

# Junior Achievement

## *JA Global Marketplace* Summative Evaluation

**Final Report**  
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**ETI**

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## **I. Introduction**

JA Worldwide (JA) is a not-for-profit organization financed by businesses, foundations, government, and individuals. The purpose of JA is to educate and inspire young people to value free enterprise, business, and economics with the expectation that this will improve the quality of their lives. JA's programs reflect this purpose and are designed to help students assess their personal skills, interests, and values, understand the economic benefits of education, explore career options, learn job-seeking skills, and practice personal and family financial management.

JA middle grades programs encompass economics and business curricula for students in grades six through eight. The middle grades programs reinforce the value of education and teach students the principal characteristics of economic systems and the role of business within those systems. Through a series of six lessons, *JA Global Marketplace* provides practical information about the global economy and its effect on students' daily lives.

Junior Achievement (JA) contracted with the Evaluation and Training Institute (ETI) to conduct a summative evaluation of JA's middle grades program, *JA Global Marketplace*, during the spring 2006 semester. The purpose of the evaluation was to assess the impact of the program on student learning. This report presents the study design and methodology, the key findings, and the implications of the study and its results.

## **II. Research Design and Methodology**

For this study, ETI used a pre-post program and comparison group research design to measure the extent to which the *JA Global Marketplace* program improved students' knowledge of the global economy and how it works. A subject-specific test was administered twice to students in selected program and comparison classrooms—once at the start of the school semester and again six to eight weeks later.<sup>1</sup> Also, program students were asked to complete a satisfaction survey at the end of the program. Student scores on the subject-specific test were analyzed to assess the relative knowledge gains between program and comparison students. The study methodology, including the sampling process, instrument design, types of analyses, and study limitations are described in more detail in the remainder of this section.

### **The Sample**

A task force of 12 JA Area Offices offering *JA Global Marketplace* to area schools in spring 2006 was asked to recruit 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grade program and comparison teachers and their classrooms for the study. JA Area Offices were directed to recruit non-JA classrooms by offering interested classroom teachers the *JA Global Marketplace* program during the second half of the spring 2006 semester. JA Area Offices also were directed to recruit program teachers and classrooms that followed a traditional JA implementation format, not JA in-a-day classrooms or classrooms in community-based settings.

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<sup>1</sup> The *JA Global Marketplace* program runs for approximately six to eight weeks. The administration and collection of both program and comparison pre- and post-tests were carried out within that timeframe.

Five of the 12 JA Area Offices were able to recruit 39 program and 15 comparison classrooms for the study (see **Table 1**).

**Table 1**  
**Sample of Participating Classrooms**

<b>Area Office</b>	<b><u>Number of Program Classrooms</u></b>	<b><u>Number of Comparison Classrooms</u></b>
JA of Central Carolinas, Inc.	3	2
JA of Milwaukee	0	2
JA of Southeast Texas, Inc.	16	4
JA of Upper Midwest, Inc.	15	2
JA of Washington	5	5
<b>TOTAL</b>	<b>39</b>	<b>15</b>

At the end of the study, all five JA Area Offices submitted to ETI completed pre- and post-tests from program and/or comparison students. Six program and six comparison classrooms dropped out of the study and did not submit any test data. As shown in **Table 2**, the 33 program classrooms yielded 606 completed pre- and post-tests, and the 9 comparison classrooms yielded 133.

**Table 2**  
**Final Sample of Completed Pre- and Post-Tests by JA Area Office**

<b>Area Office</b>	<b><u>Number of JA Program Classrooms</u></b>	<b><u>Number of Completed Pre-post Tests</u></b>	<b><u>Number of Comparison Classrooms</u></b>	<b><u>Number of Completed Pre-post Tests</u></b>
JA of Central Carolinas, Inc.	3	67	2	41
JA of Milwaukee	0	0	2	20
JA of Southeast Texas, Inc.	11	197	3	38
JA of Upper Midwest, Inc.	14	243	2	34
JA of Washington	5	99	0	0
<b>Total</b>	<b>33</b>	<b>606</b>	<b>9</b>	<b>133</b>

## Instruments

To determine the extent to which program students learned the principles of a global economy and made greater gains in the subject matter than a comparison group of students, ETI developed a pre-post subject-specific knowledge test. The test consisted of a combination of 44 multiple-choice and short answer items covering the content of the *JA Global Marketplace* curriculum and reflecting the national academic content standards for the middle grades social studies curriculum. Some items assessed students' knowledge—recognition of facts and concepts, while other items assessed students' comprehension—understanding of the meaning of concepts. The remaining items assessed students' ability to apply their learning—using the information to solve problems. Copies of the pre- and post-tests are in **Appendix A**.

In addition, ETI developed a satisfaction survey for program students only (**See Appendix A**). The satisfaction survey asked students to indicate what they liked most and least about the program; what they thought about the lessons in general; and to what extent they believed the program had an effect on their critical thinking, as well as on their understanding of and interest in business and school.

### **Data Collection Process**

ETI worked with the five participating JA Area Offices to coordinate the administration and collection process for the pre- and post-tests. Each of the JA Area Offices received a set of clearly labeled program and comparison classroom packets for distribution. The classroom packets contained a letter of instruction to the teacher and enough pre- and post-tests for each student in the class. Both program and comparison teachers administered the pre- and post-tests to their students at the beginning of the semester and after six to eight weeks, and returned the completed tests to the JA Area Offices.

The JA Area Offices submitted all completed tests to ETI and ETI matched as many of the pre- and post-tests as possible, resulting in 606 completed pre- and post-tests from program students and 133 from comparison group students.

### **Analysis**

The analysis of the pre-post program and comparison data involved several steps: analysis of the demographic distribution of the data; a test for program and comparison group equivalence; analysis of gain scores and effect size; item analysis; and analysis of program and comparison students matched on selected demographic variables.

### **Demographic Distribution**

The demographic distribution of the data was reviewed in order to determine the extent to which the program and comparison groups were comparable in terms of grade level, gender, ethnicity, prior experience with JA, and number of completed pre- and post-tests available for analysis. As presented in **Tables 3** through **6**, our review revealed some disparities in students' demographic characteristics by grade level. **Based on our analysis of these disparities, ETI selected the sample of 6<sup>th</sup> grade program and comparison students as the focus of the analysis for this study.** The process and reasoning involved in this decision are included in the detailed discussion that follows.

**Grade Level.** The largest proportion of both program and comparison students was in the 6<sup>th</sup> grade. In comparison, the proportion of 7<sup>th</sup> grade program students was very small compared to the comparison group at that grade level; and the proportion of 8<sup>th</sup> grade comparison students was half that of the program group. **In terms of the proportion of pre- and post-tests by grade level, the proportions of program and comparison 6<sup>th</sup> grade students represented the most appropriate sample for analysis (see Table 3).**

**Table 3**  
**School Grade Level Distribution**

Grade Level	<u>Number of Program Students</u>	<u>Percentage of Program Students</u>	<u>Number of Comparison Students</u>	<u>Percentage of Comparison Students</u>
	(n=592)	(n=592)	(n=127)	(n=592)
6 <sup>th</sup> Grade	454	77%	78	61%
7 <sup>th</sup> Grade	20	3	37	29
8 <sup>th</sup> Grade	118	20	12	10

**Gender.** As shown in **Table 4**, program and comparison group students were equally distributed in terms of gender in the overall sample and in the 6<sup>th</sup> grade. In the 7<sup>th</sup> and 8<sup>th</sup> grades, the proportion of females and males varied. The gender distributions among comparison students in the 7<sup>th</sup> grade and among program students in the 8<sup>th</sup> grade were comparable. In contrast, a larger proportion of females (60%) than males (40%) represented the program students in the 7<sup>th</sup> grade, and a larger proportion of males (67%) than females (33%) represented the comparison students in the 8<sup>th</sup> grade.

