *Intent to Persist* (Figure 4), *Problem Solving* (Figure 5), and *Implementation Activities* (Figure 6). Caution should be employed when interpreting the results for the Hall County/TCSG Career Pathways program given the small sample size (n=20).

Figure 2. Intrinsic Motivation ("Now" Scores)

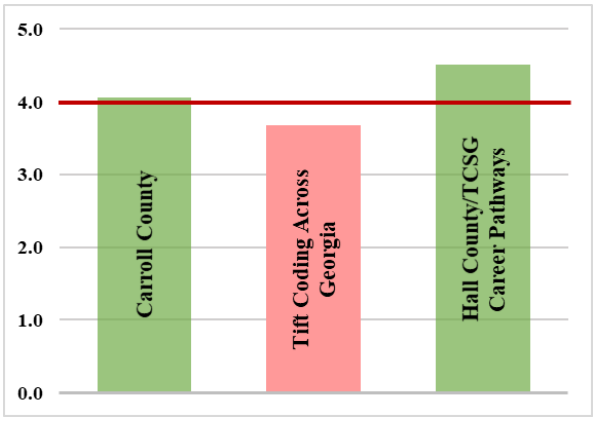


Figure 3. Self-Management/Self-Regulation ("Now" Scores)

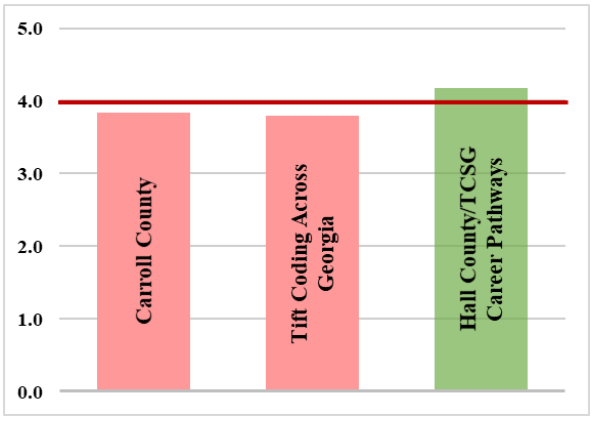


Figure 4. Intent to Persist ("Now" Scores)

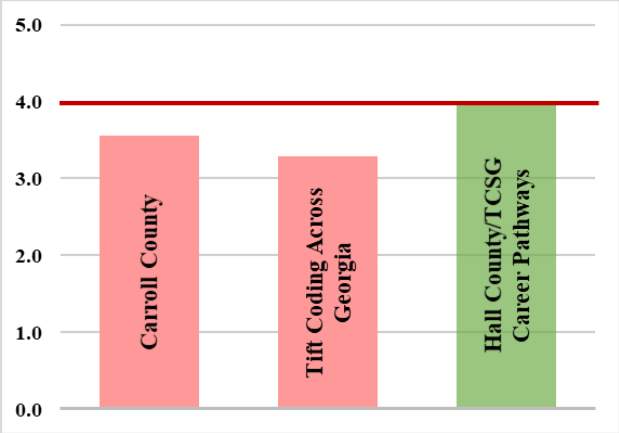


Figure 5. Problem Solving ("Now" Scores)

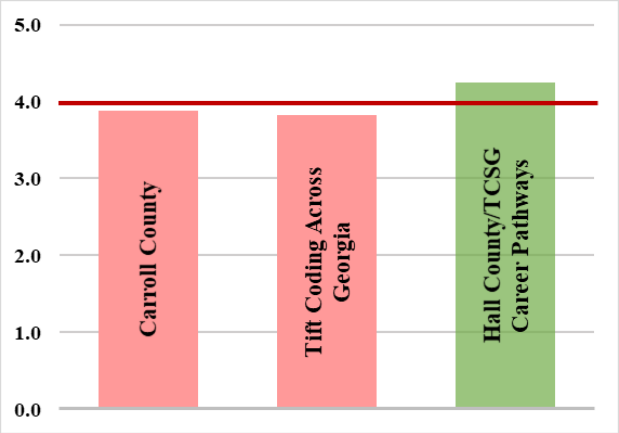


Figure 6. Implementation Activities ("Now" Scores)

