



**THE IMPACT ON STUDENTS
OF PARTICIPATION IN JA WORLDWIDE**

**SELECTED CUMULATIVE AND
LONGITUDINAL FINDINGS**

January 26, 2004

Prepared by:

**The Education Group
JA Worldwide Headquarters
One Education Way
Colorado Springs, Colorado 80906**

General Summary

The high stakes accountability movement in American education is causing stakeholders to look at JA Worldwide (JA) programs with a more critical eye than in the past. JA has a strong commitment to program evaluation to support program improvement and accountability to stakeholders.

Over the past ten years, numerous evaluation studies conducted by professional external evaluators have confirmed that JA programs are successful in raising students' aspirations, teaching free enterprise and entrepreneurial skills, providing a positive business role model, and teaching students to recognize and create opportunities to achieve their goals. An increasing body of evidence indicates that JA programs reach students of various ethnic backgrounds in innovative and unique ways, and carefully structured program activities and curricula help both male and female students to increase their positive attitudes, motivations, and behaviors.

In order to assess the cumulative effects and long-term impact of students' participation in JA programs, the Worldwide Institute for Research and Evaluation (WIRE), in collaboration with the JA Worldwide Education Group, has conducted a number of nationwide evaluation studies over the course of several years. By utilizing consistent methods and reporting practices, these studies provide credible evidence for the positive impact of JA programs.

Findings on the cumulative effects of the JA Elementary School Program reveal that participation in JA for multiple years during the elementary grades increased student learning and skill development – specifically, problem solving and decision making skills – in business, economics, and personal finance.

Assessment of the long-term impact of students' participation in JA showed that students participating during their middle school and high school years had a better understanding of free enterprise, were more likely to be employed, and were more likely to enroll in postsecondary education than were other same-age students. Results of these evaluation studies attest to the many positive effects for students who participated in JA during their K-12 years.

Table of Contents

1.0 Introduction 3

2.0 Cumulative Effects of the JA Elementary School Program..... 4

2.1 Objective Referenced Test (ORT) Results 5

2.2 Alternative Assessment Results..... 7

2.3 Summary..... 9

3.0 Long-term Impact of JA Worldwide Participation 9

3.1 Student Understanding of the Free Enterprise System 10

3.2 Educational Performance and Skills 13

3.3 Attitudes and Aspirations Regarding Education..... 15

3.4 Employment Attitudes, Participation, and Aspirations..... 17

4.0 Conclusion 19

4.1 Post-high School Findings..... 19

4.2 High School Findings 20

4.3 Middle School Findings 21

4.4 Elementary School Findings 22

1.0 Introduction

JA Worldwide (JA) is the world's largest non-profit organization dedicated to educating young people about business, economics, and personal finance. Through a network of dedicated volunteers, JA offers in-school and after-school programs for students in grades K-12. JA programs focus on seven key content areas: business, citizenship, economics, entrepreneurship, ethics/character, financial literacy, and career development. Today, nearly 150 JA offices in the United States reach more than four million students annually; through JA International, another two million students in more than 100 nations worldwide are served each year.

The cumulative effects of JA for students who participated in the JA Elementary School Program every year from second to fifth or sixth grade was evaluated during the 1997-1998 and 1998-1999 academic years. The long-term impact of JA on students who participated during middle school or high school was studied during the 2001-2002 and 2002-2003 academic years. This report summarizes findings related to the following questions from these nationwide evaluation studies:

- Is there a benefit to students who participate in JA during multiple years?
- Have JA students gained and retained an understanding of the free enterprise system?
- What do students perceive as the learning impact of participating in JA?
- What do students perceive as the impact of JA on their attitudes and decisions concerning education and work?
- How do the attitudes and decisions of students who have participated in JA compare to those of students in general?

Following this Introduction, the report contains three sections:

- Section 2 – Cumulative Effects of the JA Elementary School Program, presents findings related to the cumulative effects for students who have

participated in the JA Elementary Program during multiple years. Their learning performance is compared with students who participated in the JA program for the first time.

- Section 3 – Long-term Impact of JA Participation presents findings related to the long-term impact of students' participation in JA programs. The attitudes, beliefs, knowledge, and behaviors of JA students are compared with those of students in general. In addition, findings of JA students' perceptions of the impact of JA on their current and future lives are revealed.
- Section 4 – Conclusion presents a summary of findings by school level, including comparative and perceived long-term impact of the JA programs.

2.0 Cumulative Effects of the JA Elementary School Program

The cumulative effects of the JA Elementary School Program were evaluated by assessing the learning and skills of elementary students who had participated in JA during multiple years (longitudinal students). The performance of these JA students was assessed after their participation in JA during the fifth grade (1997-1998 study) or sixth grade (1998-1999 study). Their performance was compared to the performance of students from demographically similar schools who had participated in JA only during the fifth or sixth grade (first-year students). Performance for both the longitudinal students and the first-year students was also compared to students who had not ever participated in a JA program.

