AN EVALUATION OF JUNIOR ACHIEVEMENT ELEMENTARY PROGRAMS IN TEXAS

Submitted to

THE ASSOCIATION OF JUNIOR ACHIEVEMENT AREAS OF TEXAS

Submitted by

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EXECUTIVE SUMMARY

This evaluation uses multiple analytical approaches based upon student survey data from 6,317 elementary school respondents across Texas to capture the effects of their participation during the 2015-16 academic year in the following Junior Achievement (JA) programs: JA OUR CITY, JA OUR REGION, and JA OUR NATION. The first approach is a difference analysis of items common to pre- and post-JA surveys using a matched-pair sample. This methodology allows for an investigation of the relationship between student participation and the *change* in these items, leading to stronger inferences of causality on the effects of JA on student knowledge, attitudes, and intent. Secondly, an analysis of post-only survey items reflects student thoughts on the JA experience.

Student participation in JA OUR CITY increases student knowledge of municipal finance and operation as well as entrepreneurship. Students scored on average 13 percentage points higher on the posttest than they did on the pretest. Seventy-two percent of White students scored better on the posttest than on their pretest, followed by 67 percent of African-American and 62 percent of Hispanic students.

Student participation in JA OUR REGION increases student knowledge of the importance of entrepreneurship in a regional economy and tracking revenues and expenses of a small business. Students scored on average 14 percentage points higher on the posttest than they did on the pretest. Sixty-five percent of Hispanic students increased their score on the posttest relative to their pretest, followed by 61 percent of White and African-American students.

Student participation in JA OUR NATION increases student knowledge of the importance of 21st century job market skills in science, technology, engineering, and math. Students scored on average 12 percentage points higher on their posttest relative to their pretest. Seventy percent of White students scored higher on their posttest than they did on their pretest, followed by 69 percent of African-American students and 61 percent of Hispanic students.

Participation in JA OUR NATION empowers students' feeling of control over the future, improves their attitude about studying hard to prepare for a good future, and increases their interests in owning their own business and becoming an inventor. Over 50 percent of students felt more empowered to create their own future after their participation than they did prior to participation. The same is true regarding their willingness to study hard to prepare themselves for a good life. Over 30 percent of students expressed more interest in becoming an inventor than they did prior to JA. Over 40 percent indicated that they were more interested in starting their own business; the same percentage had a better idea of what their career will be as they enter the labor market.

Students were overwhelmingly positive in their assessment of all three JA programs. Over 80 percent of students in JA OUR CITY agreed that they would participate in another JA program, learned important knowledge and skills, were glad that they had JA in their class, and enjoyed JA. Over 80 percent of JA OUR REGION participants reported that JA made school more interesting and fun. Over 70 percent indicated that JA helped them prepare for their future and over 60 percent thought that JA made them more aware of their career interests and taught them how to manage their money. Over 90 percent of JA OUR NATION students agreed that, as a result of JA, they were more aware of the real-world relevance of their school work.

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ABOUT JUNIOR ACHIEVEMENT

Founded in 1919, Junior Achievement (JA) is a unique private-public technical assistance model with a global presence in 119 countries. JA utilizes trained volunteers primarily from the private sector to deliver research-based lessons in classrooms at all grade levels in the K-12 system. In the United States, over 218,896 volunteers delivered JA content during the 2015-16 school year to over 4.6 million in over 200,000 classrooms.[1]

The Three Pillars of Junior Achievement programs are Entrepreneurship, Work Readiness and Financial Literacy. The Junior Achievement curriculum satisfies the "Three R's" that research shows are necessary to impact student learning: rigor, relevance, and relationships. The curriculum is aligned to the Texas Essential Knowledge and Skills across multiple content areas including mathematics, language arts, science, social studies such as economics, geography, history, government, and career and technical courses; it makes abstract academic content relevant to students by using real-world applications and utilizing pedagogical techniques consistent with recent findings in cognitive science; and, it gives students an opportunity to build relationships with the volunteers. This aspect of the Junior Achievement model is especially promising for minority and economically disadvantaged students who are less likely to have sustained exposure to role models who have achieved educational and economic success.

The Junior Achievement model includes many of the artifacts that research has identified as critical in improving student learning. The curriculum is sequenced vertically from kindergarten through 12th grade. Its alignment with the Texas Essential Knowledge and Skills sharpens the focus on the curriculum, the most important driver of decisions regarding instruction in the standards-based environment. This focus on the curriculum also means that the Junior Achievement model is complementary to other existing high quality initiatives, especially at the high school level. Furthermore, all Junior Achievement programs support the skills and competencies identified by the Partnership for 21st Century Skills.[2]

This evaluation focuses on three of the eight elementary school JA programs in six JA regions in Texas. JA OUR CITY is intended for 3rd graders and "…introduces students to the characteristics of cities and how cities are shaped by zoning. Students also learn about the importance of money to a city; how financial institutions help businesses and city residents; and how the media is an integral part of a city's life. Students learn the role of an entrepreneur by exploring what it takes to open a restaurant."[3]

JA OUR REGION, meant for 4th graders, "…introduces students to entrepreneurship and how entrepreneurs use resources to produce goods and services in a region. Students

[1] See https://www.juniorachievement.org/web/ja-usa/fact-sheet.
[2] See http://www.uschamberfoundation.org/sites/default/files/publication/edu/Life%20in%20the%2021st%20Century%20Workforce.pdf for a summary and explanation of these skills.
[3] https://www.juniorachievement.org/web/ja-usa/ja-programs.

operate a hypothetical hot dog stand to understand the fundamental tasks performed by a business owner and to track the revenue and expenses of a business."[4]

JA OUR NATION, intended for 5th graders, "…provides practical information about the need for employees who can meet the demands of the 21st century job market, particularly high-growth, high-demand jobs. By program's end, students will understand the skills, especially in science, technology, engineering, and math, that will make their futures brighter."[5]

METHODOLOGY

This report includes findings from pre- and post-test surveys administered to JA elementary school program participants in Texas during the 2015-16 academic year. Teachers along with JA staff and volunteers distributed and collected the surveys at the onset of the JA program and again upon completion. Table 1 shows that there are 6,317 matched pre- and post-surveys, 46 percent of which are from JA OUR CITY, 30 percent from JA OUR REGION, and 24 percent from JA OUR NATION.

TABLE 1: NUMBER OF MATCHED-PAIR SURVEYS BY JA PROGRAM.

JA Program	Number of Matched Pre- and Post-Surveys	Percent
JA OUR CITY	2,219	46%
JA OUR REGION	1,905	30%
JA OUR NATION	1,493	24%
Total	**6,317**	**100%**

Table 2 indicates that, consistent with the statewide averages in K12 public schools, the sample consisted of a slightly higher percentage of students who reported that they are male (49 percent) relative to female (47 percent). Only 4 percent did not report their gender across all programs, with a high of 8 percent among JA OUR CITY students. The percentage who reported their ethnicity as White (14%) is substantially lower than the state at 29 percent. Forty-one percent reported that they are Hispanic, lower than the state average of 52 percent. Compared to the state average of 13 percent, only 6 percent of the sample is African-American. The percent of JA OUR NATION students who were Hispanic was 48 percent, notably higher than JA OUR REGION and JA OUR CITY. Thirty-nine percent of the sample indicated that they were another ethnicity (e.g. Asian, Pacific Islander) or missing.

Table 3 indicates that the JA programs were deployed according to their intended grade level, with JA OUR CITY among 3rd graders, JA OUR REGION among 4th graders, and JA OUR NATION among 5th graders. Overall, 46 percent reported that they had previous

[4] Ibid.
[5] Ibid.

experience with JA. The high rate of missing responses on this item make interpretation difficult, especially among such young students.

TABLE 2: STUDENT DEMOGRAPHICS BY JA PROGRAM.

Gender	JA OUR CITY (%)	JA OUR REGION (%)	JA OUR NATION (%)	Total (%)	State* (%)
Female	48	44	49	47	49
Male	50	48	48	49	51
Not Reported	2	8	3	4	0
Total	**100**	**100**	**100**	**100**	**100**
Ethnicity					
White	16	10	12	14	29
Hispanic	38	40	48	41	52
African-American	7	5	8	6	13
Other/Missing	39	45	32	39	6
Total	**100**	**100**	**100**	**100**	**100**

* Source: TEA Texas Academic Performance Report 2014-15 State Profile.

TABLE 3: GRADE LEVEL AND JA EXPERIENCE BY JA PROGRAM.

Grade Level	JA OUR CITY (%)	JA OUR REGION (%)	JA OUR NATION (%)	Total (%)
3	100	0	0	46
4	0	100	0	30
5	0	0	100	24
Total	**100**	**100**		**100**
Previous JA Experience				
No	20	19	19	20
Yes	49	40	48	46
Missing	31	41	33	34
Total	**100**	**100**	**100**	**100**

Table 4 lists the three types of survey items: Content Knowledge, Attitudes and Intent, and Student Evaluation. "Content Knowledge" includes items that capture student understanding of the content that is specific to each program. Since the items are particular to each of the three programs, they are not included in Table 4, but are listed in detail in the discussion of the results. The items are, however, the same for both the pre- and the post-survey administrations and serve as a basis for the matched-pair analysis.

