The Imagine Project

2019 Impacts Report – March 18, 2019

QREM

STRONG **DATA** = SOUND **DECISIONS**

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1. Executive Summary

This evaluation finds that the Imagine Project impacts students in different ways, depending on their age group and gender. Specific results include:

- **The Imagine Project has a substantial impact on middle school students –** Middle school participants made more significant gains on the established constructs than any other age group. Specifically, middle school students made gains in their ability to manage their stress and their perception of support from others (increases of 11.5% and 6.3%, respectively).
- **Boys were especially receptive towards the Imagine Project** – Boys of all age groups made substantial gains in many of the constructs –seeing improved attitudes towards school by 11.6%, their ability to manage stress by 9.8%, and their perceptions of support by 8.0%.
- **Girls improved with stress management** – Middle and high school girls participating in the Imagine Project improved their overall stress management by 9.4%.

These analyses were also broken down by school level and gender to ascertain if specific groups were more receptive. Key findings of this analysis include:

- **The Imagine Project had a larger effect on middle school boys** – Middle school boys posted the largest gains among all of the groups analyzed, especially on stress management, support, academic risk taking, and writing. These findings indicate that middle school boys may be the largest beneficiaries of this program compared to other age groups and to girls.
- **Of all high school students, girls made the largest gains in stress management** – This finding shows high school girls are another key group that can benefit from this program, especially through learning techniques that improve their stress management.

Recommendations to improve future evaluations include:

- **More data should be collected from older students** – it is recommended for future research that more data should be collected from middle school and high school students. While there were sufficient data for a thorough analysis from both age groups, it is recommended that more data should be collected in order to expand the pool.
- **Teacher data** – As a follow-up to this evaluation, teachers should be surveyed to determine their impact on the project.

2. Methodology

To measure the impact of the Imagine Project on its students, several methodologies were used. First, there was an observational component to the program. Evaluators visited classrooms while the program was in operation. Results from the observational data were combined with interviews with the Imagine Project founder and research of the adjudicated literature to build pre- and post-tests. To strengthen the design, some classrooms were provided with the pre-test (before the program), and others were provided with the post-test (conducted upon the completion of the program). No one group received both the pre-test and the post-test to minimize test-retest effect (Shadish, Cook, and Campbell, 2002). The surveys—along with the administration protocols—were developed by QREM. The Imagine Project distributed the surveys to the teachers, and the teachers administered those surveys to their students.

Six constructs were developed to measure the impact of the Imagine Project:

Figure 1: Constructs Developed and Measured

Construct	Definition
Academic Risk Taking	The comfort of taking a risk in class (e.g., students answer a question they are uncertain about).
Future	Positive outlook towards their future.
Positive School Attitudes	Positive attitudes towards school, especially items pertinent to engagement, safety, and feelings towards school.
Stress Management	Ability and skills needed to manage stress.
Support	Their perception of receiving support from others and ability to support themselves.
Writing	Development of writing skills.

Public access data were used to provide some descriptive findings comparing students of the Imagine Project, specifically data pertaining to individual development and school attitudes from the National Center for Education Statistics. Analytical techniques employed include basic demographic information, means testing on group progress on school level (elementary, middle, or high school) using ANOVAs. Data were analyzed using Excel and SPSS V. 21 software.

Missing data at the individual and group level were dealt with using approximation and matched interpolation. Listwise deletion was applied for separate calculations for random missing data. All analyses performed met the minimum requirements of 30 respondents (Cohen and Cohen, 1983; Hair and Tatham, 2001).

3. Literature Review

Building resilience is important for young people to navigate the varying stressors they face in their lives. In providing an extensive overview of the causes of youth deviance, Bernat (2009) mentions a myriad of causes described in the literature, including:

> "…poverty, poor physical health and disabilities, educational failures and negative school environments, dysfunctional families, racial inequality, and community disorganization…drug and alcohol use, violent temperaments, gang membership, poor school performance, school mobility, dropping out of school, teen pregnancy and childbirth, criminal victimization, unemployment and the lack of job skills, family conflict, parental abuse and neglect, excessively strict family discipline, homelessness, abusive youth peer groups, poor student-teacher relationships, and prejudice and discrimination (including police practices that are viewed as unfair or abusive)" (p. 252-253).

Developing resilience in young people can help them overcome the variety of stressors they are likely to experience, even as children. Schools provide an excellent place to begin developing these skills because children spend a lot of time at school, teachers and other adults can be positive role models, and schools provide a space for children to build positive relationships with adults (Bernat, 2009). Teachers in particular have the ability to positively impact children's sense of self and how they feel about their future (Roshandel and Hudley, 2018). Positive relationships with adults—including parents, teachers, and community members—are necessary in all aspects of a child's life (VanderVen, 2004). School and community partnerships help adults support children in all aspects of their lives.