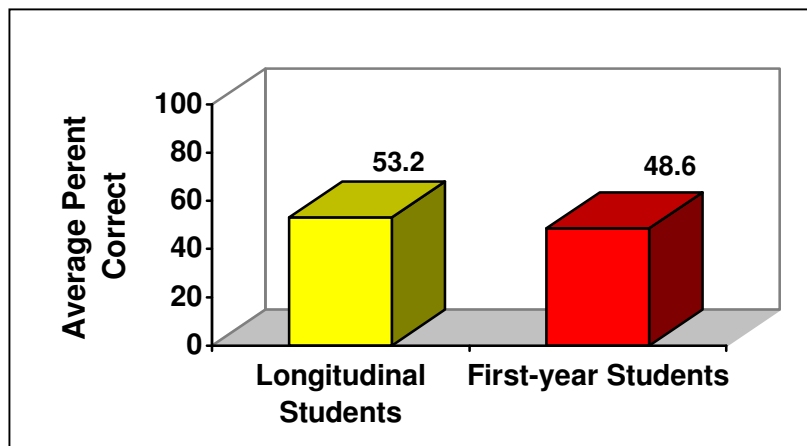
Both longitudinal students and first-year students were administered Objective Referenced Tests (ORTs) and alternative assessment exercises. ORTs assess students' knowledge of key concepts; alternative assessment exercises assess students' ability to apply these concepts. Alternative assessment is generally considered to be a better measure of critical thinking and practical understanding of concepts. However, alternative assessment is limited, as only a few concepts or skills can be incorporated into any one exercise. To fully assess student learning, both ORT and alternative assessment are required.

The 1997-1998 and 1998-1999 evaluation studies tested whether the sequential curriculum of the JA Elementary School Program did, in fact, have a cumulative impact on student learning and skills over time. In other words, did students who had participated in the sequence of JA programs throughout the elementary grades more fully understand concepts and develop more skills after participating in JA during the fifth or sixth grades, as compared to students who had not participated in JA in previous grades.

2.1 Objective Referenced Test (ORT) Results

In 1997-1998, the performance of fifth-grade students was assessed. After completing the JA fifth-grade program (*Our Nation*), both the longitudinal students and the first-year students performed significantly better than students who had not participated in the *Our Nation* program. Mean performances on the *Our Nation* ORT for both the longitudinal students and the first-year students are presented in Figure 1. The longitudinal students scored higher on the ORT than did the first-year students, suggesting that students who had previously participated in a JA program had foundational knowledge that allowed them to benefit more fully from the *Our Nation* curriculum.

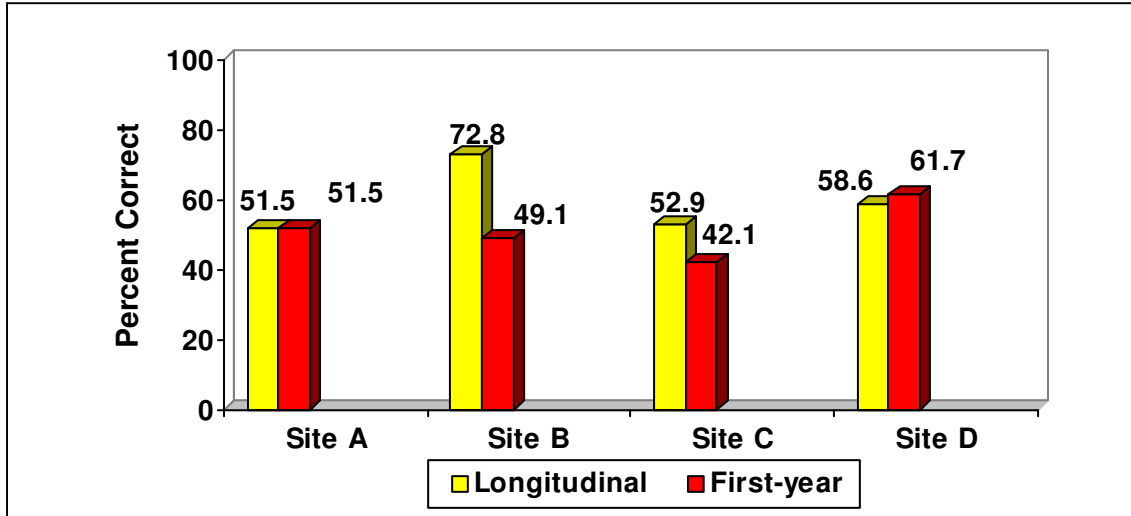
Figure 1. Mean Performance on the *Our Nation* ORT



Averaged over all the testing sites, the longitudinal students' ORT scores, although higher than the scores of the first-year students, were not statistically

significantly higher. Sites B and C did, however, showed statistically significant gains in learning when compared to the first-year students, as shown in Figure 2.

Figure 2. *Our Nation* ORT Performance—by Sites

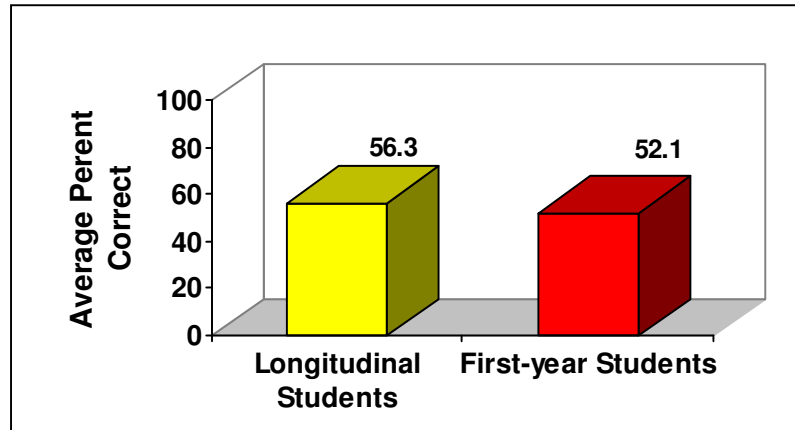


In 1998-1999, the performance of sixth-grade students was assessed. The design and findings of the 1998-1999 evaluation study were similar to the 1997-1998 study, which assessed fifth-grade students.

After completing the JA sixth-grade program (*Our World*), both the longitudinal students and the first-year students performed significantly better than students who had not participated in the *Our World* program.

Mean performances on the *Our World* ORT for both the longitudinal students and the first-year students are presented in Figure 3. The longitudinal students scored higher on the ORT than did the first-year students.