The effect of student participation in the JA programs on content knowledge is examined in two ways. First, the investigation looks at the percentage of students who

demonstrated an increase in the percent correct on the postsurvey content items relative to the presurvey. Second, the analysis includes student gains as measured by the difference between their postsurvey score and presurvey score.

Attitudes and Intent items apply to JA OUR NATION only and capture student responses to items that relate to vocation, the future, and the connection between education and employment. The specific items are listed in detail in the section entitled "Changes in Attitudes and Intent for JA OUR NATION" below. Since these items appear on both the pre- and post-surveys, the gain analysis reveals the extent to which student participation in JA OUR NATION changes student attitudes and intent.

The surveys conclude with a number of post-survey items that reflect overall student opinions about their experience in JA. These items are specific to each program and outlined in more detail in the section entitled "Student Evaluation Results" below.

TABLE 4: SURVEY ITEMS AND JA PROGRAMS.

Survey Items	Program	Survey
Content Knowledge	Program-specific.	Pre and Post
Attitude and Intent	JA OUR NATION ONLY.	Pre and Post
Student Evaluation	Program-specific.	Post Only

RESULTS: CHANGES IN CONTENT KNOWLEDGE

Table 5 includes the content knowledge survey items that reflect the curriculum taught by the volunteers. Survey items are multiple-choice and are typically administered to the students immediately prior to and after the JA program. Some of the items in the table have been shortened due to their length. The choice set is not shown. For each JA program, the results are reported by ethnicity, gender, and previous JA experience. Results by ethnicity are reported for White, Hispanic, and African-American students only.

TABLE 5: CONTENT KNOWLEDGE ITEMS BY JA PROGRAM.

JA OUR CITY	
ITEMS	1. A city is where people live, work, and play and is designed by a _____. 2. Cities are organized into _____ that govern how land can be used. 3. Buying a toy is different than buying food because a toy is a _____ and food is a _____. 4. People can pay for things with _____. 5. _____ are places where people keep, borrow, and save money. 6. When people choose not to spend all of their income and instead keep some of it, it is called _____. 7. The workers in a restaurant who make the food are called the _____and the customers who eat the food are called the _____. 8. When Carlos opens his new business, he can be called a(n) _____. 9. Online communication is a popular way for people in a city to share and discuss the news. Another name for online communication is _____.
JA OUR REGION	
ITEMS	1. All of the following are resources used by entrepreneurs except one. Which one is NOT a resource used by entrepreneurs? 2. Money earned from sales is _____. 3. A person who uses resources to start a business is a/an _____. 4. Money spent to buy resources is _____. 5. A geographic area united by a similar characteristic is a/an _____. 6. Which of the following is NOT a key task of an entrepreneur? 7. _____ is the chance of loss or failure when making a business decision. 8. All of the following are part of the supply chain except one. Which one is NOT part of the supply chain? 9. Which of the sentences below is NOT true?
JA OUR NATION	
ITEMS	1. The term "Goods" refers to: 2. The definition of free market economy is: 3. The definition of innovation is: 4. Skills refer to a person's: 5. What is a career cluster? 6. Which of the following is NOT part of the STEM career cluster? 7. _____ is the discussion between a potential employee and employer to help decide if a job is a good match. 8. What is a resume? 9. Trade refers to the process of: 10. Soft skills include:

PERCENT WHO DEMONSTRATED GAINS

The percent correct on the content questions for each program were calculated for both the pre- and post-surveys. Figure 1 shows the percent of students in each program who scored higher on the post-survey than the pre-survey. Across all races and JA programs, over 60 percent of the students gained in content knowledge. Over 70 percent of the White students in JA OUR CITY scored higher on the post-survey content questions than the pre-survey content questions, outpacing their African American peers (67 percent) and Hispanic peers (62 percent). Among JA OUR REGION students, 66 percent of Hispanics gained in content knowledge compared to just over 60 percent of their White and African-American peers. In JA OUR NATION, the percentage of Hispanic students who gained in content knowledge lagged their peers, just over 60 percent of Hispanics compared to almost 70 percent for Whites and African Americans.

FIGURE 1: PERCENT WHO DEMONSTRATED GAINS IN CONTENT KNOWLEDGE BY ETHNICITY.*

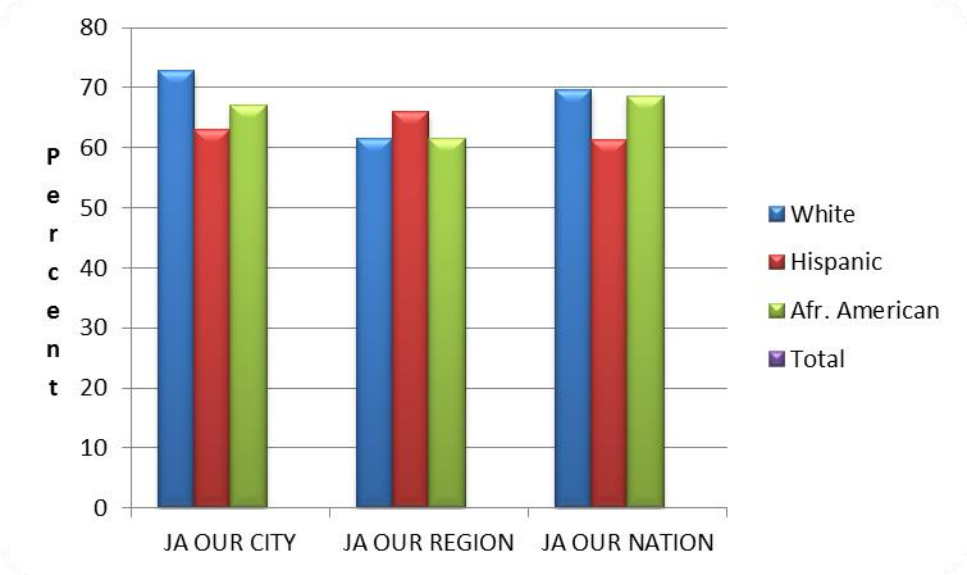


Figure 2 indicates that, except for JA OUR REGION, prior experience did not make a notable difference. Sixty-five percent of students in JA OUR REGION who had previous JA experience exhibited a gain in content knowledge compared to only 58 percent among those who did not have previous experience. Figure 3 shows that there was not a notable difference by gender across all 3 JA programs.

FIGURE 2: PERCENT WHO DEMONSTRATED GAINS IN CONTENT KNOWLEDGE BY PREVIOUS JA EXPERIENCE.

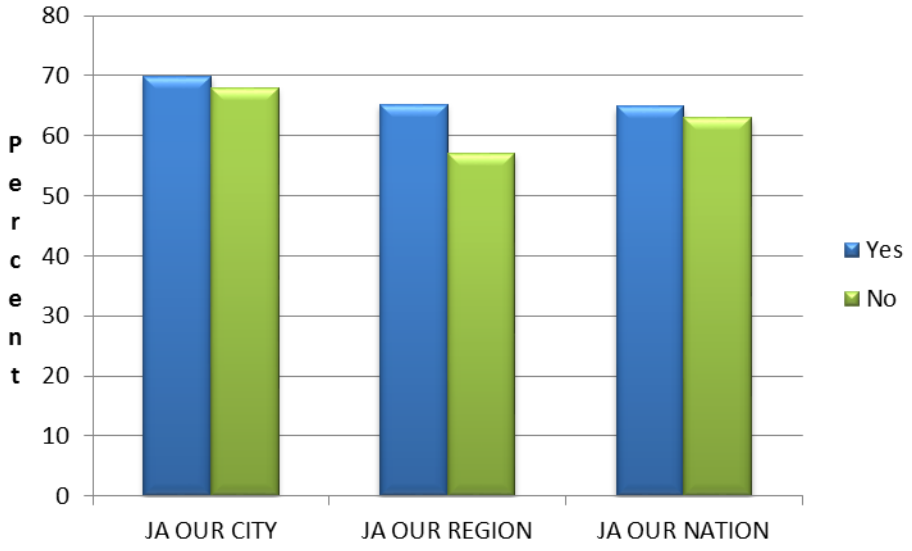
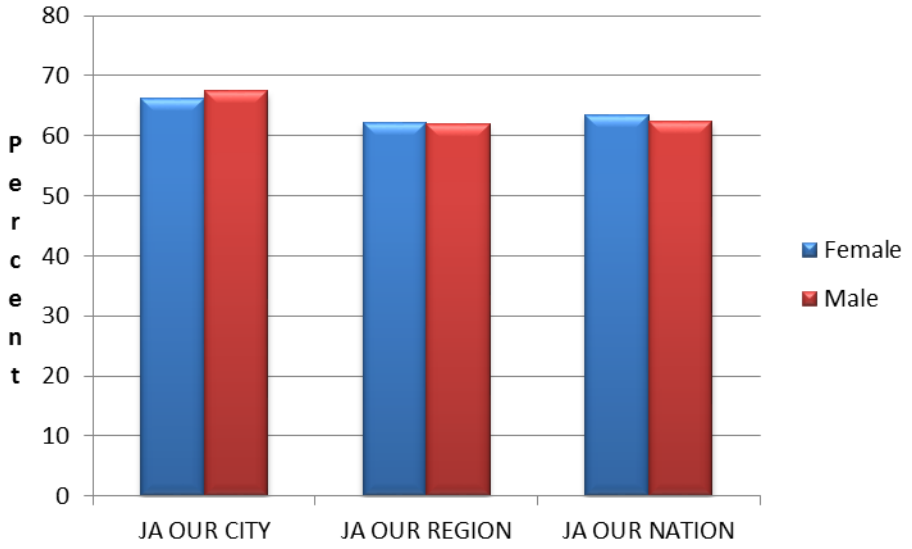


FIGURE 3: PERCENT WHO DEMONSTRATED GAINS IN CONTENT KNOWLEDGE BY GENDER.