A key factor of resiliency in children is a proactive attitude towards problem solving, built on an internal locus of control, self-confidence, and a willingness to undertake challenges (Joseph, 1994). Building these characteristics, however, is a long and difficult task. In a study of undergraduate students, Fritson (2008) found that journaling helped these students develop self-efficacy and a greater internal locus of control. Self-efficacy is a predictor of success in a wide range of behaviors from quitting smoking to succeeding in sports or school (Manstead and Van-Eekelen, 1998; Sadri and Robertson, 1993; Stajkovic and Luthans, 1998). Fritson's research was inspired by the use of journaling in clinical psychology to promote self-introspection, reflection, and change individual perceptions, behaviors, and cognitions (especially in light of difficult life experiences). Journaling is an active way for people to consider and improve their personal perspectives, mood, and daily behaviors (Beck and Beck, 1995). Relatedly, developing an internal locus of control and developing self-esteem can prevent adolescents from engaging in negative risk-taking behaviors (Gullone and Moore, 2000). When children have a more positive attitude and positive moods, they are less likely to take negative risks (Morrongiello et al., 2015).

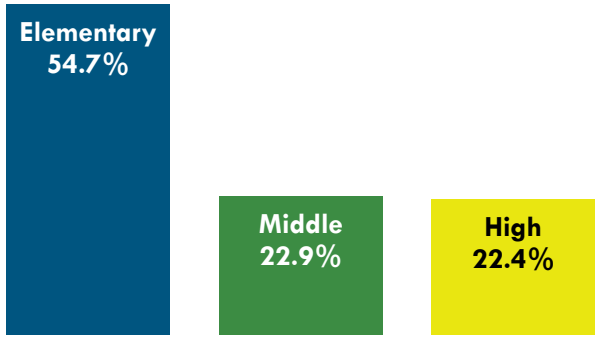
However, not all journaling is equally effective. Journaling that focuses on emotions related to a negative experience rather than both emotions and thoughts (cognitive processing of the negative event) can actually lead to reinforcing negative emotions and prevent healing (even leading to physical expressions of stress, like illness) (Ullrich and Lutgendorf, 2002).

Journaling can be used to improve student success in academic settings as well. Researchers find that journaling promotes reflection, helps students articulate their thoughts, and assists in problem solving (Fogarty and McTighe, 1993; Clarke, Waywood, and Stephens, 1993). Furthermore, Perkins, Simmons, and Tishman (1990) found that journaling helps build students' cognitive and metacognitive skills.

4. Students Participating in the Evaluation

The Imagine Project is designed for students of all ages. As stated in the methodologies, students in all three grade-level configurations participated in the evaluation. As Figure 2 illustrates, most of the 362 students who participated in the evaluation of the Imagine Project were in elementary school (grades 3-5), followed by middle school students (grades 6-8), and high school (grades 9-12). Other demographic details include:

Figure 2: School Level



- Most students surveyed were male (50.8%).
- More students took a post-test (59.1%) than a pre-test (40.9%).

There were enough individuals in all groups to complete the pre-test and post-test, meeting the minimum standards established by Cohen and Cohen (1983).

5. Need for the Imagine Project

The need for the Imagine Project is supported by data from the General Social Survey (2019), the Search Institute (2012), and the National Center for Education Statistics (2019). These survey results on America's youth highlight the levels of stress and support that American students experience. As Figure 3 shows, a majority of American students feel it is

Figure 3: Stress and Support

Factors	National
My parents push me to be the best I can be	84.0%
It's okay to make a mistake	76.0%
I will have a good life	75.0%
My parents ask me about my homework	59.0%
I have the skills to manage my stress	50.0%
My parents go to meetings or events at my school	48.0%

okay to make a mistake and they have the support and interest of their parents. At the same time, only half of today's young people feel they have the skill-sets to manage stress. These results indicate that some children feel they do not have the necessary skills needed to manage stress and draw upon their own support systems – items the Imagine Project focuses on.