**Table 4**  
**Gender Distribution**  
(Percentage of Students)

Gender	<u>Overall</u>		<u>6<sup>th</sup> Grade</u>		<u>7<sup>th</sup> Grade</u>		<u>8<sup>th</sup> Grade</u>	
	<u>Program</u>	<u>Comparison</u>	<u>Program</u>	<u>Comparison</u>	<u>Program</u>	<u>Comparison</u>	<u>Program</u>	<u>Comparison</u>
	(n=601)	(n=133)	(n=452)	(n=78)	(n=20)	(n=37)	(n=117)	(n=12)
Female	49%	49%	49%	50%	60%	51%	49%	33%
Male	51	21	51	50	40	49	51	67

**Ethnicity.** **Table 5** depicts the ethnic breakdown of program and comparison students. Overall, a larger percentage of program students were Caucasian (60%) compared to comparison students (47%). This pattern was consistent across grade levels.

With respect to minority representation, there was a larger proportion of African Americans among comparison students than among program students, overall and across grades. Similar breakdowns were evident among Hispanic students, with one exception: Hispanic students in the 8<sup>th</sup> grade represented eight percent of program students and zero percent of comparison students. The percentage of Asian/Pacific Islanders and American Indian/Alaskan Natives representing program and comparison students was minimal except in the 8<sup>th</sup> grade with Asian/Pacific Islanders representing 15 percent of the students. **On the whole, the grade level with the most representative and ethnically comparable program and comparison students was the 6<sup>th</sup> grade.**

**Table 5**  
**Ethnic Distribution**  
(Percentage of Students)

Ethnicity	Overall		6 <sup>th</sup> Grade		7 <sup>th</sup> Grade		8 <sup>th</sup> Grade	
	Program (n=595)	Comparison (n=132)	Program (n=447)	Comparison (n=78)	Program (n=20)	Comparison (n=37)	Program (n=118)	Comparison (n=12)
White/ Caucasian	60%	47%	54%	40%	90%	76%	75%	--%
Black/ African American	18	30	21	26	--	16	6	83
Hispanic/ Latino	17	19	20	32	--	68	8	--
Asian/ Pacific Islander	6	3	4	4	--	2	15	--
American Indian/ Alaskan Native	4	2	4	4	--	--	6	--
Other	7	10	7	13	10	2	6	16

**Prior JA Experience.** Surprisingly, across grades and overall, a larger percentage of comparison than program group students have had prior experience with JA (See **Table 6**).

**Based on the breakdown across grades, the 6<sup>th</sup> and 8<sup>th</sup> grade program and comparison group students were the most comparable.**

**Table 6**  
**Prior JA Experience**  
(Percentage of Students)

Response	Overall		6 <sup>th</sup> Grade		7 <sup>th</sup> Grade		8 <sup>th</sup> Grade	
	Program (n=575)	Comparison (n=124)	Program (n=454)	Comparison (n=78)	Program (n=17)	Comparison (n=33)	Program (n=108)	Comparison (n=11)
Yes	32%	44%	39%	43%	6%	61%	11%	18%
No	68	56	61	57	94	39	89	82

**Summary.** The analysis of the demographic data across grades revealed that the 6<sup>th</sup> grade program and comparison students were the most appropriate sample for the analysis. The number of pre- and post-tests was sufficient for analysis and the gender and ethnic distributions presented the fewest disparities between program and comparison students.

### **Analysis of the 6<sup>th</sup> Grade Sample**

The analysis of the 6<sup>th</sup> grade sample included the following steps:

- A test of group equivalence was conducted for which a t-test comparing the pre-test scores of both program and comparison groups students was performed on a sample of 454 program and 78 comparison test scores.
- An analysis of gain scores was performed on the pre- and post-test difference scores of 454 program and 78 comparison students.

- An analysis of effect size was conducted to assess the relative magnitude of any significant differences obtained from the analysis of gain scores.
- An item analysis was conducted on the pre- and post-test items in order to evaluate the content areas in which program students outperformed comparison students.

### **Analysis of Matched Program and Comparison Students**

As discussed above, the 6<sup>th</sup> grade program and comparison students were selected as the focus of this study based on our review of their demographics and the number of pre- and post-tests available for analysis. Nevertheless, the size of the program group (n=545) was almost seven times larger than the size of the comparison group (n=78).

To adjust for this difference and to strengthen the analysis, ETI controlled for as many initial differences that may have influenced the results, by matching program and comparison students on gender, ethnicity, and JA experience. The matching process produced 73 matched pairs. The analyses discussed above—test for group equivalence, gain score analysis, effect size, and item analysis—were conducted on the 73 matched pairs and the results are presented in **Section III, Program Impact**, following the results of the analysis of the 6<sup>th</sup> grade sample.

### **Study Limitations**

No evaluation study is without its limitations. Conducting summative studies involving program and comparison groups in the social sciences is a challenging task. The methodological issues and constraints encountered recruiting program and comparison participants, retaining sufficient samples for analysis, and minimizing the number of confounding influences represent common limitations to the reliability and validity of social science evaluations. The summative evaluation of the *JA Global Marketplace* program was no different, and its limitations are discussed below. On the whole, the research design and approach to the analyses has accounted for and addressed the limitations under which the study was conducted.

### **Non-equivalent program and comparison groups**

The comparison group for this study was not a “true” control group in the sense that the participating classrooms were not randomly assigned to either a program or comparison group. Program classrooms constituted those classrooms already receiving *JA Global Marketplace* during the spring 2006 semester, and comparison classrooms were offered *JA Global Marketplace* in the future. In order to ensure that the program and comparison classrooms would be as similar as possible, comparison classrooms were recruited from within the same school or community and from teachers who had expressed an interest in the *JA Global Marketplace* program, but were willing to wait until the end of the semester to receive it. The expectation was that those classrooms serving as comparison classrooms would receive *JA Global Marketplace* once the study had been completed.

There remains of course, the possibility that there were initial differences between the two groups which have not been identified, and that these differences might have accounted for some of the post-test differences revealed by the analysis. To minimize the influence of

unaccounted differences, the test for equivalence was used to test for initial differences between the two groups and the analysis of gain scores was used to control for individual differences in initial scores. Another layer of control was added when the comparison group was matched with the program group to control for the influence selected demographics might have on the results.

### **Size of the Program and Comparison Groups**

As mentioned previously, recruiting program and comparison classrooms was challenging, and yielded a sample of program pre- and post-tests that was four and a half times as large as the sample of control pre- and post-tests. Even after selecting out the 6<sup>th</sup> grade program and comparison students for the analysis, the disparity in the group sizes remained.

Large differences in sample sizes have the potential of increasing the variability within each group, which in turn might influence statistical outcomes. To ensure that the variability between the program and comparison groups was minimized, a review was conducted on the demographic distribution of program and comparison students. This review showed that the two groups were comparable in terms of gender, ethnicity, and prior JA experience, and analyses were conducted on the sixth grade sample based on this conclusion.