AVERAGE GAINS

Table 6 includes the average scores on the post- and pre-surveys. Students in JA OUR CITY had the most prior knowledge as measured by the pretest with an average score of 61 percent, compared to 43 percent in JA OUR REGION and 48 percent in JA OUR NATION.

Participation in JA programs had substantial impact on student knowledge. The average difference between the posttest and the pretest among JA OUR CITY students was 13 percentage points. Among JA OUR REGION and JA OUR NATION students, the average difference was 14 and 12 percentage points, respectively.

There were notable differences by ethnicity. Across all programs, White students scored highest on the pretest, followed by African-American and Hispanic students. White students also exhibited the highest gains in learning in both JA OUR CITY and JA OUR REGION, but Hispanic students in JA OUR NATION had the highest gains on average.

Table 6 reveals that the average gain in scores for females was approximately the same as males in all three programs. Importantly, Table 6 shows that students who had prior experience in a JA program had higher content knowledge at the onset of each JA program than those who did not. JA OUR CITY students with previous JA experience on average got 63 percent of the pretest content items correct compared to only 57 percent among those who had no previous JA experience. Among JA OUR REGION students, the relative scores were 50 versus 45 percent and for JA OUR NATION students they were 57 versus 46 percent, a full 11 percentage points higher.

TABLE 6: MEANS IN CONTENT KNOWLEDGE ON PRE- AND POST-TESTS BY JA PROGRAM.

		JA Our City			JA Our Region			JA Our Nation		
		Average Score (%) Pre-test	Average Score (%) Post-test	Average Difference* (%)	Average Score (%) Pre-test	Average Score (%) Post-test	Average Difference *(%)	Average Score (%) Pre-test	Average Score (%) Post-test	Average Difference* (%)
All Students		61	74%	13%	43%	57%	14%	48%	60%	12%
Ethnicity										
	White	66	81	16	53	72	19	55	66	11
	Hispanic	57	69	12	42	55	13	45	60	15
	African-American	61	74	14	44	61	16	47	56	9
Gender										
	Female	61	74	13	45	59	14	47	60	13
	Male	60	74	14	45	59	14	48	60	11
Prior JA										
	No	57	73	15	45	59	14	46	59	9
	Yes	63	77	14	50	65	15	57	62	5

*Calculated as the average difference in student scores between post- and pre-test scores.

GAINS ACROSS JA REGIONS

The surveys were distributed to students across six JA regions: Brazoria, Chisholm Trail (Fort Worth, Abilene, Amarillo, Midland/Odessa), Dallas, East Texas, Houston, and San Antonio. This section analyzes differences in gains in content knowledge across these regions by ethnicity for each of the JA programs. The reason why the results are disaggregated by ethnicity is because it is the only background information that is collected by the surveys and the above analysis in Table 6 indicates that content knowledge correlates to student performance. This analysis reveals how content knowledge differs across the regions among students by ethnicity. It is important to note that there are factors that are related to content knowledge which are not captured by the surveys and therefore are not included here. Inferences of program effectiveness across region, therefore, are difficult to draw based simply on the results included herein. They are offered nonetheless, as a basis upon which deeper investigations by program staff may be conducted to explain the differences across regions. The primary purpose of this analysis is to show that differences across regions exist and are substantial in some cases. Regions are not identified, therefore, in order to prevent misattribution of scores in low performing regions to poor program design and implementation.

Table 7 shows the average pretest, posttest, and differences by ethnicity and region for JA OUR CITY. Note that only five of the six regions are represented because the surveys from one region had missing ethnicity data. There are substantial differences across regions in average score on the pretest. For example, the average pretest scores for White students ranged from 48 percent in Region 5 to 71 percent in Region 3, a 23 percentage point difference. The range of postsurvey scores among White students decreased to 13 percentage points (71 percent in Region 5 to 84 percent in Region 3). Similar patterns emerge for the other ethnicities, suggesting that student participation in JA is effective at addressing the within-ethnicity learning needs of those who are in most need of it.

Table 7 also includes the differential in the average scores of the Hispanic and African-American students with the White students. Column 2 indicates that the differentials on the pretest in Region 1 were larger than most of the other regions, with the average Hispanic pretest score 5 percentage points less than White students in Region 1. Column 5 shows the percentage point difference between the posttest and pretest, and reveals that White students gained more or equal to Hispanic and African-American students. Column 4 indicates that the differentials between White and Hispanic/African-American students increased on the posttest relative to the pretest. For those instances such as Region 2 in which the minority population outscored the White students on the pretest, their advantage decreased after student engagement in JA.

TABLE 7: DIFFERENCES IN MEANS IN CONTENT KNOWLEDGE: JA OUR CITY BY REGION.

Region/Ethnicity		Column 1: Average Score: Pretest (%)	Column 2: Differential with White Students	Column 3: Average Score Posttest (%)	Column 4: Differential with White Students	Column 5: Column 3 – Column 1
1	White	58		79		21***
	Hispanic	53	-5	61	-18	8***
	African-American	49	-9	63	-16	14***
2	White	59		74		15***
	Hispanic	58	-1	67	-7	9***
	African-American	65	6	77	3	12***
3	White	71		84		13***
	Hispanic †					
	African-American	78	7	83	-1	5***
4	White	68		83		15***
	Hispanic	60	-8	73	-10	13***
	African-American	64	-4	79	-4	15***
5	White	48		71		23***
	Hispanic	52	4	70	-1	18***
	African-American	49	1	65	-6	16***

* Statistically significant at the .1 level
** Statistically significant at the .01 level
*** Statistically significant at the .001 level
† No Hispanics were reported for this region.

Table 8 includes the same information as Table 7, but for JA OUR REGION. As with JA OUR CITY, there are notable differences in scores on the pretest across the different regions within race, suggesting that there are unobservable differences (e.g. income level) across region and within race that are not captured in the data. In contrast to JA OUR CITY, African-American students in Regions 3 and 4 outgained their White counterparts. As a result, African-American students in Region 3 scored higher on average than their White peers on the posttest (78 vs 76, respectively). Indeed, the gain of 34 percentage points among African-American students in Region 3 is the highest gain. The average pretest score of African-American students in Region 4 was 25 percentage points less than their White peers, decreasing to 16 percentage points less on the posttest. Hispanic students in Region 4 also outpaced their White counterparts, decreasing their gap from 18 points down on the pretest to 10 points down on the posttest.

TABLE 8: DIFFERENCES IN MEANS IN CONTENT KNOWLEDGE: JA OUR REGION BY REGION.

Region/Ethnicity		Column 1: Average Score: Pretest (%)	Column 2: Differential with White Students	Column 3: Average Score Posttest (%)	Column 4: Differential with White Students	Column 5: Column 3 – Column 1
1	White	42		74		32***
	Hispanic	39	-3	53	-21	14***
	African-American	29	-13	56	-18	27***
2	White	40		62		22**
	Hispanic	41	1	55	-7	14***
	African-American	47	7	59	-3	12***
3	White	54		76		22***
	Hispanic †					
	African-American	44	-10	78	2	34***
4	White	67		80		13***
	Hispanic	49	-18	70	-10	21***
	African-American	42	-25	64	-16	22***
5	White	46		59		13**
	Hispanic	41	-5	51	-8	10***
	African-American	52	6	60	1	8**

* Statistically significant at the .1 level
** Statistically significant at the .01 level
*** Statistically significant at the .001 level
† No Hispanics were reported for this region.

Table 9 includes the same information for students who participated in JA OUR NATION. Note that there are only 4 regions reported due to JA OUR NATION not being active in one of the regions included in the previous tables. This means that Region 2, for example, cannot be assumed to be the same as Region 2 in the previous tables.

Hispanics in Region 1 substantially outgained both their White and Hispanic peers, resulting in only a 1 percentage point difference on the posttest relative to White students in spite of scoring on average 10 percentage points less on the pretest. The gain among Hispanic students in Region 4 also outpaced their White peers.

Both Hispanic and African-American students outgained their White counterparts in Region 3. The gains experienced by Hispanic students in Region 3 outpaced that of their White peers by 9 percentage points (14 vs 5, respectively), and African American students outpaced their White peers by 2 percentage points. These trends resulted in a substantial closing of the differentials on the posttest as shown in Column 4.

TABLE 9: DIFFERENCES IN MEANS IN CONTENT KNOWLEDGE: JA OUR NATION BY REGION.