Both sixth grade groups achieved a higher percentage of correct ORT items than did the comparable fifth-grade groups, indicating that learning had taken place for all students between the fifth and the sixth grades. The longitudinal students, however, continued to outperform the first-year students.

Figure 3. Mean Performance on the *Our World* ORT

2.2 Alternative Assessment Results

Findings for the JA longitudinal students on the alternative assessments showed statistically significant improvements in application of concepts and critical thinking in both the 1997-1998 and 1998-1999 studies. Results of the alternative assessments in the 1997-1998 study can be seen in Figure 4. Longitudinal students demonstrated more learning than the first-year students did in two of the three alternative assessment exercises. The longitudinal students made statistically significant improvement in their critical thinking skills as applied to job interviewing (Exercise 1).

Fifth-grade students who had participated in JA for multiple years were better able to understand and utilize résumé and interpersonal information in making hiring decisions than were students who were participating in JA for the first time.

The 1998-1999 alternative assessments were designed to measure how well students were able to apply concepts about manufacturing and international exchange. The findings were similar to those from the 1997-1998 study. Results of the 1998-1999 alternative assessments can be seen in Figure 5.

Figure 4. *Our Nation* Alternative Assessment Results

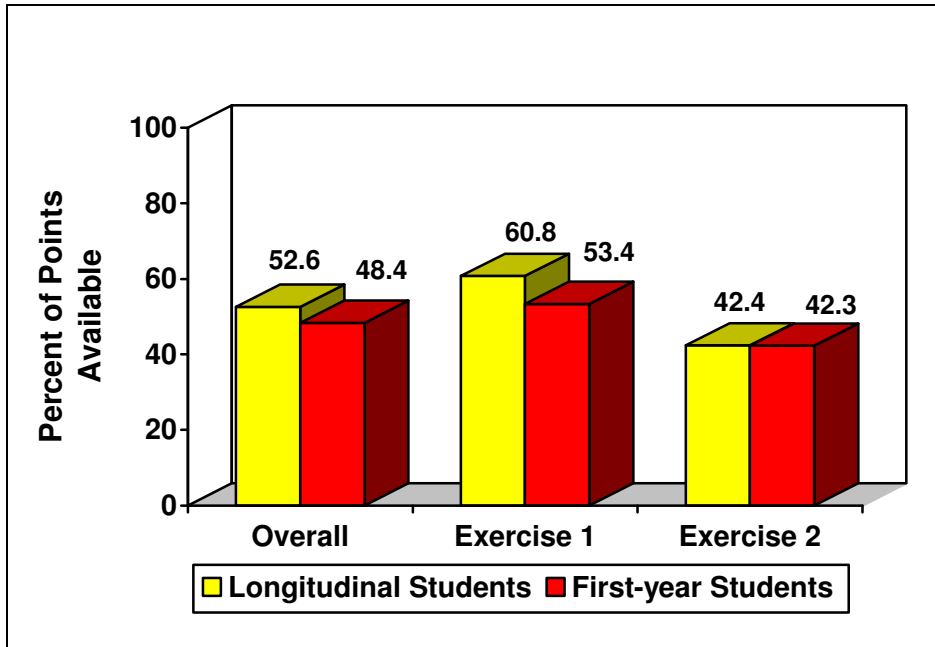
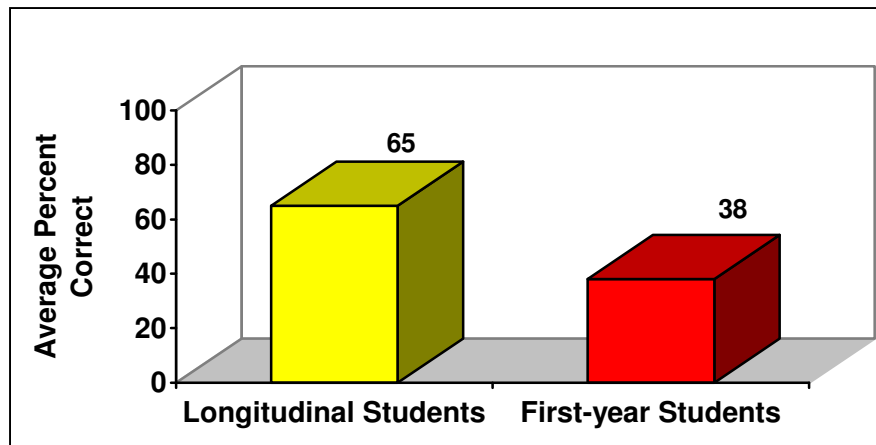


Figure 5. *Our World* Alternative Assessment Results



The *Our World* alternative assessment shows a large, statistically significant difference between the performance of the longitudinal and the first-year students, suggesting that participation in JA during multiple years significantly enhanced students' ability to apply their conceptual learning.

2.3 Summary

The ORT and alternative assessment findings from both 1997-1998 and 1998-1999, taken together, indicate that there is overall benefit for student learning from participation in the JA Elementary School Program over multiple years. That is, students who participated in JA in the second, third, and fourth grades achieved more of the objectives from the JA fifth grade and sixth grade programs than did fifth- or sixth-grade students who were participating in JA for the first time. The most important difference between these two groups was the greater ability of the JA students to apply the concepts presented in the JA programs.

3.0 Long-term Impact of JA Worldwide Participation

During the 2001-2002 and 2002-2003 academic years, WIRE, in collaboration with the JA Worldwide Education Group, conducted national longitudinal evaluations to assess the longer-term impact on students (at three different grade levels) of participation in JA. These studies surveyed approximately 750 students in order to:

1. Track the perceived influences of JA in students' lives as they transitioned from one school level to the next or into the work world.
2. To compare the knowledge, attitudes, and decisions of these JA students with same-age students who had not participated in JA.
3. To compare JA students to students in general.