As an additional precautionary measure, the program and comparison students were matched on selected demographic variables to generate equivalent program and comparison sample sizes and to control for as much variability between the two groups as possible. An additional analysis was conducted on the matched pairs sample. As discussed in the report, the analyses of the 6<sup>th</sup> grade sample and the matched pairs sample revealed similar results, indicating that the difference in sample sizes did not significantly contribute to the variability within or between the two groups.

### III. Program Impact

This section presents the results of the analysis of the 6<sup>th</sup> grade program and comparison group students' pre- and post-scores on the subject-specific test. **Overall, the findings for both the sample of 6<sup>th</sup> grade students followed by the matched pairs sample indicated that the JA Global Marketplace program had a positive impact on student learning.**

#### Sample of 6<sup>th</sup> Grade Students

##### Test for Group Equivalence

The test for group equivalence is often used when program and comparison groups are being compared on a pre-post measure. The test uses pre-test means to determine how alike or different the program and comparison groups are at the outset of the study. If there are no differences between the pre-test program and comparison means, the credibility of any comparative results increases considerably.

The results of the test for group equivalence performed on the 6<sup>th</sup> grade sample are displayed in **Table 7** and show that the mean pre-test scores of the two groups were not found to be significantly different. **This finding and other information about the comparability of the two groups in terms of their demographic make-up, established that the comparison students were, at the outset, much like the program group in terms of content knowledge and personal characteristics.**

Also shown in **Table 7** are mean post-test scores of the program and comparison students. After the program, the program group's mean post-test score was significantly higher than the comparison group's mean score ( $p < .05$ ). Given that the pre-test scores between the two groups were equivalent, this gain can be attributed to program students' participation in *JA Global Marketplace*.

**Table 7**  
**Test for Group Equivalence**  
(\* $p < .05$ )

	N	Pre-Test			Post-Test		
		Mean	SD	T-Test	Mean	SD	T-test
Program	454	15.98	5.64	.907	18.33	6.65	2.96*
Comparison	78	15.36	5.24		15.97	5.57	

##### Analysis of Gain Scores

The results of the t-test performed on the program and comparison group post-test means displayed in **Table 7** suggests that *JA Global Marketplace* increased participating students' knowledge and understanding of international business concepts and practices compared to comparison students. However, these results did not control for individual pre-test score differences between the two groups. Instead, an analysis of gain scores was used to control for individual students' scores and to measure the added gains program students made above the gains made by comparison students. The gain or difference score was the post-test score minus

the pre-test score. The gain scores for each student (paired pre-post case) were recorded and the gain scores for each group were compared using a t-test.

As displayed in **Table 8**, the results of the analysis of gain scores were significant at  $p < .01$ . **From pre- to post-test, program students outperformed their comparison counterparts by almost two points on average.** The difference between the program and comparison gain scores was a mean of 1.73 which produced a statistically significant t-test result.

**Table 8**  
**T-test on Gain Scores**  
(\* $p < .05$ )

	N	Mean Gain	SD	Mean Difference	T-Test	df	Significance
Program	454	2.35	5.26	1.73	2.75	530	.006*
Comparison	78	0.62	4.37				

### **Effect size**

Not only is it important to know if differences between the program and comparison groups are statistically significant, but it also is important to know whether the differences identified are large enough to make a “real” difference. Whereas statistical significance tells us the likelihood that research results differ from chance expectations, effect size tells us the relative magnitude of the difference obtained.

In education, effect sizes of .30 or higher are often considered meaningful. Effect sizes of .50 are robust and effect sizes of 1.00 are considered to be an indisputable demonstration of program effectiveness. Cohen’s d, the standard computation for effect size, was computed to determine the effect size of the t-test results. **Cohen’s d statistic produced an effect size of .37 for this analysis, indicating that the relative magnitude of the program’s impact is respectable.**

### **Item Analysis**

As a means of giving the statistical results more meaning, an item analysis evaluated the degree to which learning was successful across the test’s content areas. The percentage of correct responses from program and comparison students was computed for each test item on the pre- and post-tests (See **Table A** in **Appendix B** for an item-by-item breakdown of the percentage of correct responses at pre and post-test, the percentage point difference in correct responses from pre- to post-test, and the percentage point gains in correct responses). Results of the item analysis revealed the following:

- Between 50 and 85 percent of the answers provided by program students were correct on 18 of 44 post-test items (41%). In contrast, between 50 and 76 percent of the answers provided by comparison students were correct on 14 of 44 post-test items (32%).

- On 32 of 44 items (73%), the percentage of correct answers from pre- to post-test increased by as much as 24 percentage points among program students. By comparison, the percentage of correct answers from pre- to post-test increased by no more than 13 percentage points on 25 of 44 items (57%) among comparison students.
- On 70 percent of the post-test items (31 of 44), the percentage of correct answers exceeded that of comparison students.

The breadth and scope of test-items on which program students made greater gains compared to comparison students confirms the statistical findings. A complete list of the test-items can be found in **Appendix C. The selected sample of the test-items presented below demonstrates that JA Global Marketplace students learned curriculum specific economic terms and concepts across different content areas.**

- Two kinds of trade are domestic trade and inter-domestic trade. (Q9a; True or False)
- What is trade? (Q9; Multiple response)
- Factory owners in the 18<sup>th</sup> and 19<sup>th</sup> centuries wanted to place trade barriers, mainly tariffs, on foreign goods coming into the United States. What were they trying to do with these trade barriers? (Q13; Multiple response)
- Based on the concepts of supply and demand, what happens to the price of an imported product if the importing country places a quota on that product? (Q16; Multiple response)
- What was the reason for adopting a common currency when the United States of America was founded and for adopting a common currency in our region of the world today? (Q25; Open-ended response)
- Quota – what is the correct definition? (Q26a; Matching)
- Which three countries participate in the North American Free Trade Agreement (NAFTA)? (Q29; Open-ended response)
- According to the U.S. Bureau of Labor Statistics, productivity is defined as real output per worker hour, or:  $\text{Productivity} = \text{Output} \div \text{Worker Hour}$ . Using this formula, answer the following question: If a toy maker takes 7 hours to make 21 toys, what is the toy maker's productivity? \_\_\_\_\_ toys per hour. (Q32; Open-ended)

There were a number of test-items on which correct responses provided by program students fell below those provided by comparison students, suggesting that those content areas might require more emphasis in the curriculum. Some examples are provided below. A complete list of the test-items can be found in **Appendix C.**

- An item that is imported from another country can also be exported to other countries (Q9b; True or False)
- What are the benefits of imports? (Q11; Multiple response)
- Why do governments use trade barriers? (Q12; Multiple response)
- Which of the following is an example of a human resource? (Q19; Multiple response)

- Modern types of communication such as the internet, fax machines, and cell phones make it possible to share ideas and information between nations more quickly. How do improvements in communication effect international trade? (Q22; Multiple response)
- Subsidy - what is the correct definition? (Q26c; Matching)

**Overall, the results of the item analysis reinforced the statistical findings and further revealed that the JA Global Marketplace program had a significant impact on student learning. Specifically, compared to a comparison group of students, program students improved their knowledge, comprehension, and application of the key terms and concepts of the JA Global Marketplace curriculum.**

### Sample of Matched Pairs

The same analyses performed on the 6<sup>th</sup> grade sample also were performed on the sample of matched pairs. The purpose of matching program and comparison students on selected demographic variables was to equalize the number of students in each group and to control for initial differences that might have influenced the results.