Region/Ethnicity		Column 1: Average Score: Pretest (%)	Column 2: Differential with White Students	Column 3: Average Score Posttest (%)	Column 4: Differential with White Students	Column 5: Column 3 – Column 1
1	White	53		67		14**
	Hispanic	43	-10	66	-1	23***
	African-American	40	-13	46	-21	6*
2	White	53		68		15**
	Hispanic	44	-9	57	-11	
	African-American	46	-7	60	-8	14**
3	White	61		66		5***
	Hispanic	47	-14	61	-5	14***
	African-American	53	-8	60	-6	7**
4	White	50		64		14***
	Hispanic	46	-4	63	-1	17***
	African-American	48	-2	60	-4	12***

* Statistically significant at the .1 level
** Statistically significant at the .01 level
*** Statistically significant at the .001 level

RESULTS: CHANGES IN ATTITUDE AND INTENT FOR JA OUR NATION

The items that constitute Attitudes and Intent items are listed in Table 10. They provide insight into the student dispositions to the future, ranging from specific questions regarding vocation such as inventor or business owner to general inquiries regarding empowerment to create their own futures. Since these items are included in both the pre- and post-surveys, a change analysis is possible. The analysis includes, for each item listed in Table 10, the distribution of responses on the pretest. This provides an idea of the student attitude and intent on the item prior to the JA program. These items use a Likert-scale code of 1 for "Strongly Disagree", 2 for "Disagree", 3 for "Slightly Disagree", 4 for "Slightly Agree", and 5 for "Agree", and 6 for "Strongly Agree". In addition, the analysis includes the percent of students, for each item, whose posttest response was improved relative to their pretest response. For this analysis, those students who responded with "Strongly Agree" on the pretest are removed since it is not possible for them to improve.

Figure 4 shows the distribution of presurvey responses on each item by ethnicity. The percentage of students who "Strongly Agreed" or "Agreed" was very high (approximately 70 percent or higher) for the items that referred to a general sense of the future, such as future job, creating their own future, and willingness to study hard in order to have a good life. The corresponding percentages were considerably lower, between 30 and 50 percent, for those items that referred to specific occupations such as starting their own business and being an inventor.

Figure 5 shows that the percent of students who exhibited a gain on the posttest relative to the pretest was lower for the specific occupational items than for the items that reflected general attitudes towards the future. It is notable that those items for which students had the highest percentage of improvement were also those to which students "Strongly Agreed" or "Agreed" on the presurvey at the highest rates. For example, well over 80 percent of the students on the presurvey either "Strongly Agreed" or "Agreed" that they can create their own future. In spite of this already very high rate of agreement, over 50 percent of all ethnicities improved on their responses after their participation in the JA OUR NATION program. The same pattern applies to the students who are prepared to study hard to prepare themselves for a better life.

TABLE 10: ATTITUDE AND INTENT ITEMS FOR JA OUR NATION.

JA OUR NATION	
ITEMS	1. I would enjoy being an inventor of new things. 2. I think I know what job I want to do when I grow up. 3. I have an interest in starting my own business. 4. I'm willing to study hard to prepare myself for a good job. 5. I believe I can create my own future.

FIGURE 4: PRESURVEY DISTRIBUTION OF RESPONSES ON ATTITUDE AND INTENT ITEMS BY ETHNICITY.

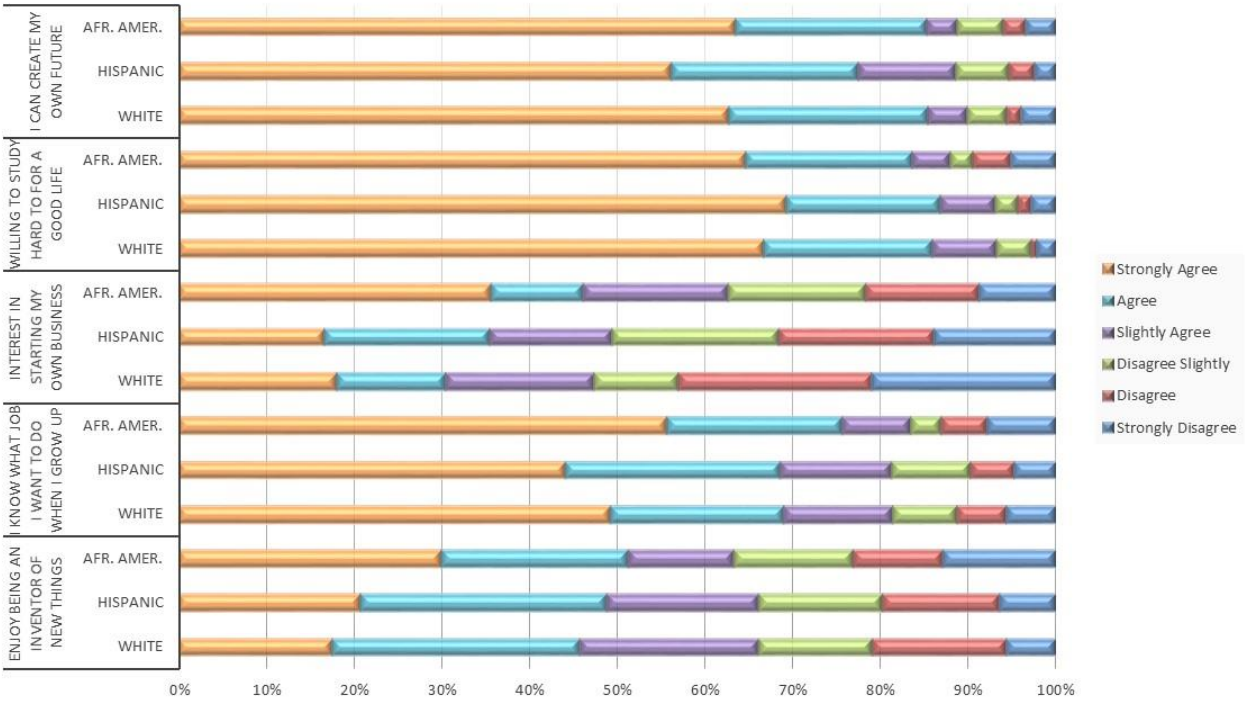


FIGURE 5: CHANGES IN RESPONSES ON ATTITUDE AND INTENT ITEMS BY ETHNICITY.

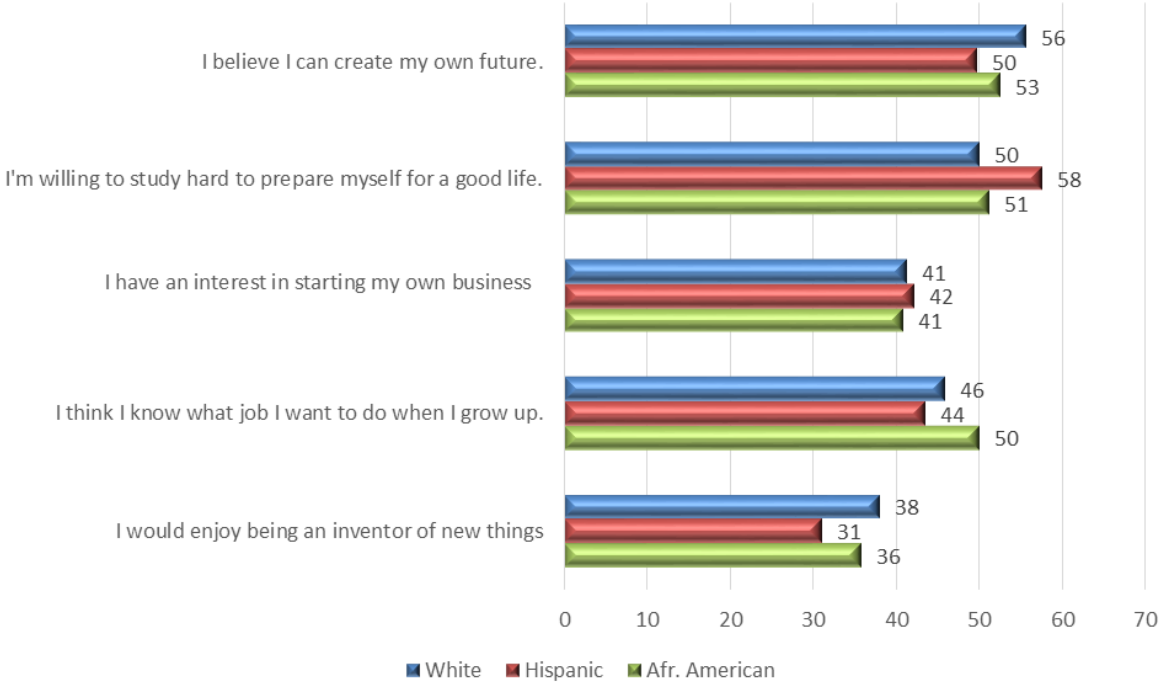


Figure 6 indicates that females are slightly more agreeable on the presurvey attitude and intent items than are males. The only exception is the responses to the item measuring enjoyment of inventing new things, for which the percent of males who either "Agreed" or "Strongly Agreed" was approximately 10 percentage points higher than females.

FIGURE 6: PRESURVEY DISTRIBUTION OF RESPONSES ON ATTITUDE AND INTENT ITEMS BY GENDER.