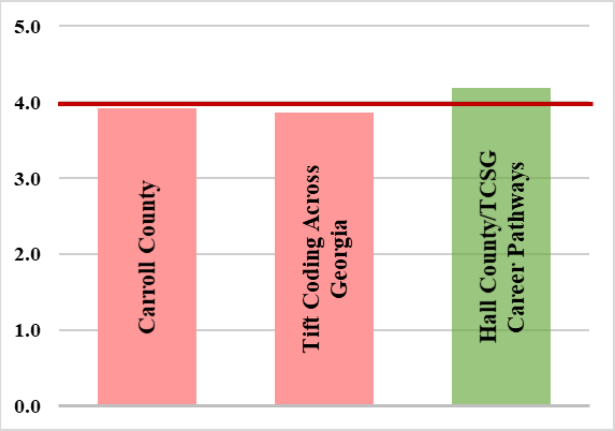
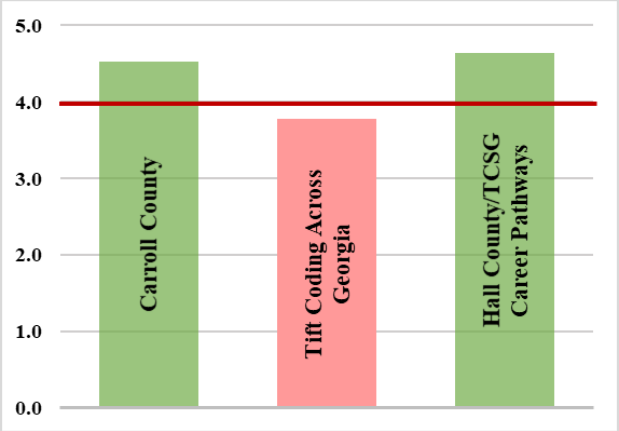


Figure 7. Overall Program Ratings



- **Program Rating**
  Collapsing across all programs, students' ratings of their programs just exceeded the optimal average of 4.00. On a 5-point Likert scale where 1 signifies *Very Poor* and 5 signifies *Excellent*, the average score was 4.01. See Table 4. Looking at Figure 7, all programs, with the exception of Tift County Coding Across Georgia (3.77), were rated above the optimal average. These ratings suggest that most programs were viewed positively by students.

- **Areas for Further Improvement**
  None of the "now" means for each of the constructs exceeded the optimal average of 4.00 on a 5-point Likert scale, despite showing statistically significant increases in *Intrinsic Motivation, Self-Management/Self-Regulation,* and *Intent to Persist*. *Implementation Activities* had the highest "now" mean of 3.90. However, three sub-items still had "now" scores below the optimal average:
    - Learning what STEM professionals do,
    - Working in groups, and
    - Interacting with STEM professionals.

  The "now" means for *Intrinsic Motivation, Self-Management/Self-Regulation,* and *Problem Solving* were all above 3.80. All of the *Intrinsic Motivation* items showed statistically significant increases, but only one had a "now" score above the optimal average (learning from mistakes on a test). In *Self-*

Management/Self-Regulation, one item did not show a statistically significant increase (setting aside time to do homework and study). In *Problem Solving*, only three items were above the optimal average. The items with the lowest scores were:

- Letting students choose their own topics or projects, and
- Working out explanations on their own.

The construct with the lowest "now" mean was *Intent to Persist* (3.40). The lowest rated items referred to imagining and desiring a career in STEM. The students' ratings suggest that programs should enhance the inquiry-based learning environment to promote student motivation and interest in STEM. In particular, allowing students to have more agency over their own work and increasing student exposure to STEM professionals and real-world problems may enhance students' intentions to persist in STEM education and careers.

Table 4. Program Rating

Program Rating:	n	Mean	Assessment		(1) Very Poor	(2) Poor	(3) Average	(4) Good	(5) Excellent
All Students	263	4.01	Good		5%	2%	21%	30%	42%

Note. [1]Reference lines are set at 3.5 and 4.0. Assessment: Good = Above 4.0; Attention = Below 4.0; Action = Below 3.5. Highest percentages are highlighted in gray.