### Test for Group Equivalence

The test for group equivalence was conducted on the 73 6<sup>th</sup> grade matched pairs revealing results consistent with those obtained for the unmatched 6<sup>th</sup> grade sample. As shown in **Table 9**, the difference between the program and comparison pre-test means was less than one point—not a significant difference. Also, the program group significantly outperformed the comparison group on the post-test ( $p < .05$ ). **Since program and comparison students were matched on gender, ethnicity, and JA experience for this analysis, the lack of difference between the two groups at the outset and the significant differences in mean post-test scores further strengthens the credibility and validity of the study.**

**Table 9**  
**Test for Group Equivalence**  
(\* $p < .05$ )

	N	Pre-Test			Post-Test		
		Mean	SD	T-Test	Mean	SD	T-test
Program	73	14.85	6.47	.647	17.89	6.57	-2.268*
Comparison	73	15.44	5.39		16.01	5.63	

### Analysis of Gain Scores and Effect Size

**The analysis of gain scores on the sample of matched pairs mirrored that of the 6<sup>th</sup> grade unmatched sample. The mean difference (“Xbar”=2.47) between program and comparison gain scores was significant at  $p < .01$  (See Table 10). From pre- to post-test, program students increased their score by over three points on average, whereas comparison students increased their score by less than one point on average. Furthermore, Cohen’s d statistic produced an effect size of .50 for this analysis, revealing that when initial differences between the groups were controlled, the magnitude of the program’s impact was more easily detected.**

**Table 10**  
**T-Test on Gain Scores**  
 (\*p.<.05)

	N	Mean Gain	SD	Mean Difference	T-Test	df	Significance
Program	73	3.04	5.53	2.47	3.06	72	.003*
Comparison	73	0..58	4.39				

### **Item Analysis**

An item analysis of the test questions revealed the following:

- The percentage of items with 50 percent or more correct responses was similar between program and comparison groups. Between 50 and 82 percent of the answers provided by program students were correct on 17 of 44 post-test items (39%). Similarly, between 50 and 76 percent of the answers provided by comparison group students were correct on 15 of 44 post-test items (34%).
- **The percentage increase in correct responses from pre- to post-test was almost three times greater among program students than comparison students.** On 31 of 44 items (70%), the percentage of correct responses from pre- to post-test increased by as much as 33 percentage points among program students. With the comparison group, the percentage of correct responses from pre- to post-test increased no more than 12 percentage points on 25 of 44 items (57%).
- On 64 percent of the post-test items (28 of 44), the percentage of correct responses exceeded that of comparison students.

**Table B in Appendix B** contains an item-by-item breakdown of the percentage of correct responses.

Examples of test-items on which program students made greater gains than comparison students were (**See Appendix C for a complete list**):

- A trade barrier can slow or stop trade between countries. (Q9c; True or False)
- Currency is the money in common use in any country. (Q9i; True or False)
- Which of the following is **not** a goal of the North American Free Trade Agreement (NAFTA)? (Q14; Multiple response)
- The Constitution of the United States of America requires a common currency that is recognized and is given “full faith and credit” throughout the entire nation. What world region has recently adopted a common currency? (Q24a; Open-ended response)
- \_\_\_\_\_ are goods or services sold to another country. (Q27a; Fill in the blank)
- If the currency exchange rate from the Swedish Krona to the American Dollar is 8 to 1, how many dollars would it take to buy a 16 Krona candy bar? \_\_\_\_\_ (Q33; Open-ended response)

**These results are similar to the results outlined for the 6<sup>th</sup> grade unmatched sample and have similar implications.**

Examples of test-items on which program students made less gains than comparison students are listed below (**See Appendix C for a complete list**):

- A country's culture is its attitudes, traditions, beliefs, and values.(Q9e; True or False)
- A company manufacturer from the U.S. opens a plant in Mexico and sends a manufacturing specialist to work in Mexico for a period of time. The specialist takes her family to live and work in Mexico City for this period of time. This situation is an example of \_\_\_\_? (Q17; Multiple response)
- What is that currency called? (Q24b; Multiple response)
- You are invited to speak at the United Automobile Workers' union hall in Flint, Michigan about what you have learned about trade from your Junior Achievement course. You arrive driving a foreign import. The union members see you get out of your car and begin to yell at you. They are upset because: (Q34; Multiple response)

**Overall, the results of the item analysis of matched pairs further reinforced the statistical findings and confirmed the significant impact the *JA Global Marketplace* program has on student learning. Moreover, all the results presented in this report revealed that program students significantly outperformed comparison students on their knowledge of key terms and concepts related to the global economy and how it works.**

## IV. Student Satisfaction

Program outcomes are also dependent upon student satisfaction with the program. At the time of the post-test JA Global Marketplace students were asked to provide their feedback about what they liked most and least; their perceptions of various aspects of the lessons; and their attitudes about business and education. The sample for the student satisfaction portion of the post-test was not limited to those students with a matching pre-test. As a result, the sample size ranged from 667 to 683.

### What Students Liked Most and Least

**Table I I** shows that working in groups and class activities were the most favored program activities, as indicated by approximately two-thirds of the students.

**Table I I**  
**What Students Liked Most**  
(n-670)

Program Activities	Percent Response
Working in groups	38%
Class activities	31
Class discussions	14
Student workbook activities	9
International resources CD-Rom	5
Other	3

As reflected in **Table I 2**, students liked the student workbook activities the least, followed by class discussions.

**Table I 2**  
**What Students Liked Least**  
(n-674)

Program Components	Percent Response
Student workbook activities	52%
Class discussions	23
International resources CD-Rom	9
Working in groups	7
Other	6
Class activities	4

## Perceptions of the Lessons

Student perceptions of various aspects of the program lessons provided valuable feedback on the delivery of the program. As shown in **Tables 13** and **14**, the majority of the students considered the lesson length (58%) and difficulty level (66%) to be “just right.” Whereas, one-fifth to one-quarter of the students found the lessons to be “too long” and “too hard,” less than one-fifth found the lessons to be “too short” or “too easy.”

**Table 13**  
**Student Perceptions of Lesson Length**

(n=676)

Length	Percent Response
Just right	58%
Too long	27
Too short	15

**Table 14**  
**Student Perceptions of Lesson Difficulty**

(n=681)

Difficulty Level	Percent Response
Just right	66%
Too hard	20
Too easy	13

As shown in **Table 15**, 76 percent of the students “strongly agreed” or “agreed” with the statement, “I liked the activity materials.” Similarly, 78 percent of the students “strongly agreed” or “agreed” that the volunteer facilitated the overall program in an interesting way. Student endorsement of the volunteers’ capabilities also seemed to make students feel comfortable enough to ask questions throughout the program.

**Table 15**  
**Student Perceptions of the Volunteer and Comfort Level**

Statements	N	Strongly Agree	Agree	Disagree	Strongly Disagree
The volunteer presented the program in an interesting way	667	29	51	14	6
I felt comfortable asking questions during the activities	677	27	52	15	6
I liked the activity materials	679	28	49	17	6

## Attitudes about Business and Education

JA programs have a dual purpose: 1) to teach the principals of economics; and, 2) to reinforce the value of education. **Table 16** presents the distribution of student agreement and disagreement with various statements concerning the value of global trade, business, and education.