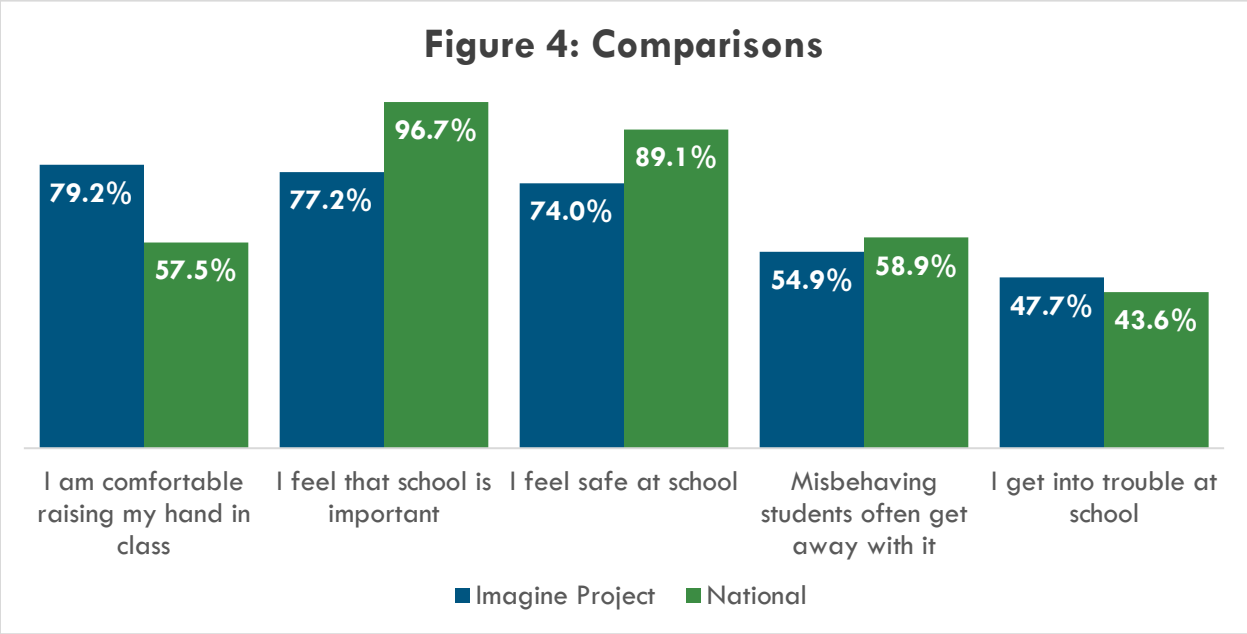


Figure 4 compares the results of high school students participating in the Imagine Project to survey results of their peers at the national level. In this comparison, considerably fewer Imagine Project participants felt that school was important and that they felt safe at their schools. Furthermore, more Imagine Project students feel they get into trouble at their school compared to their national peers (National Center for Education Statistics, 2019). These three items are a likely indicator of school-based stress and demonstrate the need for programs like the Imagine Project.

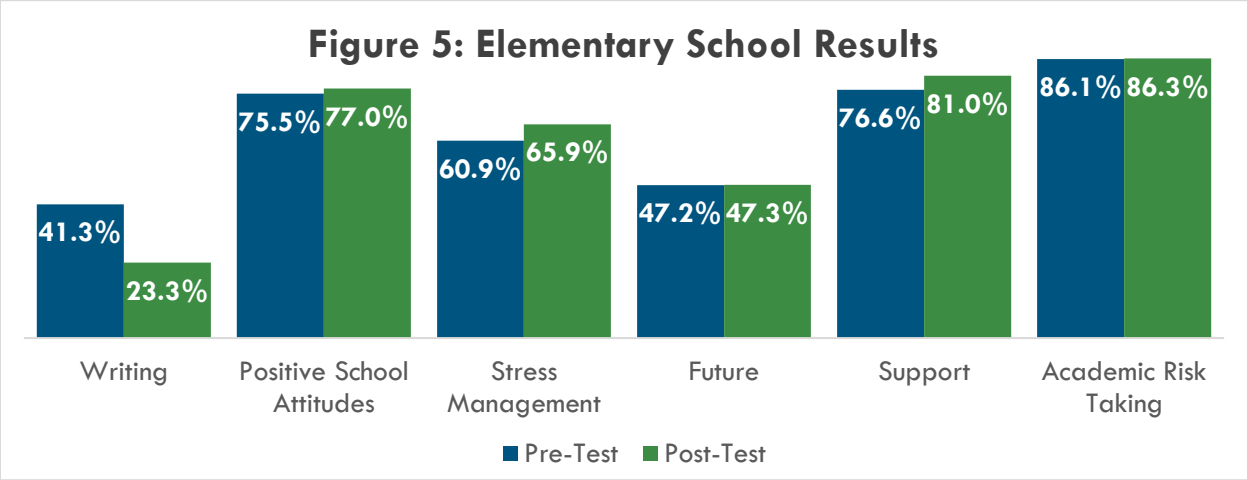
6. School Level Findings

6.1 Elementary

The findings highlighted in Figure 5 (next page) show some gains from the pre-test to the post-test, but only the gains in skills and comfort with writing were statistically significant and could be attributed to the Imagine Project program.[1] The fact there were no significant findings among the six key constructs