Table 5. Intrinsic Motivation

	Intrinsic Motivation		n	Mean[1]	Paired Samples t-test[2]	1 (Strongly Disagree)	2 (Disagree)	3 (Neutral)	4 (Agree)	5 (Strongly Agree)
1)	I prefer class work that is challenging so I can learn new things.	Before	279	3.20	p<0.001**	10%	13%	38%	25%	14%
		Now	279	3.62		7%	8%	25%	37%	23%
2)	It is important to me to learn what is taught in this program.	Before	279	3.53	p<0.001**	6%	11%	28%	33%	22%
		Now	279	3.95		5%	5%	14%	43%	33%
3)	I like what I am learning in this program.	Before	279	3.42	p<0.001**	10%	7%	30%	34%	18%
		Now	279	3.82		9%	3%	19%	35%	34%
4)	I think I will be able to use what I learn in this program in other classes.	Before	279	3.22	p<0.001**	10%	18%	30%	25%	17%
		Now	279	3.68		7%	9%	20%	37%	27%
5)	Even when I do poorly on a test, I try to learn from my mistakes.	Before	279	3.77	p<0.001**	4%	8%	20%	43%	25%
		Now	279	4.14		3%	2%	13%	43%	39%
6)	I think that what I am learning in this program is useful for me to know.	Before	279	3.33	p<0.001**	8%	14%	32%	31%	15%
		Now	279	3.84		7%	6%	16%	38%	33%
7)	I think that what we are learning in this program is interesting.	Before	279	3.43	p<0.001**	10%	11%	26%	34%	19%
		Now	279	3.82		8%	5%	18%	35%	34%
8)	Understanding STEM (Science, Technology, Engineering, and Math) is important to me.	Before	279	3.29	p<0.001**	11%	14%	31%	25%	20%
		Now	279	3.75		9%	6%	21%	30%	34%
9)	I enjoy STEM (Science, Technology, Engineering, and Math) in general.	Before	279	3.42	p<0.001**	10%	9%	33%	27%	22%
		Now	279	3.79		8%	5%	21%	34%	33%

Note. [1]Reference lines are set at 3.5 and 4. [2]Please note that only students with matched Pre and Post data were assessed for significance. Desired statistically significant changes are highlighted in green and undesired statistically significant changes are highlighted in red. **p<0.001, *p<0.01, †p<0.05. Highest percentages are highlighted in gray.

Table 6. Self-Management / Self-Regulation

Self-Management/Self-Regulation		n	Mean[1]	Paired Samples t-test[2]	1 (Strongly Disagree)	2 (Disagree)	3 (Neutral)	4 (Agree)	5 (Strongly Agree)
10) I turn all my assignments in on time.	Before	275	3.37	p<0.001**	5%	15%	37%	22%	20%
	Now	275	3.78		5%	5%	26%	31%	32%
11) I miss class often. (negatively worded)	Before	275	1.98	p=0.461	49%	24%	14%	8%	6%
	Now	275	1.93		52%	22%	13%	5%	8%
12) I am often late for class. (negatively worded)	Before	275	1.94	p=0.365	52%	21%	16%	6%	6%
	Now	275	1.89		56%	18%	14%	5%	7%
13) I set aside time to do my homework and study.	Before	275	3.16	p=0.095	12%	15%	35%	21%	17%
	Now	275	3.25		12%	12%	33%	26%	17%
14) When I say I'm going to do something, I do it.	Before	275	3.50	p<0.001**	7%	7%	33%	32%	20%
	Now	275	3.76		4%	4%	28%	37%	26%
15) I am a hard worker.	Before	275	3.76	p<0.001**	6%	6%	24%	33%	31%
	Now	275	4.11		2%	3%	20%	32%	43%
16) I finish whatever I begin.	Before	275	3.50	p<0.001**	7%	9%	37%	22%	25%
	Now	275	3.81		5%	4%	29%	28%	33%

Note. [1]Reference lines are set at 3.5 and 4. [2]Please note that only students with matched Pre and Post data were assessed for significance. Desired statistically significant changes are highlighted in green. **p<0.001, *p<0.01, †p<0.05. Highest percentages are highlighted in gray. Statements 11 and 12 are negatively worded; signficance is measured in the reverse direction as the other statements.