Almost all of the students “strongly agreed” or “agreed” that to learn about global trade is important. Eighty-six percent indicated that the program helped them understand how global trade works. On the other hand, less than 50 percent of students agreed that the program either increased their interest in business or their interest in pursuing a career in business.

With respect to the value of education, the program helped students realize the importance of staying in school (63%), but did not have as strong an influence on how much students liked school (see **Table 16**). Despite students’ lack of fondness for school, 56 percent conceded that the program had improved their critical thinking skills.

**Table 16**  
**Student Attitudes about Business and Education**

(Percent responses)

Statements	N	Strongly Agree	Agree	Disagree	Strongly Disagree
It is important to learn about global trade	683	26%	66%	6%	2%
The program helped me to understand how businesses operate around the world	675	25	63	9	3
The program increased my interest in a career in business	671	17	32	38	13
The program increased my interest in business	676	13	36	38	13
The program made me realize that it is important to stay in school	672	24	44	22	10
The program improved my critical thinking skills	667	14	45	35	7
The program made me like school more	673	6	18	41	36

## Overall Program Perceptions

On the whole, the program was successful. Over 65 percent of students learned a lot and expressed confidence talking about what they had learned (see **Table 17**).

**Table 17**  
**Student Attitudes about the Program Overall**

Statements	N	Strongly Agree	Agree	Disagree	Strongly Disagree
I learned a lot in this program	672	23	50	22	5
I feel confident talking about what I learned in this program	671	12	48	33	8

## **V. Conclusions**

Overall, the findings indicate that the *JA Global Marketplace* program has a positive impact on student learning of international business concepts and practices at the 6<sup>th</sup> grade level.

- Program students outperformed comparison students by over two points on average on a pre- and post-subject-specific test.
- The relative magnitude of the difference between program and comparison students' scores was .37 for the sample of unmatched 6<sup>th</sup> graders and .50 when the program and comparison students were matched on selected demographic variables.
- An item analysis of the test questions demonstrated that *JA Global Marketplace* students learned curriculum specific economic terms and concepts across different content areas.

With respect to program satisfaction, the majority of students reported that they learned a lot and were confident about talking about what they had learned. Working in groups and class activities were the most favored activities and workbook activities and class discussions were liked the least. Other findings with respect to program activities, lessons, and attitudes about business and economics were the following:

- The majority of the students considered the lesson length and difficulty to be “just right.”
- Over 70 percent of the students found that the volunteer presented the material in an interesting way and they were comfortable asking questions during the lessons.
- Over three-quarters of the students indicated that the program helped them understand how global trade works, but less than half agreed that the program either increased their interest in business or a career in business.
- The program helped students realize the importance of staying in school, but did not have as strong an influence on how much students liked school.

In conclusion, the *JA Global Marketplace* program is effective at teaching 6<sup>th</sup> grade students the fundamental concepts and practices of international business. Middle grades students in the 6<sup>th</sup> grade participating in this program are more likely to achieve a greater understanding of economic principles than those students who do not have JA in their classroom.

# **APPENDIX A**



9. What is trade?

- <sub>a</sub> A fair exchange between two people
- <sub>b</sub> An exchange of goods or services
- <sub>c</sub> A sale of goods from one country to another
- <sub>d</sub> A transfer of ownership between corporations

10. People trade most often as

- <sub>a</sub> Individuals
- <sub>b</sub> Employees of a business
- <sub>c</sub> Neither of the above
- <sub>d</sub> Both of the above

11. What are the benefits of imports?

- <sub>a</sub> They give more choices to consumers
- <sub>b</sub> They do not cost as much as domestic products
- <sub>c</sub> They can help lower the price of domestic products
- <sub>d</sub> All of the above

12. Why do governments use trade barriers?

- <sub>a</sub> To control trade
- <sub>b</sub> To increase benefits for their own countries
- <sub>c</sub> To keep people from immigrating
- <sub>d</sub> A and B
- <sub>e</sub> None of the above

13. Factory owners in the 18<sup>th</sup> and 19<sup>th</sup> centuries wanted to place trade barriers, mainly tariffs, on foreign goods coming into the United States. What were they trying to do with these trade barriers?

- <sub>a</sub> Increase international trade between the United States and Europe
- <sub>b</sub> Develop a stronger United States military
- <sub>c</sub> Increase westward expansion
- <sub>d</sub> Help the growth and development of American industries

14. Which of the following is **not** a goal of the North American Free Trade Agreement (NAFTA)?

- <sub>a</sub> Encourage fair competition in free trade
- <sub>b</sub> Increase investment opportunities in the three countries that participate
- <sub>c</sub> Manage interest rates on goods that are traded between nations
- <sub>d</sub> Create procedures to help each country settle disagreements

15. In which of the following documents can you find the basic laws of international trade followed by the World Trade Organization (WTO)?

- <sub>a</sub> The World Trade Organization (WTO) bylaws
- <sub>b</sub> The General Agreement on Tariffs and Trade (GATT)
- <sub>c</sub> The Constitution
- <sub>d</sub> The North American Free Trade Agreement (NAFTA)

16. Based on the concepts of supply and demand, what happens to the price of an imported product if the importing country places a quota on that product?

- <sub>a</sub> The price decreases
- <sub>b</sub> The price increases
- <sub>c</sub> The price stays the same
- <sub>d</sub> The product is not available

17. A computer manufacturer from the U.S. opens a plant in Mexico and sends a manufacturing specialist to work in Mexico for a period of time. The specialist takes her family to live and work in Mexico City for this period of time. This situation is an example of:

- <sub>a</sub> Emigration
- <sub>b</sub> Immigration
- <sub>c</sub> Global trade of human resources
- <sub>d</sub> Free trade

18. You have been sent by a fast food company to open a franchise in India. Before leaving, you did research on Indian culture and discovered that in many parts of India people do not eat beef for religious reasons. When you talk about the opening of the franchise with Indian officials you should.

- <sub>a</sub> Tell them that hamburgers are very tasty and if the people will give beef a chance, they will give up their religious beliefs about beef.
- <sub>b</sub> Tell them that if the people will not eat beef, there is no need to even bother opening a fast food franchise in India.
- <sub>c</sub> Tell them that the fast food company is aware of Indian cultural and religious beliefs and will make hamburgers for the Indian market that have a beef substitute.

19. Which of the following is an example of a human resource?

- <sub>a</sub> Production
- <sub>b</sub> Labor
- <sub>c</sub> Management
- <sub>d</sub> A and B
- <sub>e</sub> B and C
- <sub>f</sub> None of the above

20. During the Age of Exploration Europeans acquired

- <sub>a</sub> Natural resources from North and South America
- <sub>b</sub> Capital resources from Africa
- <sub>c</sub> Natural resources from Europe
- <sub>d</sub> Human resources from Asia

21. Who invented moveable type in 1455?

- <sub>a</sub> Benjamin Franklin
- <sub>b</sub> Johann Gutenberg
- <sub>c</sub> Thomas Edison
- <sub>d</sub> Christopher Latham Sholes

22. Modern types of communication such as the internet, fax machines, and cell phones make it possible to share ideas and information between nations more quickly. How do improvements in communication effect international trade?