The 2001-2002 study tracked these 750 students when they were in the 6th, 9th, and 12th grades. They had participated in JA during the 5th, 8th, and 11th grades, and many had participated in JA programs in previous grades as well.

Information was collected from these students on:

- The extent to which they continued to participate in JA.
- Economic knowledge and learning.
- Attitudes and decisions concerning education.
- Attitudes and decisions concerning work .

The 2002-2003 study tracked the progress of these same 750 students when they were in the 7th and 10th grades and first year post high school. At this time they had all completed JA programs two years previously (with some having completed additional programs during the interim). Information was collected from these students on:

- Activities and behaviors associated with education/school.
- Activities and behaviors associated with work and life in general.
- Aspirations for the future.
- Understanding of the free enterprise system.
- Perceived impact of JA.

The 2002-2003 longitudinal study compared the JA longitudinal students to students in general, as represented by data in a national survey conducted by the National Center for Educational Statistics (NCES), U.S. Department of Education.

3.1 Student Understanding of the Free Enterprise System

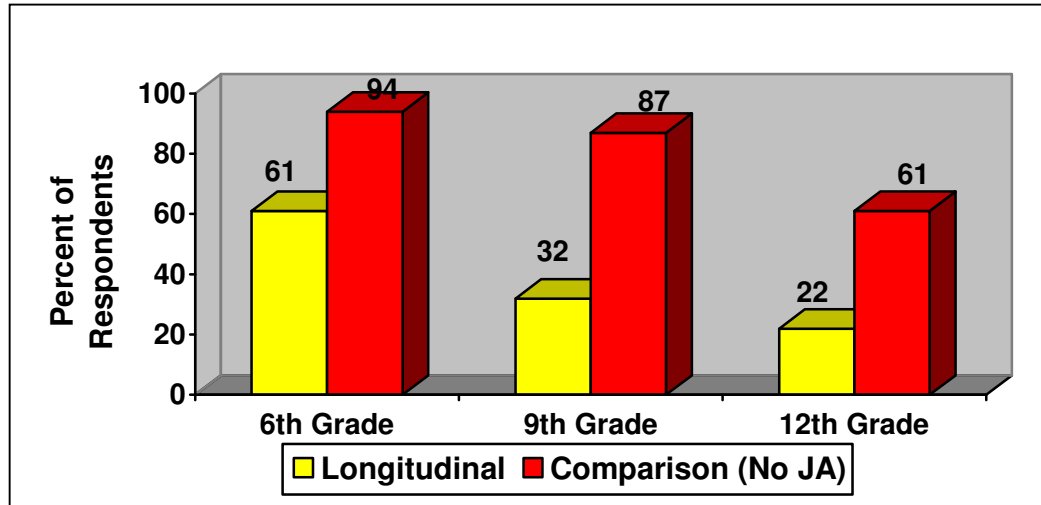
In both the 2001-2002 and 2002-2003 studies, the JA longitudinal students provided more accurate definitions of the free enterprise system than did the comparison group. This finding indicates that even a year or two after participation in JA, students could recall critical information related to the free enterprise system.

The level of the longitudinal students' understanding was statistically significantly better than students who had never participated in JA, suggesting that JA had an impact on the learning and retention of general economic concepts.

As shown in Figure 6, the percent of students providing incorrect definitions of free enterprise decreased at a statistically significant rate among the longitudinal sample, suggesting that JA, and not age alone, contributed to the observed age-related differences. These findings suggest that (1) participation in JA created an enduring understanding of several key economic concepts, and (2) this

understanding was broader and more sophisticated than that of students who did not participate in JA.

Figure 6. Students Providing Incorrect Definitions of Free Enterprise

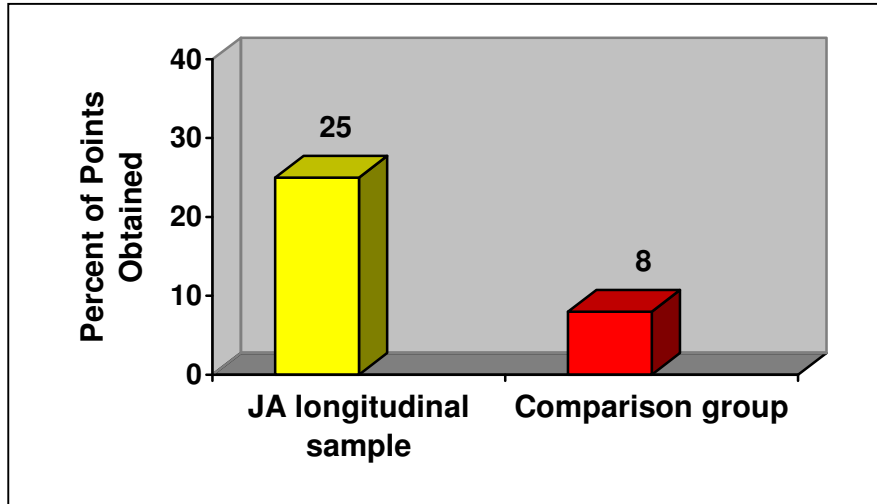


In the 2002-2003 study, the performance of JA longitudinal seventh-grade students in describing the free enterprise system was compared to the performance of a convenience sample. The results of this assessment are presented in Figure 7.

The JA longitudinal students scored statistically significantly higher than the comparison group. The difference between the performance of these two student groups shows a strong learning impact from JA participation.

In addition, this finding suggests that participating in JA significantly contributed to students' knowledge of the free enterprise system and that this knowledge remained strong even as students transitioned from elementary to middle school.