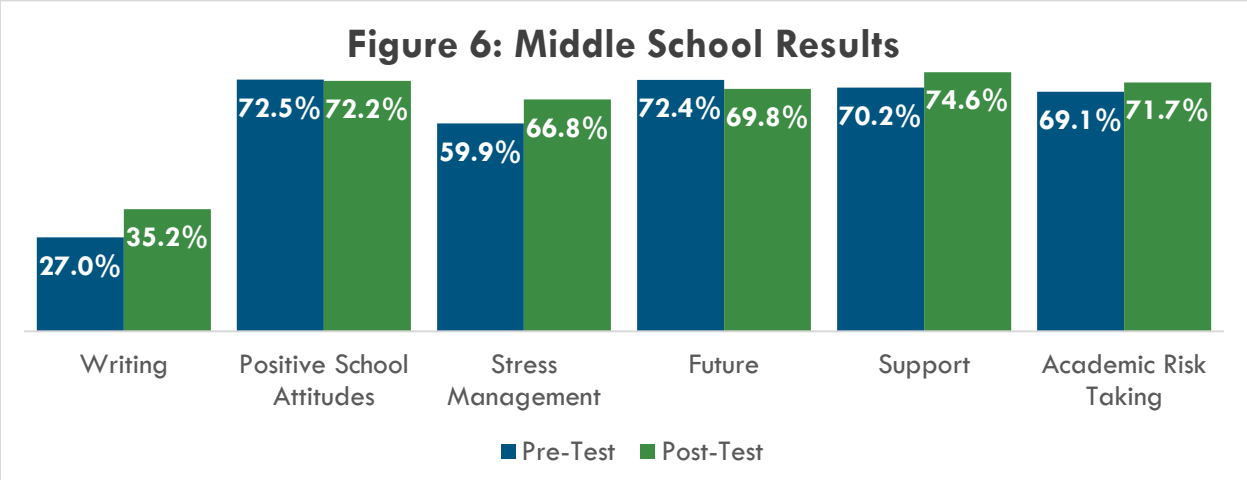
[1] Most of this construct revolved around their preferred writing method and visits to a library – functions the Imagine Project has little influence over.

may suggest that elementary school students are still too young to show measurable changes on the selected constructs or possess the maturity to comprehend these factors (Driscoll, 2005). It is important, however, that elementary school students gain confidence in their skills and writing abilities, as most elementary students are tested for proficiency. The Imagine Project may be a contributing factor to students' confidence in writing.[2]



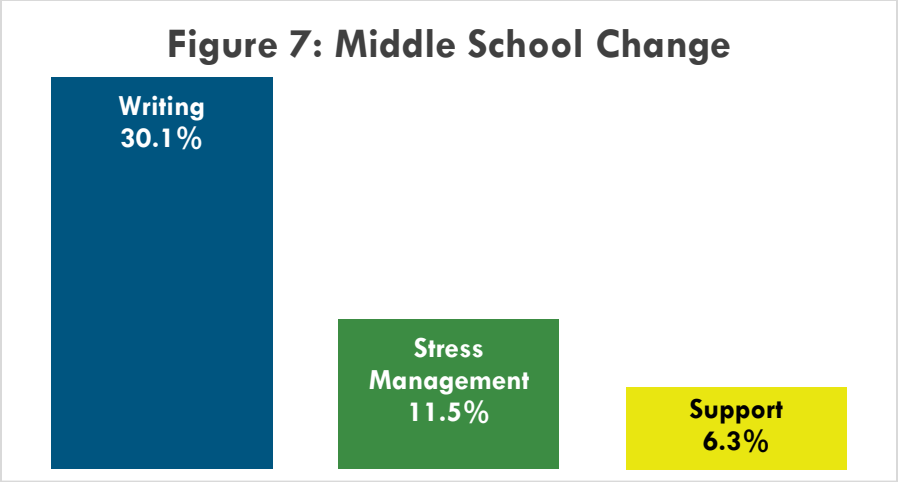
6.2 Middle School

Middle school students were the most receptive group to the program and posted the most statistically significant gains between the pre- and post-tests. There were particularly noteworthy impacts on managing stress and seeking support from others, where gains were significant at the .05 and .1 levels, respectively (Figure 6). There were no statistically significant changes in either positive school attitudes