- <sub>a</sub> Trade increases
- <sub>b</sub> Trade decreases
- <sub>c</sub> Trade stays the same
- <sub>d</sub> None of the above

23. Explain how the printing press and the internet both had an influence on international trade.

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24a. The Constitution of the United States of America requires a common currency that is recognized and is given “full faith and credit” throughout the entire nation. What world region has recently adopted a common currency?

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24b. What is that currency called?

- <sub>a</sub> Rupee
- <sub>b</sub> Yuan
- <sub>c</sub> Euro
- <sub>d</sub> Dollar

25. What was the reason for adopting a common currency when the United States of America was founded and for adopting a common currency in our region of the world today?

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26. Draw lines to match each type of trade barrier with the correct definition.

- |             |  |
|-------------|--|
| a. Quota    | 1. A government action that lowers an industry’s production costs, which also lowers the price of its good(s). |
| b. Tariff   | 2. A requirement that stops or restricts the sale of any product that does not meet certain specifications.    |
| c. Subsidy  | 3. A tax on goods imported into a country.   |
| d. Embargo  | 4. A ban on trade with another country for a single good or all goods.   |
| e. Standard | 5. A control on the amount of a product that can be imported into a country                                    |

27. Use the words below to complete each sentence.

Global

Emigrate

Exports

Imports

Immigrate

- a. \_\_\_\_\_ are goods or services sold to another country.
- b. \_\_\_\_\_ are goods or services bought from another country.
- c. \_\_\_\_\_ means to permanently leave one country for another.
- d. \_\_\_\_\_ means to permanently enter a new country from another.
- e. \_\_\_\_\_ organizations have offices and operations in various countries around the world.

28. Why do countries trade with one another?

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29. Which three countries participate in the North American Free Trade Agreement (NAFTA)?

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30. What is the role of the World Trade Organization (WTO)?

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31. What type of barrier between nations can slow or stop communication and trade?

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32. According to the U.S. Bureau of Labor Statistics, productivity is defined as real output per worker hour, or:  
Productivity = Output ÷ Worker Hour. Using this formula, answer the following question: If a toy maker takes 7 hours to make 21 toys, what is the toy maker's productivity? \_\_\_\_\_ toys per hour.

33. If the currency exchange rate from the Swedish Krona to the American Dollar is 8 to 1, how many dollars would it take to buy a 16 Krona candy bar? \_\_\_\_\_
34. You are invited to speak at the United Automobile Workers' union hall in Flint, Michigan about what you have learned about trade from your Junior Achievement course. You arrive driving a foreign import. The union members see you get out of your car and begin to yell at you. They are upset because:
- <sub>a</sub> They assume you are wealthy because you are driving a foreign car, and the union members do not like wealthy people.
  - <sub>b</sub> Their investments in American automobile companies have gone down in value.
  - <sub>c</sub> You are driving a foreign car and they do not like foreign products.
  - <sub>d</sub> They believe that foreign cars have cost many employees in the American car industry their jobs due to a lower demand for American cars.

Student Name \_\_\_\_\_

School Name \_\_\_\_\_

### JA Global Marketplace Student Satisfaction Survey

To help JA improve this program, please take a few minutes to answer the questions below. Thank you for your help!

1. What did you like **MOST** about this program? *(Please check only one)*
  - <sub>1</sub> Student Workbook activities      <sub>2</sub> Class activities      <sub>3</sub> International Resources CD-ROM
  - <sub>4</sub> Class discussions      <sub>5</sub> Working in groups      <sub>6</sub> Other *(Please specify)*: \_\_\_\_\_
2. What did you like **LEAST** about this program? *(Please check only one)*
  - <sub>1</sub> Student Workbook activities      <sub>2</sub> Class activities      <sub>3</sub> International Resources CD-ROM
  - <sub>4</sub> Class discussions      <sub>5</sub> Working in groups      <sub>6</sub> Other *(Please specify)*: \_\_\_\_\_
3. What did you think about the length of the lessons?
  - <sub>1</sub> Too long      <sub>2</sub> Too short      <sub>3</sub> Just right
4. What did you think about the information in the lessons?
  - <sub>1</sub> Too easy      <sub>2</sub> Too hard      <sub>3</sub> Just right

Please use a check (✓) to indicate how much you agree with each statement below.

Statement	Strongly Agree 1	Agree 2	Disagree 3	Strongly Disagree 4
9. It is important to learn about global trade.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. The program helped me to understand how businesses operate around the world.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. The program improved my critical thinking skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I learned a lot in this program.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I feel confident talking about what I learned in this program.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. The program increased my interest in business.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. The program increased my interest in <b>a career</b> in business.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. The program made me like school more.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. The program made me realize that it is important to stay in school.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. The volunteer presented the program in an interesting way.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I felt comfortable asking questions during the activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I liked the activity materials.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## **Appendix B**

**Table A**  
**Item-by-Item Analysis of Correct Responses on the Subject-Specific Knowledge Test**  
**6<sup>th</sup> Grade Sample**

Question Number	Group	Pre – Percentage Correct	Post- Percentage Correct	Percentage Point Increase	Program Percentage Gain/Loss
Q9a	Program	9	23	14	14
	Comparison	12	12	0	
Q9b	Program	71	71	0	-10
	Comparison	63	73	10	
Q9c	Program	53	77	24	19
	Comparison	59	64	5	
Q9d	Program	48	60	12	7
	Comparison	41	46	5	
Q9e	Program	78	78	0	3
	Comparison	76	73	-3	
Q9f	Program	66	72	6	6
	Comparison	59	59	0	
Q9g	Program	23	29	6	-3
	Comparison	14	23	9	
Q9h	Program	21	29	8	7
	Comparison	21	22	1	
Q9i	Program	50	74	24	13
	Comparison	60	71	11	
Q9	Program	45	64	19	31
	Comparison	49	37	-12	
Q10	Program	56	51	5	7
	Comparison	49	47	-2	
Q11	Program	56	49	-7	-10
	Comparison	50	53	3	
Q12	Program	45	38	-7	-2
	Comparison	37	32	-5	
Q13	Program	41	43	2	9
	Comparison	33	26	-7	
Q14	Program	18	26	8	3
	Comparison	23	28	5	
Q15	Program	14	15	1	0
	Comparison	12	13	1	
Q16	Program	51	53	2	2
	Comparison	46	46	0	

Question Number	Group	Pre – Percentage Correct	Post- Percentage Correct	Percentage Point Increase	Program Percentage Gain/Loss
Q17	Program	30	20	-10	-15
	Comparison	21	26	5	
Q18	Program	59	62	3	-2
	Comparison	54	59	5	
Q19	Program	28	23	-5	-3
	Comparison	24	22	-2	
Q20	Program	47	41	-6	-16
	Comparison	40	50	10	
Q21	Program	34	47	13	3
	Comparison	39	49	10	
Q22	Program	62	60	-2	-2
	Comparison	53	53	0	
Q23	Program	10	16	6	-2
	Comparison	5	13	8	
Q24a	Program	20	28	8	2
	Comparison	33	39	6	
Q24b	Program	33	39	6	1
	Comparison	45	49	5	
Q25	Program	3	8	5	4
	Comparison	3	4	1	
Q26a	Program	8	13	5	8
	Comparison	22	9	13	
Q26b	Program	10	10	0	7
	Comparison	10	3	-7	
Q26c	Program	12	10	-2	-9
	Comparison	6	13	7	
Q26d	Program	15	28	13	12
	Comparison	13	14	1	
Q26e	Program	15	14	-1	4
	Comparison	26	21	-5	
Q27a	Program	56	72	16	16
	Comparison	51	51	0	
Q27b	Program	58	71	13	9
	Comparison	46	50	4	
Q27c	Program	39	55	16	5
	Comparison	41	50	9	
Q27d	Program	40	56	16	9
	Comparison	46	53	7	
Q27e	Program	75	81	6	13