Table 7. Intent to Persist

Intent to Persist		n	Mean[1]	Paired Samples t-test[2]	1 (Strongly Disagree)	2 (Disagree)	3 (Neutral)	4 (Agree)	5 (Strongly Agree)
17) I am considering a career in STEM (Science, Technology, Engineering, and Math).	Before	273	2.76	p<0.001**	20%	21%	33%	17%	10%
	Now	273	3.21		15%	15%	27%	23%	21%
18) I intend to get a college degree in STEM (Science, Technology, Engineering, and Math).	Before	273	2.89	p<0.001**	18%	17%	37%	14%	14%
	Now	273	3.15		14%	15%	34%	16%	21%
19) I can see myself working in STEM (Science, Technology, Engineering, and Math).	Before	273	2.64	p<0.001**	25%	18%	36%	12%	10%
	Now	273	2.98		19%	14%	33%	16%	18%
20) Someday, I would like to have a career in STEM (Science, Technology, Engineering, and Math).	Before	273	2.79	p<0.001**	20%	15%	41%	14%	10%
	Now	273	3.02		17%	15%	34%	18%	16%
21) I intend to graduate from high school.	Before	273	4.53	p=0.004*	3%	2%	10%	11%	74%
	Now	273	4.66		2%	2%	6%	8%	82%

Note. [1]Reference lines are set at 3.5 and 4. [2]Please note that only students with matched Pre and Post data were assessed for significance. Desired statistically significant changes are highlighted in green. **p<0.001, *p<0.01, †p<0.05. Highest percentages are highlighted in gray.

Table 8. Problem Solving, Now Only

	Problem Solving	n	Mean[1]		Assessment	1 (Strongly Disagree)	2 (Disagree)	3 (Neutral)	4 (Agree)	5 (Strongly Agree)
22)	In this program, my teacher(s) tells me how to improve my work.	271		4.14	Good	3%	3%	16%	34%	45%
23)	In this program, my teacher(s) lets us choose our own topics or projects to investigate.	271		3.55	Attention	7%	9%	32%	26%	26%
24)	In this program, I work out explanations on my own.	271		3.58	Attention	4%	5%	37%	36%	18%
25)	In this program, I have opportunities to explain my ideas.	271		3.83	Attention	4%	4%	24%	42%	26%
26)	In this program, we plan and do our own projects and/or experiments.	271		3.71	Attention	4%	8%	30%	31%	28%
27)	In this program, we work on real-world problems.	271		3.81	Attention	4%	6%	24%	35%	30%
28)	In this program, we have class discussions.	271		4.02	Good	3%	3%	22%	30%	41%
29)	In this program, we investigate to see if our ideas are right.	271		3.86	Attention	3%	5%	26%	37%	30%
30)	In this program, we need to be able to think and ask questions.	271		4.17	Good	3%	1%	18%	34%	45%
31)	In this program, we are expected to understand and explain ideas.	271		3.99	Attention	3%	4%	23%	31%	39%

Note. [1]Reference lines are set at 3.5 and 4.0. Assessment: Good = Above 4.0; Attention = Below 4.0; Action = Below 3.5. Highest percentages are highlighted in gray.

Table 9. Implementation Activities, Now Only

	Implementation Activities	n	Mean[1]		Assessment	1 (Strongly Disagree)	2 (Disagree)	3 (Neutral)	4 (Agree)	5 (Strongly Agree)
32)	In this program, my teacher(s) takes notice of students' ideas.	267		4.02	Good	1%	5%	21%	36%	37%
33)	In this program, my teacher(s) shows us how new information relates to what we have already learned.	267		4.06	Good	2%	3%	20%	39%	36%
34)	In this program, we learn what scientists/ technicians / engineers / mathematicians or other STEM professionals do.	267		3.76	Attention	4%	6%	29%	33%	28%
35)	In this program, we do our work in groups.	267		3.80	Attention	3%	5%	28%	36%	28%
36)	In this program, we interact with scientists / technicians / engineers / mathematicians or other STEM professionals.	267		3.86	Attention	3%	7%	21%	39%	30%

Note. [1]Reference lines are set at 3.5 and 4.0. Assessment: Good = Above 4.0; Attention = Below 4.0; Action = Below 3.5. Highest percentages are highlighted in gray.