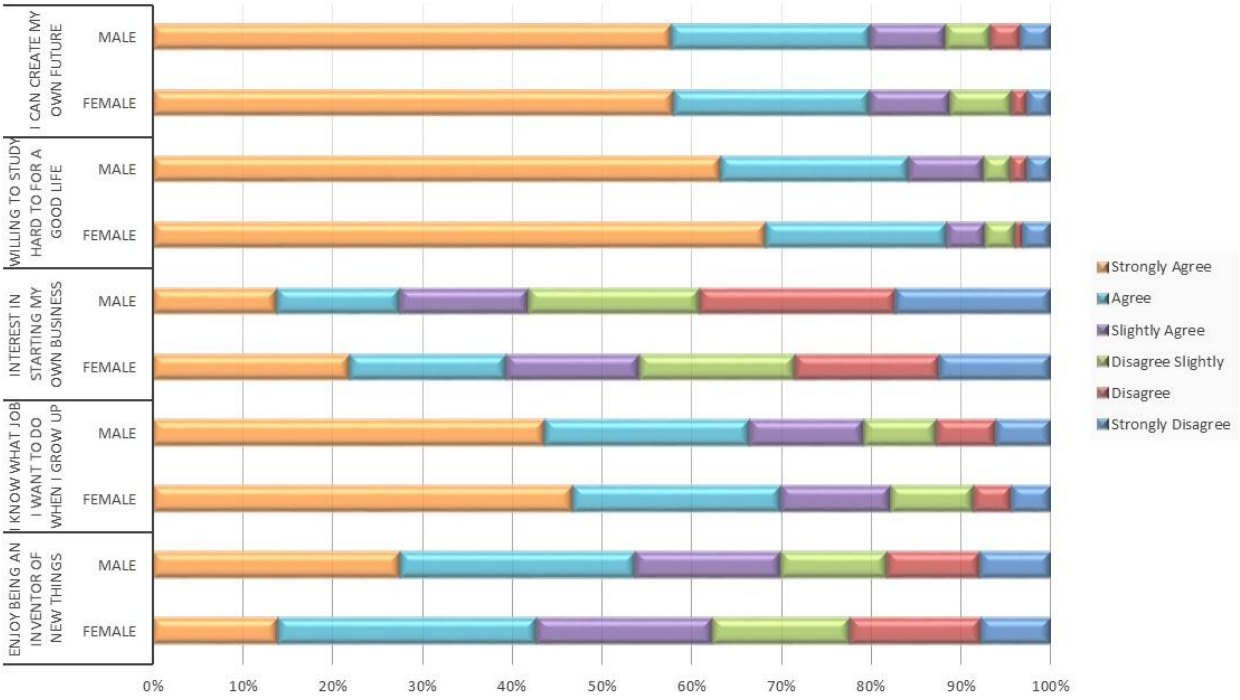


Figure 7 shows that there were not notable differences by gender in the percent of students who experienced improvement, except for females and their willingness to study hard for a good life. Even though almost 90 percent of females (vs. 84 percent for males) responded with at least "Agree" on the presurvey, the percentage of females that improved on the postsurvey outpaced their male peers by 6 percentage points (55 vs 49, respectively).

FIGURE 7: CHANGES IN RESPONSES ON ATTITUDE AND INTENT ITEMS BY GENDER.

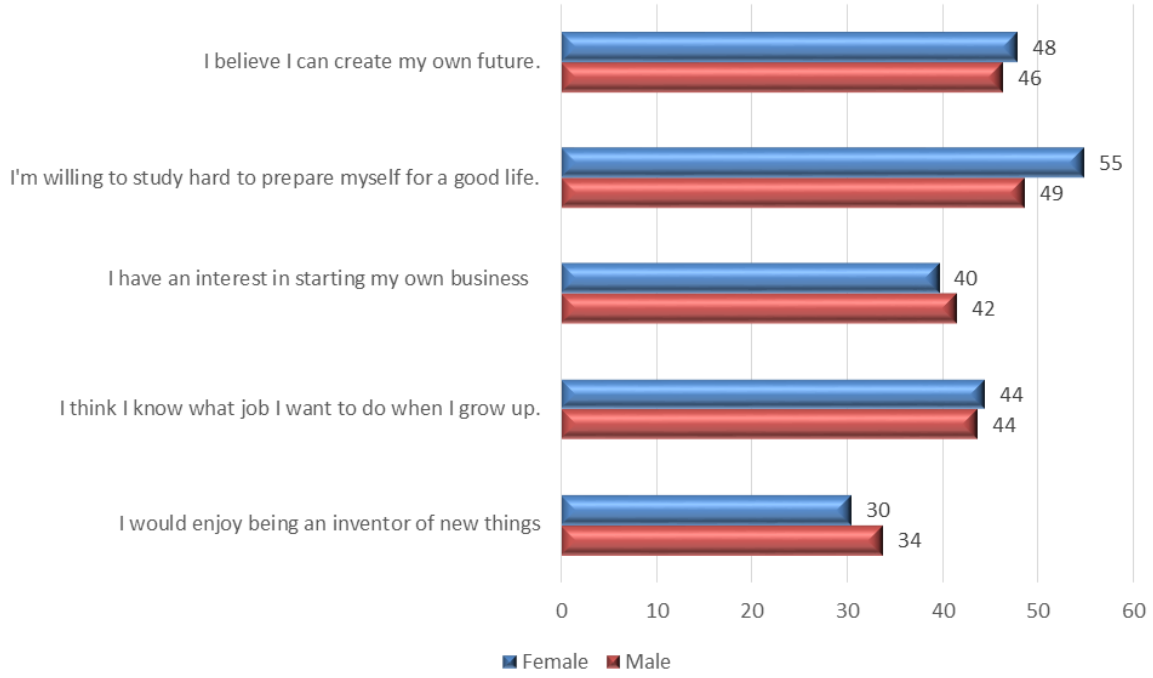
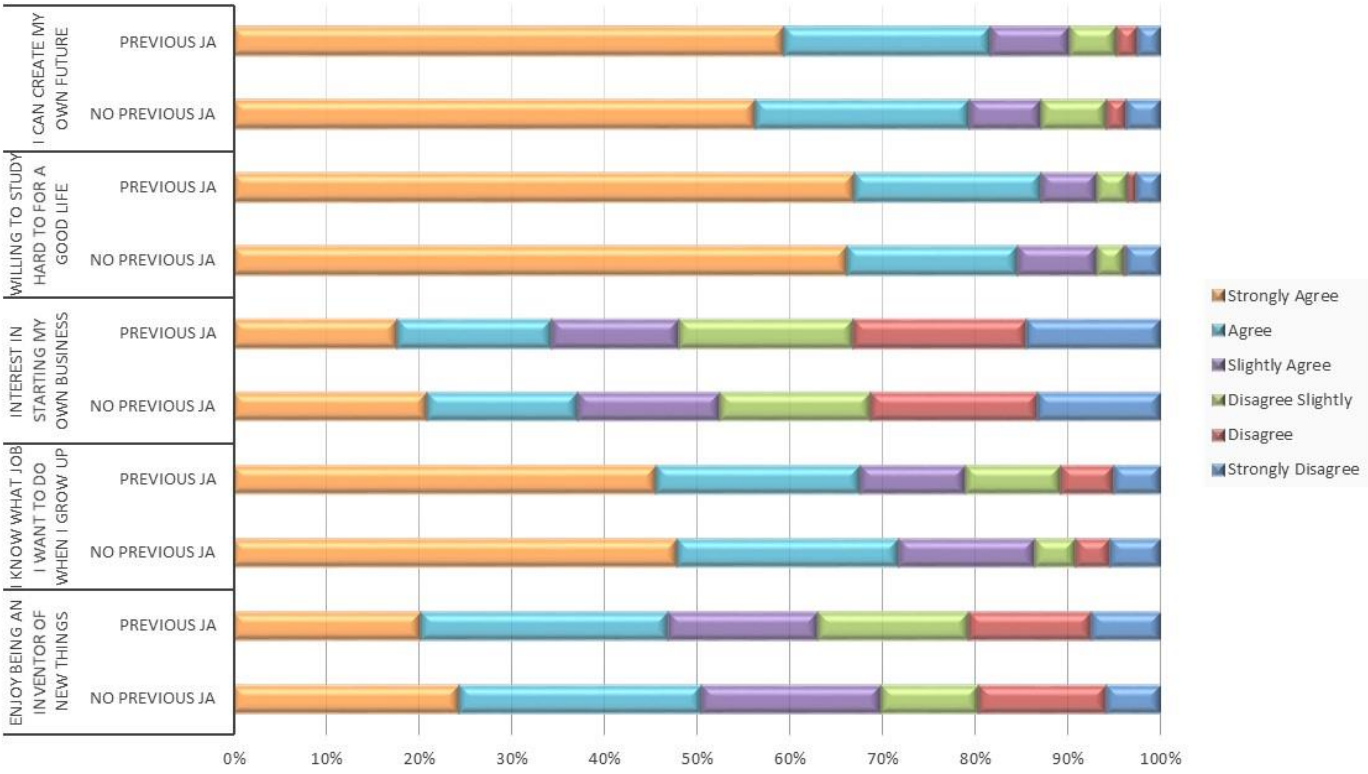