Question Number	Group	Pre – Percentage Correct	Post- Percentage Correct	Percentage Point Increase	Program Percentage Gain/Loss
	Comparison	83	76	-7	
Q28	Program	20	24	4	3
	Comparison	18	19	1	
Q29	Program	18	34	16	13
	Comparison	5	8	3	
Q30	Program	0	6	6	6
	Comparison	0	0	0	
Q31	Program	0	1	1	1
	Comparison	0	0	0	
Q32	Program	70	73	3	6
	Comparison	71	68	-3	
Q33	Program	48	52	4	9
	Comparison	44	39	-5	
Q34	Program	46	40	-6	-10
	Comparison	36	40	4	

**Table B**  
**Item-by-Item Analysis of Correct Responses on the Subject-Specific Knowledge Test**  
**6<sup>th</sup> Grade Matched Pairs Sample**

Question Number	Group	Pre – Percentage Correct	Post- Percentage Correct	Percentage Point Increase	Program Percentage Gain/Loss
Q9a	Program	8	22	16	15
	Comparison	10	11	1	
Q9b	Program	73	70	-3	-15
	Comparison	62	74	12	
Q9c	Program	43	76	33	26
	Comparison	57	64	7	
Q9d	Program	45	54	9	5
	Comparison	43	47	4	
Q9e	Program	74	70	-4	-2
	Comparison	76	74	-2	
Q9f	Program	58	64	6	3
	Comparison	58	61	3	
Q9g	Program	26	27	1	-7
	Comparison	15	23	8	
Q9h	Program	19	27	8	6
	Comparison	20	22	2	
Q9i	Program	46	68	22	13
	Comparison	60	69	9	
Q9	Program	31	65	34	44
	Comparison	49	39	-10	
Q10	Program	50	47	-3	0
	Comparison	50	47	-3	
Q11	Program	53	42	-11	-9
	Comparison	53	51	-2	
Q12	Program	41	32	-9	-3
	Comparison	38	32	-6	
Q13	Program	38	45	7	12
	Comparison	32	27	-5	
Q14	Program	11	30	19	13
	Comparison	22	28	6	
Q15	Program	12	15	3	0
	Comparison	11	14	3	
Q16	Program	47	51	4	6
	Comparison	47	45	-2	

Question Number	Group	Pre – Percentage Correct	Post- Percentage Correct	Percentage Point Increase	Program Percentage Gain/Loss
Q17	Program	24	20	-4	-8
	Comparison	20	24	4	
Q18	Program	54	61	7	1
	Comparison	54	60	6	
Q19	Program	26	19	-7	-1
	Comparison	26	20	-6	
Q20	Program	49	32	-17	-28
	Comparison	38	49	11	
Q21	Program	34	50	16	5
	Comparison	38	47	9	
Q22	Program	57	61	4	4
	Comparison	54	54	0	
Q23	Program	10	18	8	2
	Comparison	5	11	6	
Q24a	Program	19	31	12	5
	Comparison	32	39	7	
Q24b	Program	30	45	5	-2
	Comparison	43	50	7	
Q25	Program	1	4	3	2
	Comparison	3	4	1	
Q26a	Program	12	18	6	14
	Comparison	22	10	-8	
Q26b	Program	15	8	-7	0
	Comparison	10	3	-7	
Q26c	Program	12	12	0	-5
	Comparison	7	12	5	
Q26d	Program	14	32	18	17
	Comparison	14	15	1	
Q26e	Program	19	16	-3	2
	Comparison	27	22	-5	
Q27a	Program	54	70	16	16
	Comparison	53	53	0	
Q27b	Program	52	72	20	17
	Comparison	47	50	3	
Q27c	Program	35	57	22	14
	Comparison	43	51	8	
Q27d	Program	35	55	20	12
	Comparison	47	55	8	
Q27e	Program	68	82	14	20

Question Number	Group	Pre – Percentage Correct	Post- Percentage Correct	Percentage Point Increase	Program Percentage Gain/Loss
	Comparison	82	76	-6	
Q28	Program	10	23	13	13
	Comparison	19	19	0	
Q29	Program	11	27	16	13
	Comparison	5	8	3	
Q30	Program	0	3	3	3
	Comparison	0	0	0	
Q31	Program	1	1	0	0
	Comparison	0	0	0	
Q32	Program	66	62	-4	-3
	Comparison	70	69	-1	
Q33	Program	42	43	1	5
	Comparison	43	39	-4	
Q34	Program	42	38	-4	-3
	Comparison	38	39	1	

## **Appendix C**

**6<sup>th</sup> Grade Sample**  
**List of Post-Test Items on which Program Students**  
**Made Greater Gains than Comparison Students**

- Two kinds of trade are domestic trade and inter-domestic trade. (Q9a; True or False)
- A trade barrier can slow or stop trade between countries. (Q9c; True or False)
- A multilateral trade agreement involves more than two countries. (Q9d; True or False)
- A country's culture is its attitudes, traditions, beliefs, and values. (Q9e; True or False)
- Organizations around the world have the same business practices. (Q9f; True or False)
- An entrepreneur is a person who works at a company, business, or organization. (Q9h; True or False)
- Currency is the money in common use in any country. (Q9i; True or False)
- What is trade? (Q9; Multiple response)
- People trade most often as...? (Q10; Multiple response)
- Factory owners in the 18<sup>th</sup> and 19<sup>th</sup> centuries wanted to place trade barriers, mainly tariffs, on foreign goods coming into the United States. What were they trying to do with these trade barriers? (Q13; Multiple response)
- Which of the following is **not** a goal of the North American Free Trade Agreement (NAFTA)? (Q14; Multiple response)
- Based on the concepts of supply and demand, what happens to the price of an imported product if the importing country places a quota on that product? (Q16; Multiple response)
- Who invented moveable type in 1455? (Q21; Multiple response)
- The Constitution of the United States of America requires a common currency that is recognized and is given "full faith and credit" throughout the entire nation. What world region has recently adopted a common currency? (Q24a; Open-ended response)
- What is that currency called? (Q24b; Multiple response)
- What was the reason for adopting a common currency when the United States of America was founded and for adopting a common currency in our region of the world today? (Q25; Open-ended response)
- Quota – what is the correct definition? (Q26a; Matching)
- Tariff – what is the correct definition? (Q26b; Matching)
- Embargo – what is the correct definition? (Q26d; Matching)
- Standard – what is the correct definition? (Q26e; Matching)
- \_\_\_\_\_ are goods or services sold to another country. (Q27a; Fill in the blank)
- \_\_\_\_\_ are goods or services bought from another country. (Q27b; Fill in the blank)
- \_\_\_\_\_ means to permanently leave one country for another. (Q27c; Fill in the blank)
- \_\_\_\_\_ means to permanently enter a new country from another. (Q27d; Fill in the blank)
- \_\_\_\_\_ organizations have offices and operations in various countries around the world. (Q27e; Fill in the blank)
- Why do countries trade with one another? (Q28; Open-ended)
- Which three countries participate in the North American Free Trade Agreement (NAFTA)? (Q29; Open-ended response)
- What is the role of the World Trade Organization (WTO)? (Q30; Open-ended response)
- What type of barrier between nations can slow or stop communication and trade? (Q31; Open-ended)