Table 8. Educational Plans

What is the highest level of education you plan to achieve?	Before		Now		*Change*[1]	
	n	%	n	%		
High School	81	32%	65	26%	-16	-6%
2-year college	30	12%	31	12%	1	1%
4-year college	57	22%	54	22%	-3	-1%
Graduate School	38	15%	31	12%	-7	-3%
Professional School	49	19%	69	28%	20	8%
Total	**255**	**100%**	**250**	**100%**		
Average[2]	**2.59**		**2.76**		**p=0.001* (significant)[3]**	

[1] Change from Before to Now. Increases are highlighted in green; decreases are highlighted in red. [2]To compute averages, the following codes were applied: High School (1), 2-year college (2), 4-year college (3), Graduate School (4), Professional School (4). [3]Paired samples t-test, p-value: **p<0.001, *p<0.01, †p<0.05.

Table 9. Demographics

Gender	n	%
Female	79	30%
Male	181	70%
Total	**260**	**100%**

Ethnicity	n	%	Grade	n	%
Asian	-	-	6th	-	-
Black	67	26%	7th	102	39%
Hispanic	42	16%	8th	79	30%
Native American	-	-	9th	-	-
White	119	45%	10th	56	21%
Multiracial	21	8%	11th	-	-
Other	-	-	12th	13	5%
Total	**262**	**100%**	**Total**	**262**	**100%**

Note: Tables are redacted to exclude n-sizes that are less than ten.

Table 10. Participation

How long have you participated in this program?		n	%
	0 Semesters	11	4%
	1 semester	163	62%
	2 semesters	56	21%
	3 semesters	-	-
	4 or more semesters	-	-
	Don't Know	20	8%
	Total	**263**	**100%**

Did you participate in this program during the summer?		n	%
Summer Participation	Yes	21	8%
	No	240	92%
	Total	**261**	**100%**

Note: Tables are redacted to exclude n-sizes that are less than ten.

Appendix A. Construct Reliabilities

Table A1. Construct Reliabilities (Omnibus, December 2017)

Constructs		Cronbach's alpha	*Reliability Interpretation*
Intrinsic Motivation (9 items)	Before	0.902	*Excellent*
	Now	0.924	*Excellent*
Self-Management/Self-Regulation (7 items)	Before	0.755	*Good*
	Now	0.735	*Good*
Intent to Persist (5 items)	Before	0.844	*Very good*
	Now	0.849	*Very good*
Problem Solving (10 items)	Now	0.895	*Very good*
Implementation Activities (5 items)	Now	0.804	*Very good*

Cronbach's Alpha Reliability Key: Cronbach's alpha is a measure of the internal consistency of items in a construct. This statistic ranges from 0 to 1; the higher the value the better. An alpha of 0.80 or higher is considered to have achieved very good measurement reliability; an alpha of 0.65 is considered acceptable (Field, 2009).

Reliability	Interpretation
0.90 and above	Excellent reliability; at the level of the best measures
0.80 – 0.90	Very good
0.70 – 0.80	Good; in the range of most. There are probably a few items which could be improved.
0.60 – 0.70	Somewhat low. This measure needs to be supplemented by other measure (e.g., more surveys) to determine outcomes. There are probably some items which could be improved.
0.50 – 0.60	Suggests need for revision of measure, unless it is quite short (ten or fewer items). The test definitely needs to be supplemented by other measure (e.g., more tests).
0.50 or below	Questionable reliability. This measure should not contribute heavily to the outcomes and needs revision.

From: J. C. Nunnally, Psychometric Theory. New York: McGraw-Hill, 1967, pp. 172-235.

Reference:

Field, A. (2009). *Discovering Statistics Using SPSS, 3rd Edition.* Thousand Oaks, CA: Sage Publications.