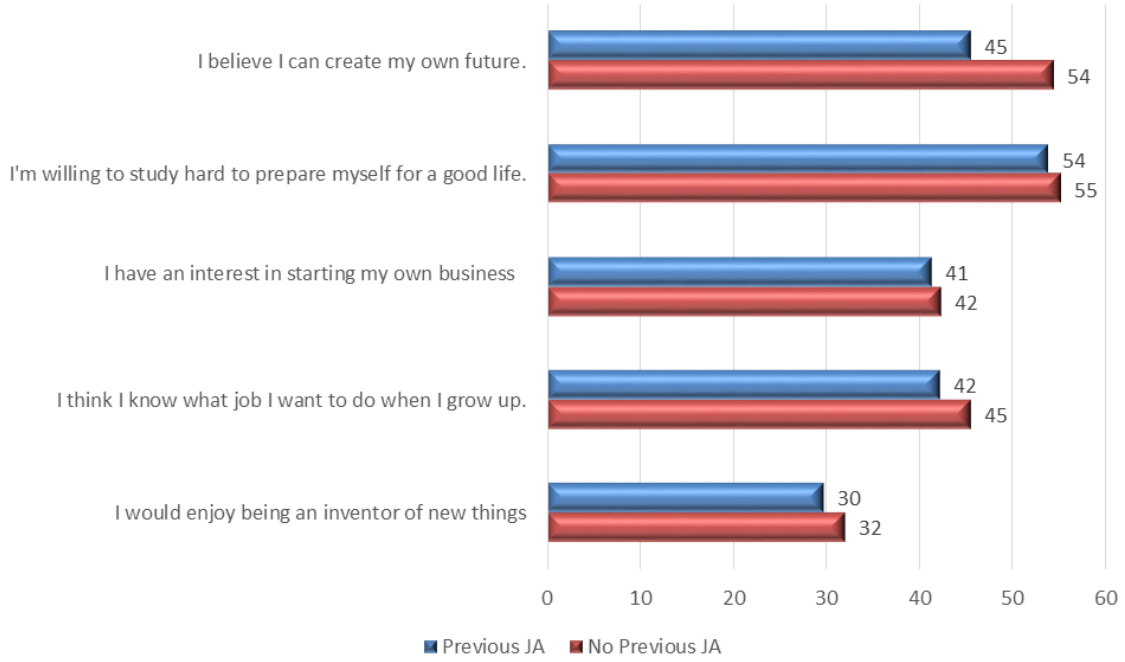
Figure 8 suggests that students with prior JA experience were slightly more agreeable on the presurvey in regards to the extent to which they can create their own future and willingness to work hard for a good life in the future. Students with prior JA experience were slightly less agreeable to items related to starting their own business, general ideas about what they want to do when they grow up, and being an inventor of new things.

FIGURE 8: PRESURVEY DISTRIBUTION OF RESPONSES ON ATTITUDE AND INTENT ITEMS BY PRIOR JA EXPERIENCE.



As shown in Figure 9, JA OUR NATION students with no prior JA experience were slightly more likely to experience improvement in their attitudes and intent relative to those who had prior JA experience. The largest gain was in regards to the belief that they can create their own future. Fifty-four percent of those with no previous JA experience improved compared to 45 percent of those with prior JA experience.

FIGURE 9: CHANGES IN RESPONSES ON ATTITUDE AND INTENT ITEMS BY PRIOR JA EXPERIENCE.



RESULTS: STUDENT EVALUATION

The last set of items included a set of evaluative questions that were unique to each program and appear on the postsurvey only. Student responses were "Yes", "No", and "Not Sure". The analysis includes the distribution of responses for each item disaggregated by ethnicity, gender, and previous JA experience.

JA OUR CITY

Students of all ethnicities had overwhelmingly positive responses across the board regarding their perspectives of their experiences in JA OUR CITY. See Figure 10. Whites generally responded positively at lower rates than their Hispanic and African-American peers. The item with the lowest positive response was 50 percent of White students who would tell their friends about the JA program; just over 60 percent of White students indicated that they had learned something to get a job. The positive response rate of the other items was at least 80 percent across all ethnicities.

FIGURE 10: EVALUATION ITEMS FOR JA OUR CITY BY ETHNICITY.

Figure 11 indicates that females were slightly more positive in their responses than were males, with the largest difference (62 vs 55 percent for females and males, respectively) in regards to telling friends to join a JA program. Figure 12 shows that there was just one notable difference by previous experience in JA. Those students with previous JA experience responded that they would participate in another JA program at a rate of 82 percent compared to only 72 percent for those students who had no prior JA experience.

FIGURE 11: EVALUATION RESULTS FOR JA OUR CITY BY GENDER.

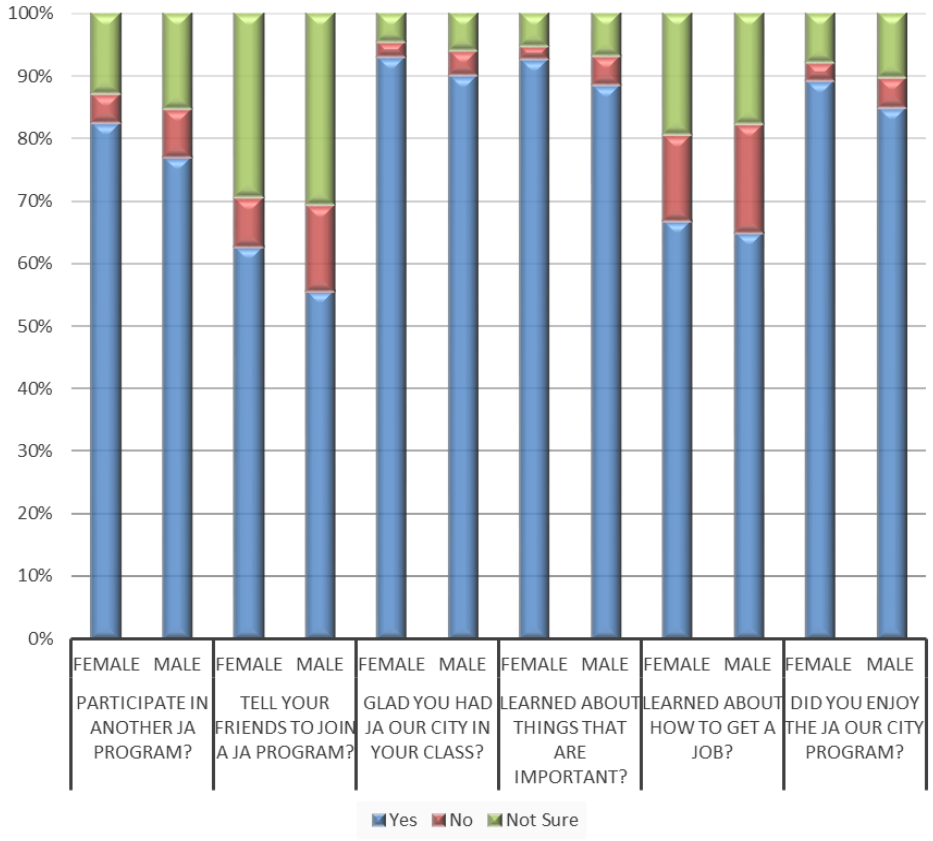
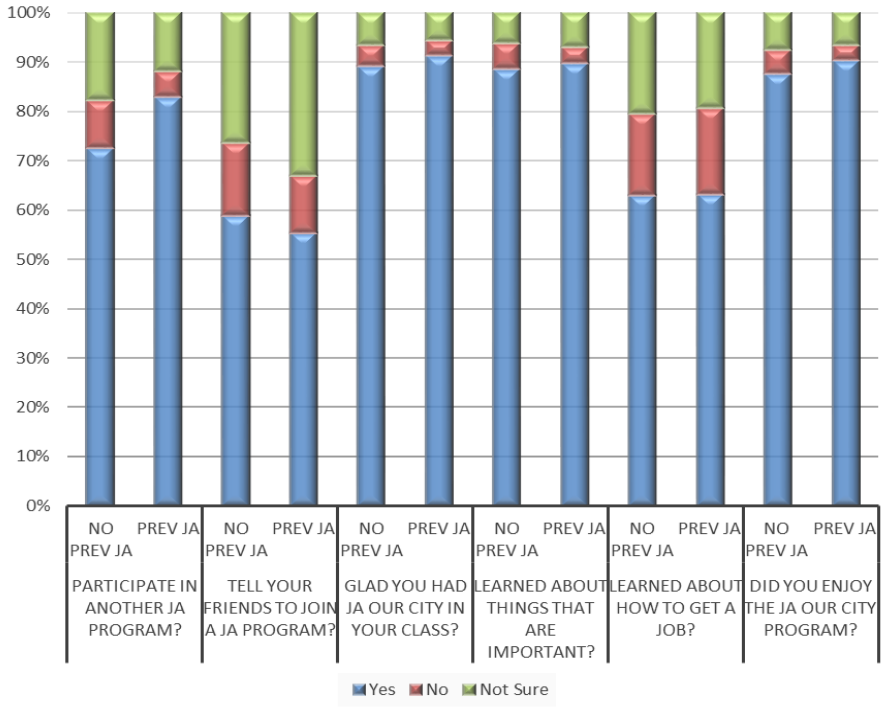