- According to the U.S. Bureau of Labor Statistics, productivity is defined as real output per worker hour, or:  
Productivity = Output ÷ Worker Hour. Using this formula, answer the following question: If a toy maker takes 7 hours to make 21 toys, what is the toy maker's productivity? \_\_\_\_\_  
\_\_\_\_\_ toys per hour. (Q32; Open-ended)
- If the currency exchange rate from the Swedish Krona to the American Dollar is 8 to 1, how many dollars would it take to buy a 16 Krona candy bar? \_\_\_\_\_ (Q33; Open-ended response)

**6<sup>th</sup> Grade Sample**  
**List of Post-Test Items on which Program Students**  
**Made Less Gains than Comparison Students**

- An item that is imported from another country can also be exported to other countries (Q9b; True or False)
- A franchise is a license to buy a company's product. (Q9g; True or False)
- What are the benefits of imports? (Q11; Multiple response)
- Why do governments use trade barriers? (Q12; Multiple response)
- A company manufacturer from the U.S. opens a plant in Mexico and sends a manufacturing specialist to work in Mexico for a period of time. The specialist takes her family to live and work in Mexico City for this period of time. This situation is an example of \_\_\_\_? (Q17; Multiple response)
- You have been sent by a fast food company to open a franchise in India. Before leaving, you did research on Indian culture and discovered that in many parts of India people do not eat beef for religious reasons. When you talk about the opening of the franchise with Indian officials you should. (Q18; Multiple response)
- Which of the following is an example of a human resource? (Q19; Multiple response)
- During the Age of Exploration Europeans acquired...? (Q20; Multiple response)
- Modern types of communication such as the internet, fax machines, and cell phones make it possible to share ideas and information between nations more quickly. How do improvements in communication effect international trade? (Q22; Multiple response)
- Explain how the printing press and the internet both had an influence on international trade. (Q23; Open-ended response)
- Subsidy - what is the correct definition? (Q26c; Matching)
- You are invited to speak at the United Automobile Workers' union hall in Flint, Michigan about what you have learned about trade from your Junior Achievement course. You arrive driving a foreign import. The union members see you get out of your car and begin to yell at you. They are upset because: (Q34; Multiple response)

**6<sup>th</sup> Grade Matched Pairs Sample**  
**List of Pre- and Post-Test Items on which Program Students**  
**Made Greater Gains than Comparison Students**

- Two kinds of trade are domestic trade and inter-domestic trade.(Q9a; True or False)
- A trade barrier can slow or stop trade between countries. (Q9c; True or False)
- A multilateral trade agreement involves more than two countries. (Q9d; True or False)
- Organizations around the world have the same business practices. (Q9f; True or False)
- An entrepreneur is a person who works at a company, business, or organization. (Q9h; True or False)
- Currency is the money in common use in any country. (Q9i; True or False)
- What is trade? (Q9; Multiple response)
- Factory owners in the 18<sup>th</sup> and 19<sup>th</sup> centuries wanted to place trade barriers, mainly tariffs, on foreign goods coming into the United States. What were they trying to do with these trade barriers? (Q13; Multiple response)
- Which of the following is **not** a goal of the North American Free Trade Agreement (NAFTA)? (Q14; Multiple response)
- Based on the concepts of supply and demand, what happens to the price of an imported product if the importing country places a quota on that product? (Q16; Multiple response)
- You have been sent by a fast food company to open a franchise in India. Before leaving, you did research on Indian culture and discovered that in many parts of India people do not eat beef for religious reasons. When you talk about the opening of the franchise with Indian officials you should. (Q18; Multiple response)
- Who invented moveable type in 1455? (Q21; Multiple response)
- Modern types of communication such as the internet, fax machines, and cell phones make it possible to share ideas and information between nations more quickly. How do improvements in communication effect international trade? (Q22; Multiple response)
- Explain how the printing press and the internet both had an influence on international trade.(Q23; Open-ended response)
- The Constitution of the United States of America requires a common currency that is recognized and is given “full faith and credit” throughout the entire nation. What world region has recently adopted a common currency? (Q24a; Open-ended response)
- What was the reason for adopting a common currency when the United States of America was founded and for adopting a common currency in our region of the world today? (Q25; Open-ended response)
- Quota – what is the correct definition? (Q26a; Matching)
- Embargo – what is the correct definition? (Q26d; Matching)
- Standard – what is the correct definition? (Q26e; Matching)
- \_\_\_\_\_are goods or services sold to another country. (Q27a; Fill in the blank)
- \_\_\_\_\_are goods or services bought from another country. (Q27b; Fill in the blank)
- \_\_\_\_\_means to permanently leave one country for another. (Q27c; Fill in the blank)
- \_\_\_\_\_means to permanently enter a new country from another. (Q27d; Fill in the blank)
- \_\_\_\_\_organizations have offices and operations in various countries around the world. (Q27e; Fill in the blank)
- Why do countries trade with one another? (Q28; Open-ended)

- Which three countries participate in the North American Free Trade Agreement (NAFTA)? (Q29; Open-ended response)
- What is the role of the World Trade Organization (WTO)? (Q30; Open-ended response)
- If the currency exchange rate from the Swedish Krona to the American Dollar is 8 to 1, how many dollars would it take to buy a 16 Krona candy bar? \_\_\_\_\_ (Q33; Open-ended response)

**6<sup>th</sup> Grade Matched Pairs Sample**  
**List of Pre- and Post-Test Items on which Program Students**  
**Made Less Gains than Comparison Students**

- An item that is imported from another country can also be exported to other countries (Q9b; True or False)
- A country's culture is its attitudes, traditions, beliefs, and values. (Q9e; True or False)
- A franchise is a license to buy a company's product. (Q9g; True or False)
- What are the benefits of imports? (Q11; Multiple response)
- Why do governments use trade barriers? (Q12; Multiple response)
- A company manufacturer from the U.S. opens a plant in Mexico and sends a manufacturing specialist to work in Mexico for a period of time. The specialist takes her family to live and work in Mexico City for this period of time. This situation is an example of \_\_\_\_? (Q17; Multiple response)
- Which of the following is an example of a human resource? (Q19; Multiple response)
- What is that currency called? (Q24b; Multiple response)
- Subsidy - what is the correct definition? (Q26c; Matching)
- According to the U.S. Bureau of Labor Statistics, productivity is defined as real output per worker hour, or  $\text{Productivity} = \text{Output} \div \text{Worker Hour}$ . Using this formula, answer the following question: If a toy maker takes 7 hours to make 21 toys, what is the toy maker's productivity? \_\_\_\_\_ toys per hour.
- You are invited to speak at the United Automobile Workers' union hall in Flint, Michigan about what you have learned about trade from your Junior Achievement course. You arrive driving a foreign import. The union members see you get out of your car and begin to yell at you. They are upset because: (Q34; Multiple response)