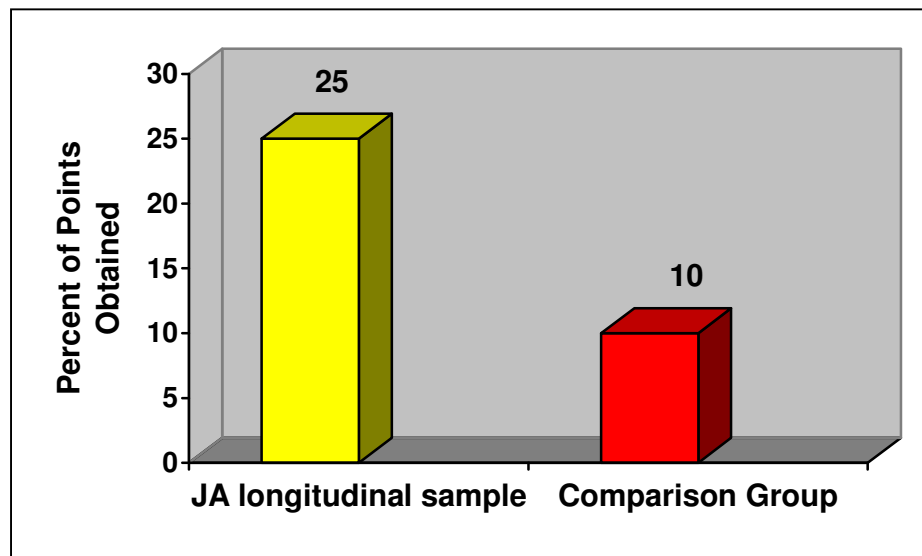
Figure 7. Seventh-grade Student Performance on Description of Free Enterprise



On a similar task, tenth-grade JA longitudinal students also significantly outperformed the comparison group. The results of this assessment are presented in Figure 8.

The difference in scores was significant and educationally meaningful. This finding suggests that students' knowledge of the free enterprise system remained strong several years after participation in JA.

Figure 8. Tenth-grade Student Performance on Description of Free Enterprise



3.2 Educational Performance and Skills

The 2002-2003 study compared the JA longitudinal students to students in general on a number of school performance indicators, such as academic honors and computer skills.

The JA longitudinal students were more likely to receive academic honors, recognition for good grades, and special recognition for writing an essay or poem than same-age students in general (when compared with data from a 1994 national government survey). Comparisons of JA students to students in general in terms of awards and recognitions received are displayed in Figure 9.

When asked to rate their computer skills, students responded with the ratings illustrated in Figure 10. The JA longitudinal students were significantly more likely to rate their computer skills as high than were students in general (as represented by data from a 1997 national government survey).

More than one-quarter of the JA longitudinal sample rated their computer skills as excellent. In addition, the more JA experience the JA longitudinal students had, the higher they rated their computer skills. All students participating in JA more than three times rated their computer skills as good or excellent, whereas 80 percent of students with fewer than three JA experiences rated their computer skills as good or excellent.

Figure 9. Percent of Students Receiving Various Awards and Recognitions During Their Sophomore Year