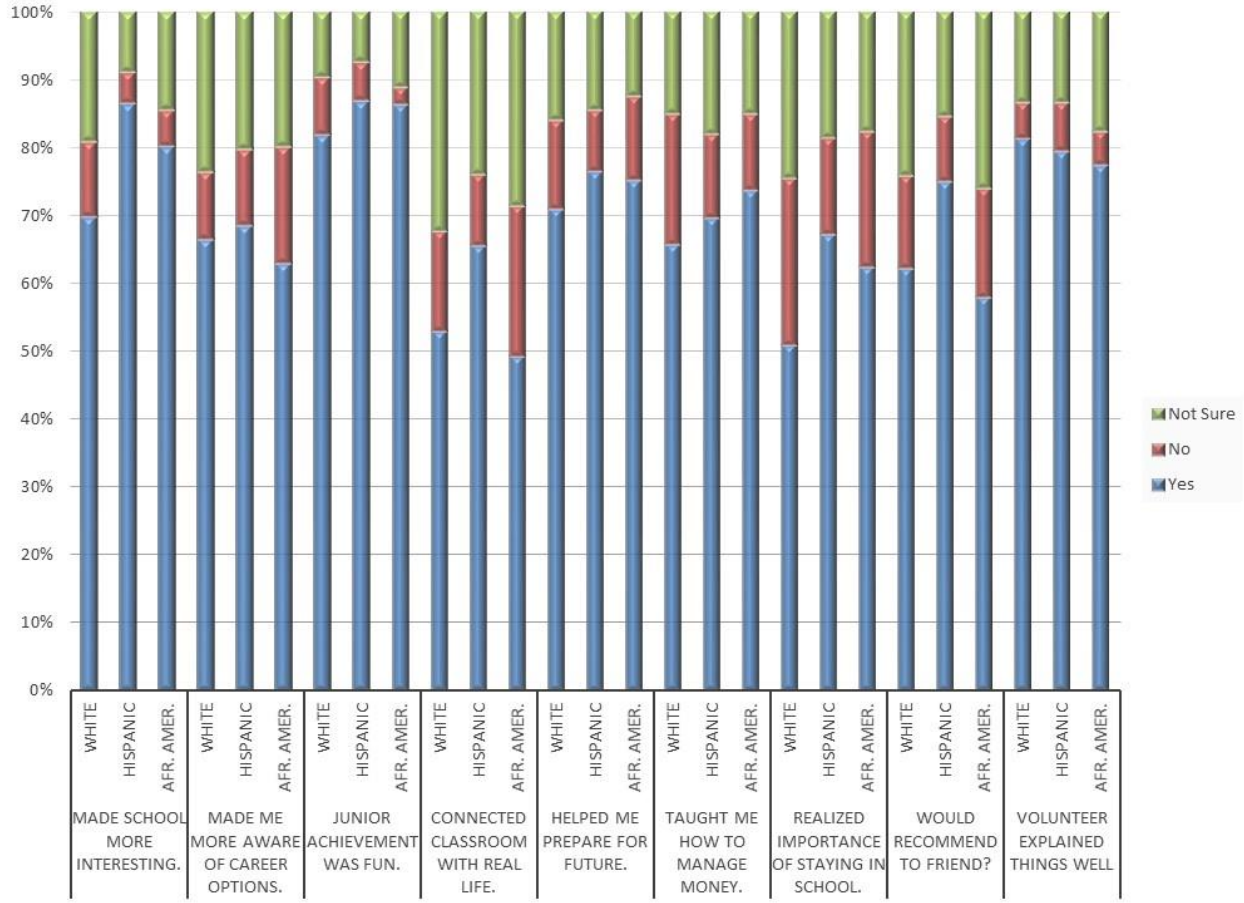
FIGURE 12: EVALUATION RESULTS FOR JA OUR CITY BY PRIOR JA EXPERIENCE.



JA OUR REGION

There were 9 evaluative items on the JA OUR REGION postsurvey as shown in Figure 13. As in JA OUR CITY, White student responses were less positive on the items, with the exception of "Connected Classroom with Real Life" and "Would Recommend to a Friend." Just under 50 percent of African-American students responded "Yes" on the former compared to just over 50 percent of Whites; on the latter, approximately 58 percent of African-American students would recommend JA to a friend compared to 62 percent of White students. "Made School More Interesting" and "Junior Achievement was Fun" received the most positive responses (over 80 percent) for all ethnicities.

FIGURE 13: EVALUATION RESULTS FOR JA OUR REGION BY ETHNICITY.



As with JA OUR CITY, Figure 14 indicates that females were slightly more or similarly positive relative to their male counterparts. The largest difference was in response to realization of the importance of staying in school. Sixty-six percent of females responded positively compared to only 59 percent of males, a difference of 7 percentage points.

FIGURE 14: EVALUATION RESULTS FOR JA OUR REGION BY GENDER.

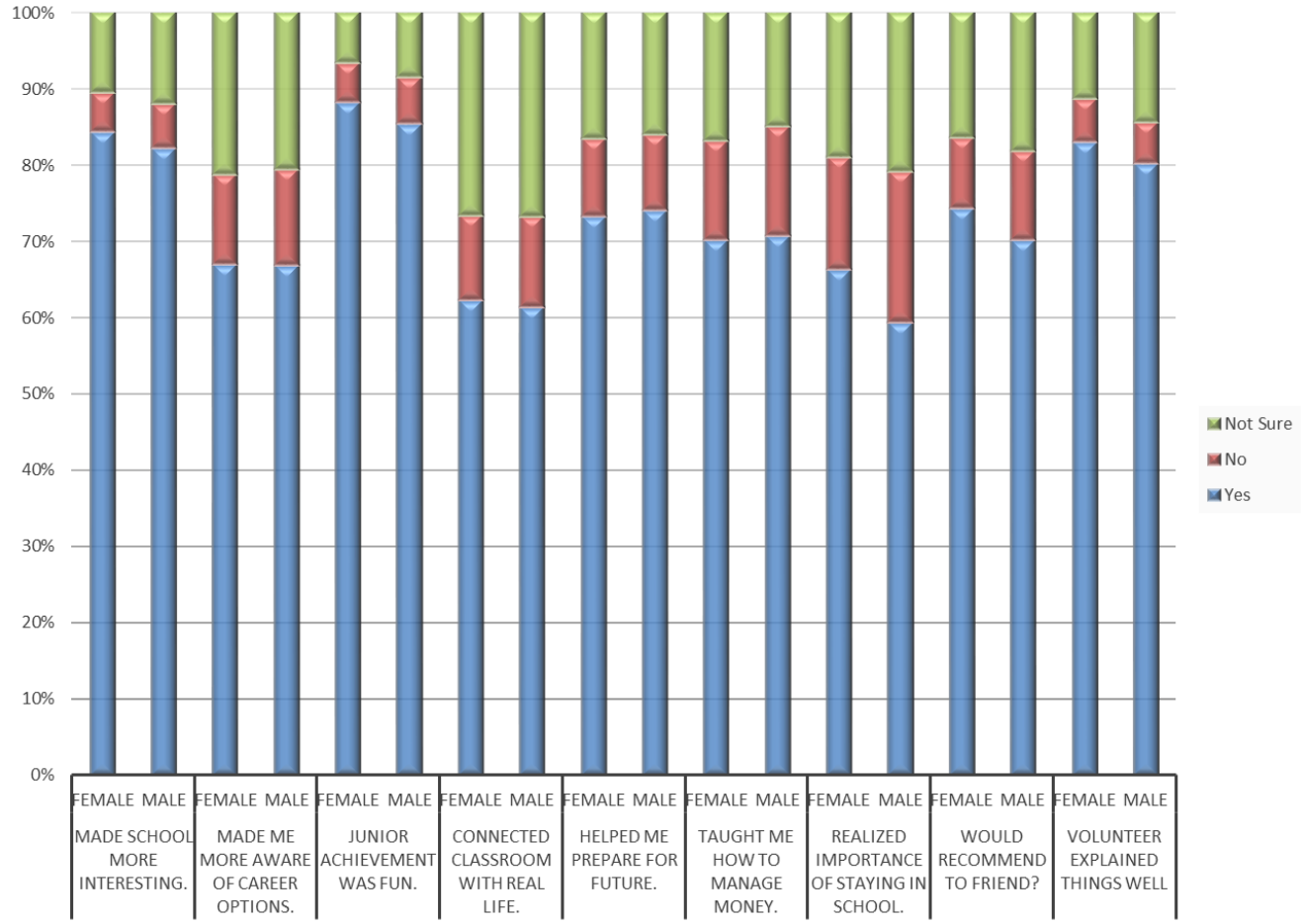
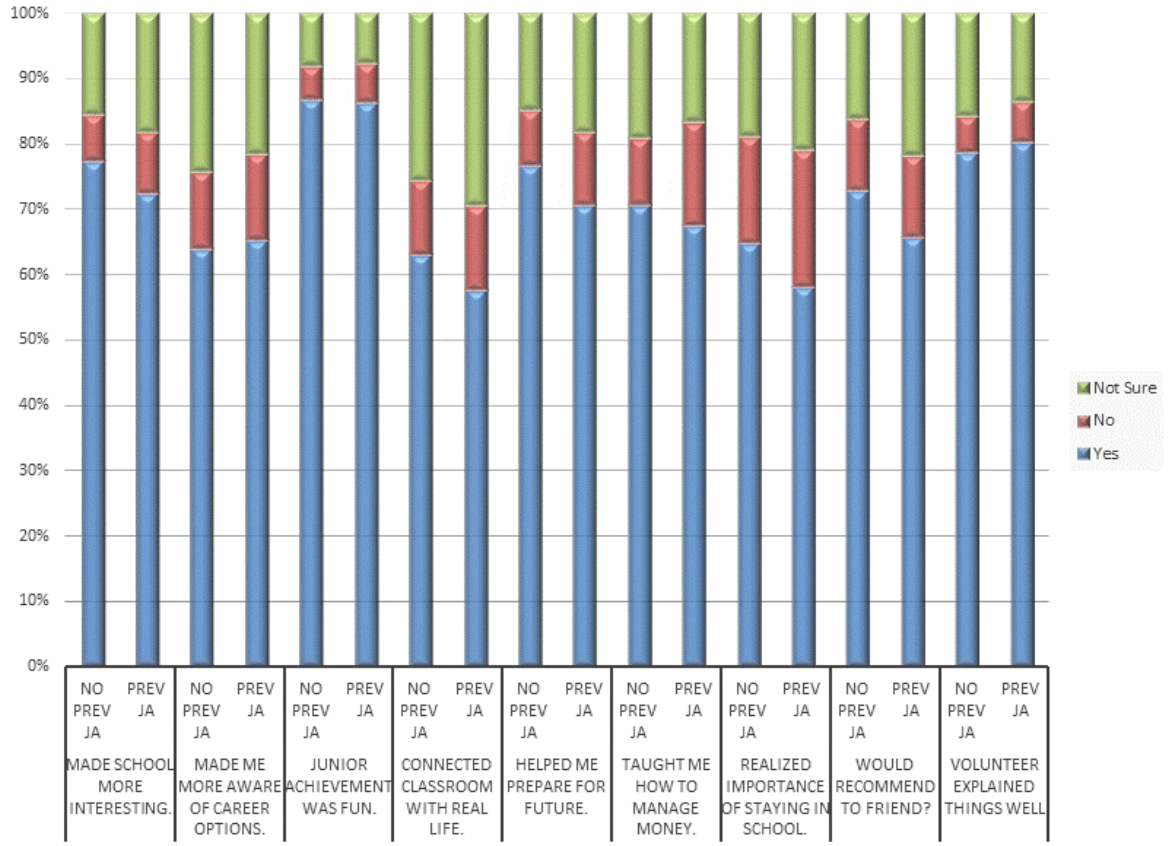


Figure 15 reveals that prior JA experience was associated with slightly lower positive responses, with the biggest differential appearing in "Helped me prepare for the future" (7 percentage points), followed by "Would recommend to a friend" (6 percentage points), and "Made school more interesting" (5 percentage points).

FIGURE 15: EVALUATION RESULTS FOR JA OUR REGION BY PRIOR JA EXPERIENCE.



JA OUR NATION

For JA OUR NATION only, the evaluation responses were on a Likert-scale, similar to the Attitude and Intent items, as shown in Figure 16. Responses were overwhelmingly positive ("Strongly Agree", "Agree", or "Slightly Agree") across all items. Over 90 percent of White and Hispanic students at least slightly agreed that "What I'm learning can be used in the real world". The positive response rates of White and Hispanic participants approached 90 percent with the item "The JA program was interesting". The item that received the lowest positive responses was "I learned about new jobs", with 58 percent, 63 percent, and 58 percent of White, Hispanic, and African-American students, respectively.

FIGURE 16: EVALUATION RESULTS FOR JA OUR NATION BY ETHNICITY.

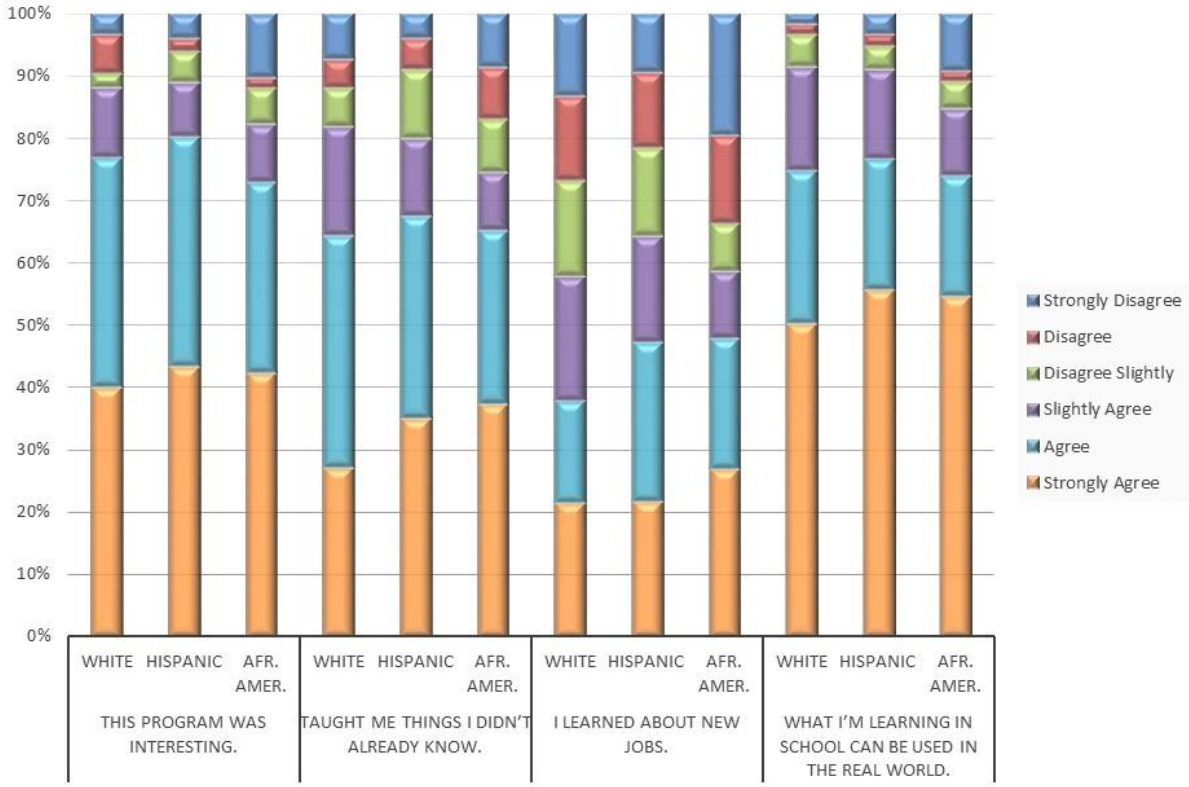


Figure 17 indicates that females were slightly more or equally positive in their responses than their male counterparts. The largest difference was to the item "I learned about new jobs", with approximately 65 percent of females responding positively compared to 59 percent of males (6 percentage point difference). Figure 18 reveals that there were no substantial differences in evaluative responses by prior JA experience.

FIGURE 17: EVALUATION RESULTS FOR JA OUR NATION BY GENDER.

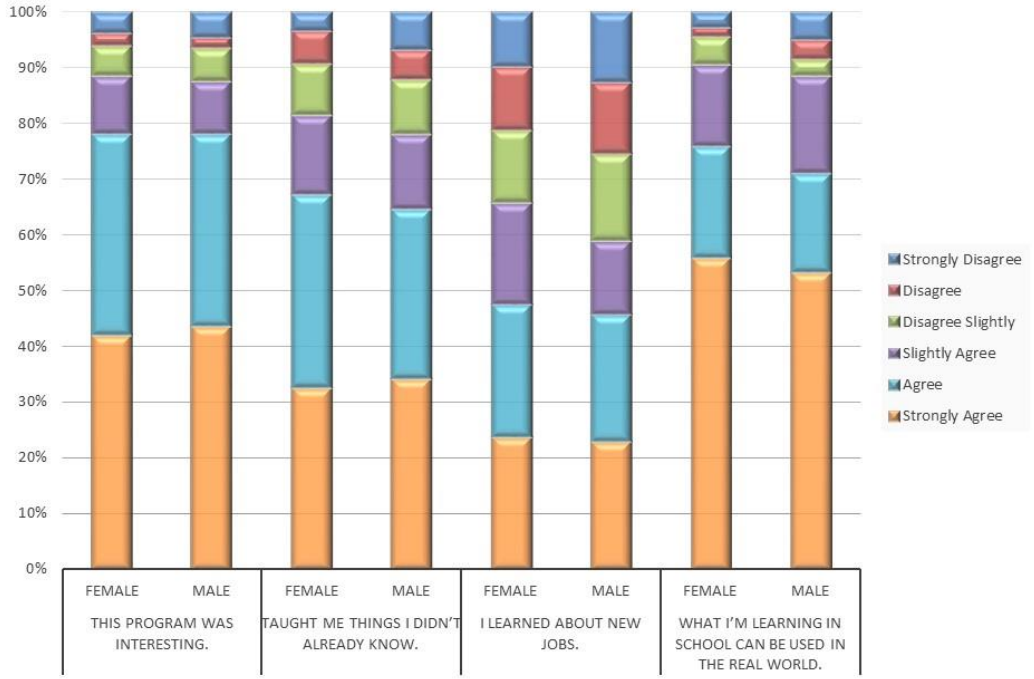


FIGURE 18: EVALUATION RESULTS FOR JA OUR NATION BY PRIOR JA EXPERIENCE.