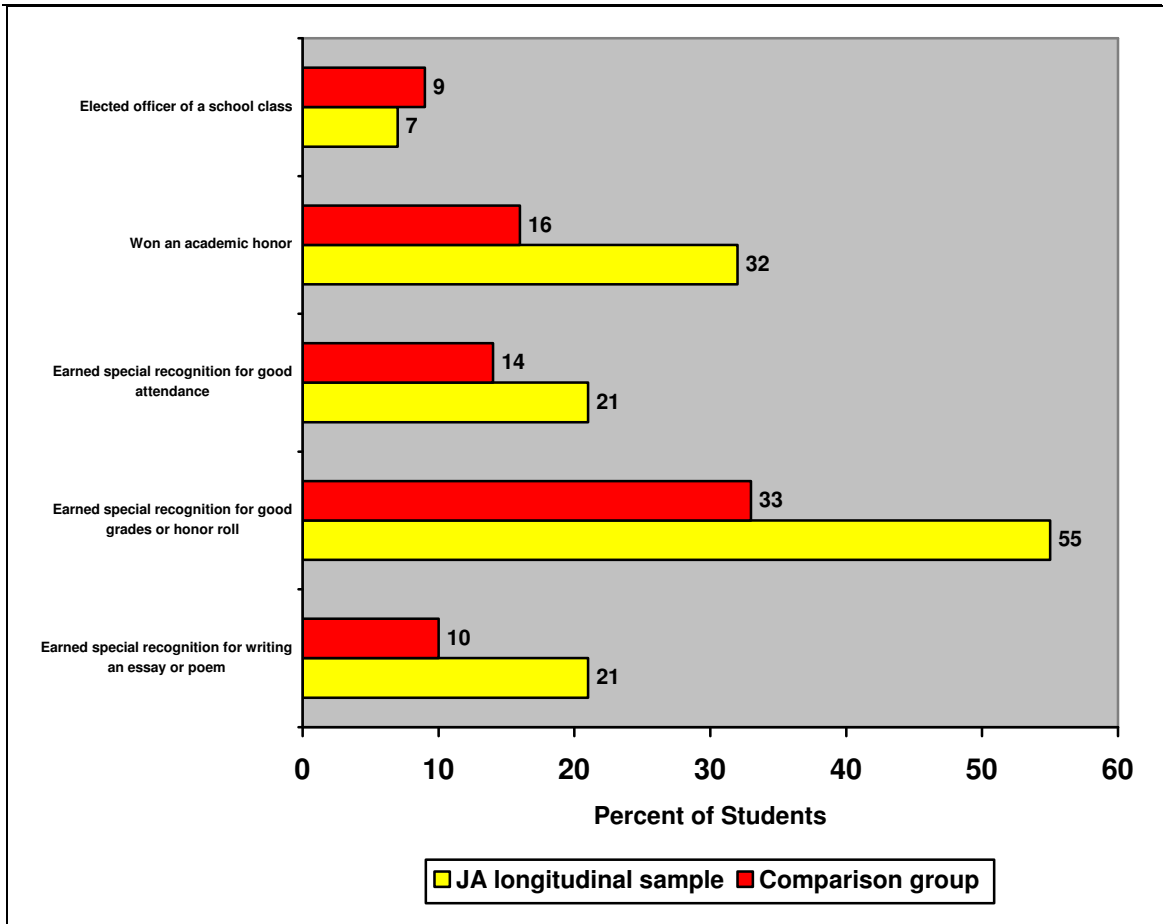
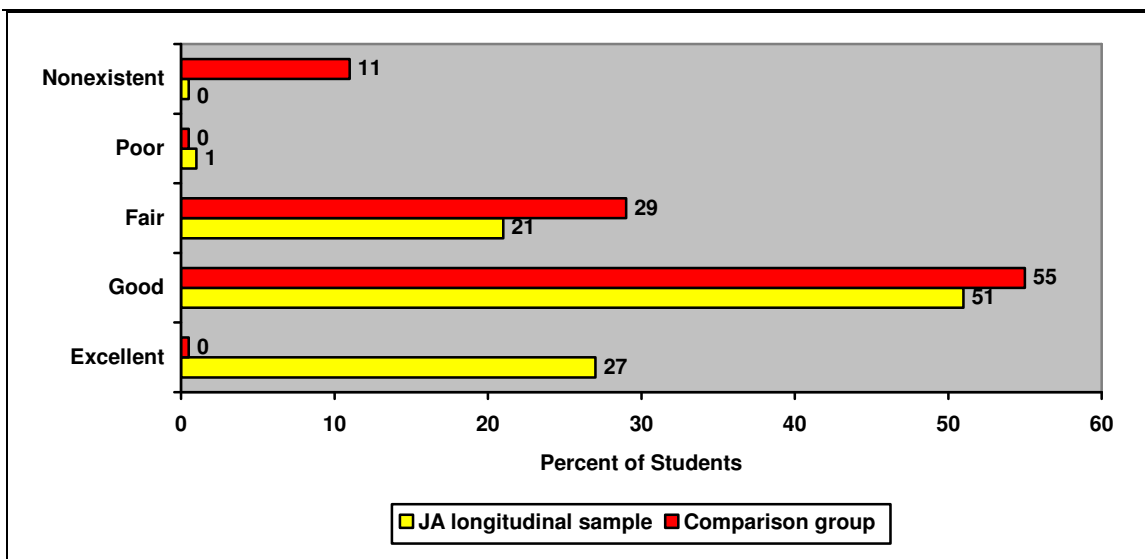


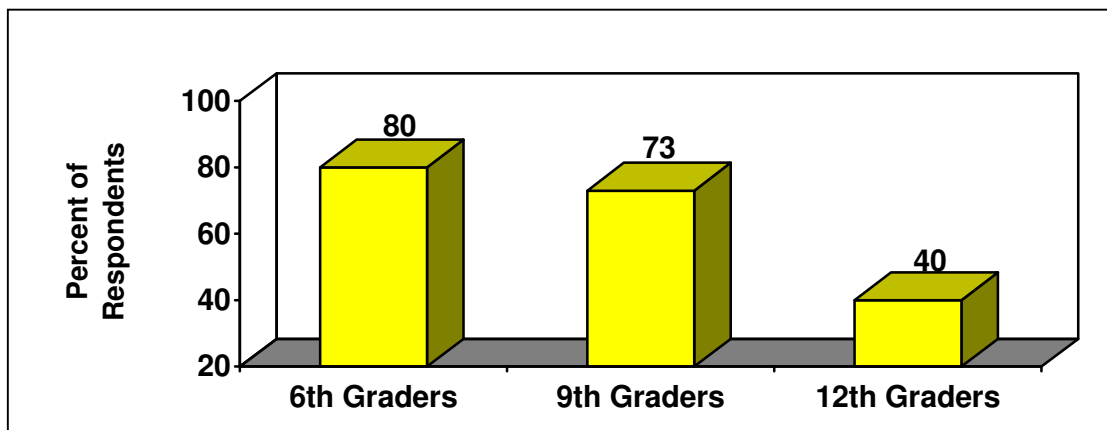
Figure 10. Percent of Students with Various Levels of Computer Skills



3.3 Attitudes and Aspirations Regarding Education

The 2001-2002 study assessed student attitudes toward school. There were statistically significant differences among the JA longitudinal students at the different grade levels with respect to the perceived impact JA has on attitudes toward school. Percentages of those reporting that JA had an impact on their attitudes are provided in Figure 11. The perceived influence of JA was greatest for the youngest students.

Figure 11. Percent of Students Reporting that JA Influenced Their Attitudes Toward School

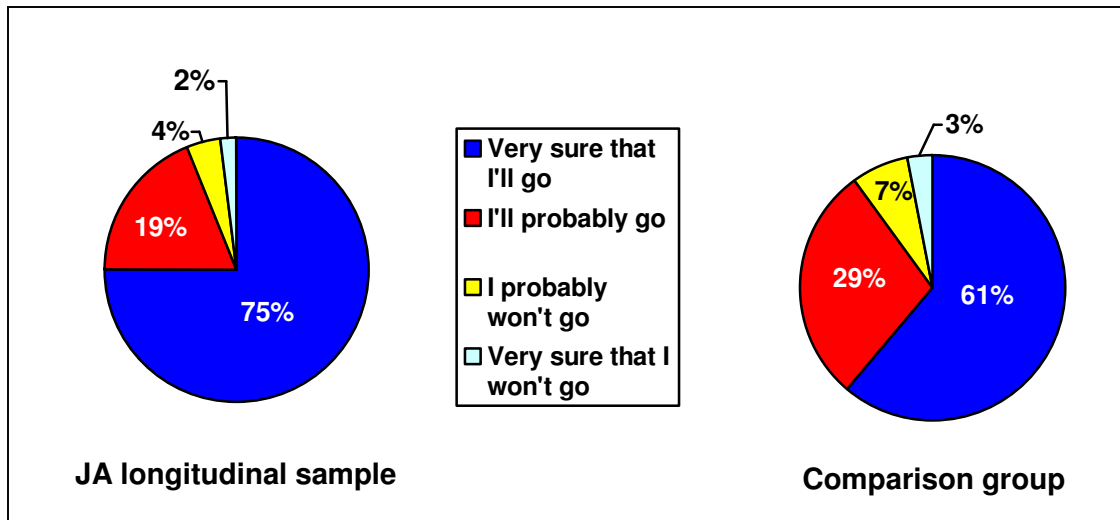


Students in the 2002-2003 study were asked about aspirations they had for their schooling. The JA longitudinal students, as compared to students in general, were significantly more likely to believe that they would graduate from high school, pursue post secondary education, and graduate from college.

When asked specifically how sure they were that they would graduate from high school, most students in both samples felt very sure. However, there was a significant difference in the percentage of JA students who were very sure they would graduate, depending on how much JA experience they had. Eighty-one percent of students who had participated in only one JA program were very sure that they would graduate. Eighty-five percent of those who participated two or three times in JA were very sure, and 97 percent of those having more than three JA experiences were very sure that they would graduate from high school.

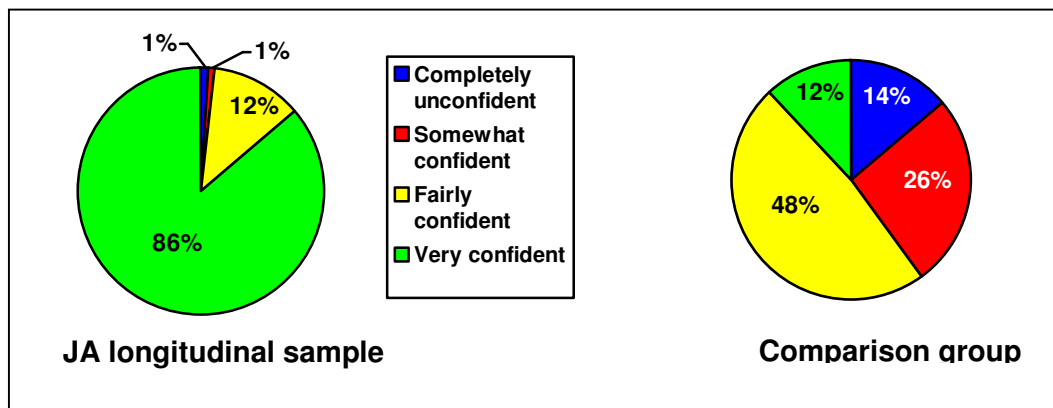
Students were also asked how sure they were that they would go on for further education after high school. As shown in Figure 12, the JA longitudinal sample was significantly more likely than the comparison group to report being very sure that they would continue their education beyond high school.

Figure 12. How Sure Students are that They Will go for Further Education after High School



Finally, there was a significant difference between the levels of confidence of the two groups in completing college, as can be seen in Figure 13. Students in the JA longitudinal sample were much more confident about their ability to complete college than students in the comparison group

Figure 13. Percent of Students Expressing Various Levels of Confidence in Completing College



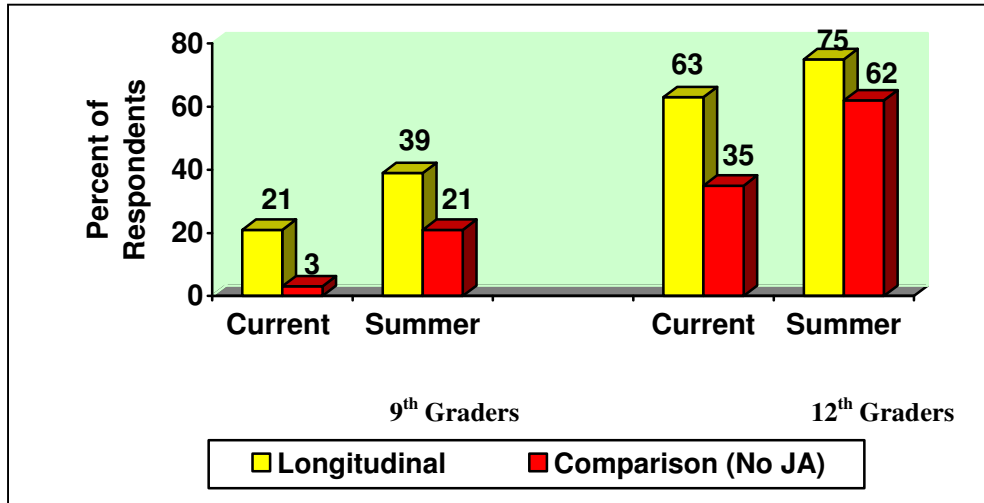
Most of the post-high school students in the 2002-2003 evaluation study reported that JA had positively influenced their attitudes toward continuing their education and toward getting a job. These students also suggested that JA had made the transition to college easier, by encouraging them to work hard (at school and on the job), and providing them information that was relevant to their classes and work tasks. Most JA students suggested that what they had learned in their JA class(es) affected the decisions they were currently making and better prepared them to make future decisions.

3.4 Employment Attitudes, Participation, and Aspirations

In the 2001-2002 study, 79 percent of the 9th grade JA longitudinal students suggested that JA had affected their attitudes toward working. The most frequent responses were (1) JA made me want to work/get a job, and (2) JA

increased my awareness about what job/career I want. Responses of 9th and 12th graders about whether they were employed are displayed in Figure 14.

Figure 14. Students Who Held Jobs



A greater percentage of JA longitudinal students than comparison group students was employed during the academic year and summer. These findings suggest that JA is contributing to the decisions students make about working.

In the 2002-2003 study, students were asked about the job they saw themselves having at age 30. Approximately the same percentage of JA longitudinal students as students in general aspired to hold a professional job and at age 30.

However, students in the JA longitudinal sample were significantly more likely to see themselves as professionals with an advanced degree than were students in general. In addition, 14 percent suggested that JA had influenced their decision to go into business. These findings suggest that JA is contributing to students' aspirations for post-secondary and graduate education and corresponding career choices.

4.0 Conclusion

4.1 Post-high School Findings

The findings suggest that JA positively contributes to several post-high school student activities and behaviors within the post-secondary educational environment, work setting, and in life in general. JA students were more likely than students in general to matriculate to college immediately after high school. JA students, compared to students in general, were more likely to declare a major during their college freshman year. The more JA programs students participated in while in elementary and secondary school, the more likely they were to select a business-related major in college. Perhaps most importantly, JA students were significantly more confident about their ability to complete college than were students in general.

Compared to students in general, significantly fewer JA students were working one year after high school because more JA students were attending college full-time. However, when considering summer employment (before most students began college), significantly more JA students worked than students in general.

JA students were significantly more likely than students in general to rate their computer skills highly. The more JA experiences students had, the higher they rated their skills.

Several post-high school JA students maintained contact with their classroom JA consultant, even though they were no longer attending the school in which the consultant presented. Several JA students also engaged in entrepreneurial activities after leaving high school. The more JA experiences students had, the more likely they were to participate in such activities.

JA students, as compared to students in general, were significantly more likely to describe themselves as taking responsibility for their behaviors and having a positive self-concept. These two characteristics, according to the psychological literature, correlate positively with success in adult life. This finding suggests,

therefore, that the students in the JA longitudinal sample are more likely than students in general to be successful in their personal lives. Further, the number of JA programs in which a student had participated correlated with taking responsibility for their own behavior. The more JA experiences, the more likely a student was to report taking responsibility for their own behavior.

4.2 High School Findings

Findings from the high school students included most of the same areas as were addressed for the post-high school students. While the activities students engaged in at school did not differ significantly for the JA students as compared to students in general, the JA students were significantly more likely to be recognized for outstanding performance in these activities. The students in the JA longitudinal sample received more academic honors, recognition for good grades, and special recognition of school projects than did students in general.

In addition, JA students, as compared to students in general, were less likely to engage in behaviors that would disrupt their learning in high school. Specifically, JA students were less likely to be tardy and were less likely to cut or skip classes.

A greater percentage of JA students volunteered for unpaid community service projects as compared to students in general. The types of service they reported included church-related service and working with special interest groups (e.g., the disabled, the elderly, the homeless, etc.)

Most of the JA students worked at least part-time during the school year, whereas only about one-quarter of students in general worked during the academic year. In addition, JA students were more likely to work during the summer.

The JA students, as compared to students in general, were significantly more likely to hold high aspirations for their future with regard to having good friends, earning respect in the community, owning a home, and having a job that pays

well. Given that the psychological literature reports that an important component in achieving a high quality of life is setting high goals, this finding that JA students hold high aspirations suggests that JA students are more likely than students in general to experience a high quality of life as adults.

4.3 Middle School Findings

Findings from the middle school students included the same areas as were addressed for the high school students, with the exception that data were not collected on student employment. JA students were most likely to participate in band or orchestra at middle school, while students in general were most likely to participate in sports at middle school. While most middle school students were well behaved, JA students had fewer behavioral problems than students did in general. JA students were less likely to be tardy, cut or skip class, miss attending school altogether, or be sent to the principal's office.

While slightly fewer than half of the middle school students in general volunteered for a community service project, nearly 70 percent of the JA students volunteered to perform unpaid services. This finding suggests that JA may contribute to students' desire to serve the community. In addition, the more JA experiences students had, the more likely they were to volunteer in the community. Many of the JA students had received awards and recognition for their involvement in community service.

JA middle school students were significantly more likely than middle school students in general to aspire toward a college prep program of study when they reached high school. Further, the JA students were more likely to believe that they would attend college, graduate from college, and attend even higher levels of learning, as compared to students in general. JA students' confidence in their graduating from high school was positively correlated with the number of JA experiences they had.

Lastly, JA middle school students held higher aspirations for their careers as compared to middle school students in general. JA students were more likely to see themselves in a managerial or professional role at age 30, as compared to students in general.

4.4 Elementary School Findings

The ORT and alternative assessment findings, taken together, indicate that the sequential curriculum of the Elementary School Program had positive cumulative effects on student learning and skills over time. That is, students who participated in the *Our Families*, *Our Community*, *Our City* and *Our Region* activities achieved more of the objectives from the *Our Nation* or *Our World* curriculum than students participating in only the *Our Nation* or *Our World* curriculum. These findings indicate that participation in JA over multiple years during elementary school increases student conceptual learning as well as the capacity to apply concepts to solve problems.