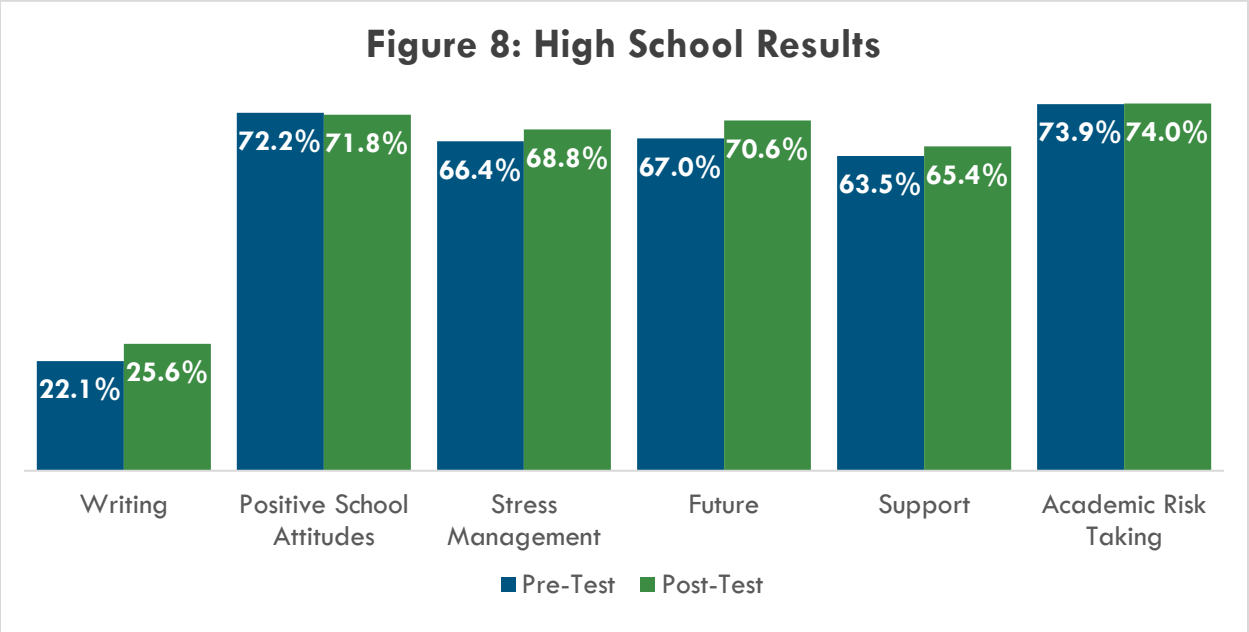
[2] More data and study are required.

or future constructs. This is likely because a one-time visit was not sufficient to alter students' attitudes in a meaningful way, and multiple visits may be needed to generate a longer lasting and more substantial impact.[3]



6.3 High School

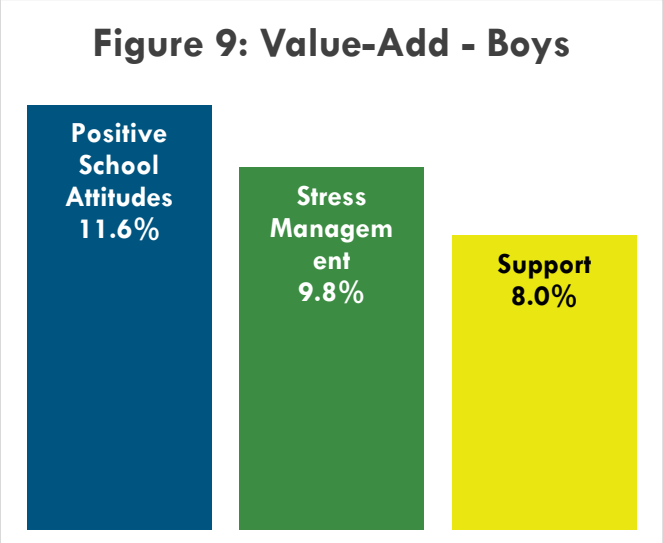
High school students made gains, but none were statistically significant. These data suggest three possibilities: (1) this group may be too old to get the full benefits of the program, (2) a one-time visit may not be enough for this age group, or (3) the small sample worked against obtaining valid results. As sub-group comparisons did register statistically significant findings (see page 12), it is strongly suggested that further testing should be conducted.

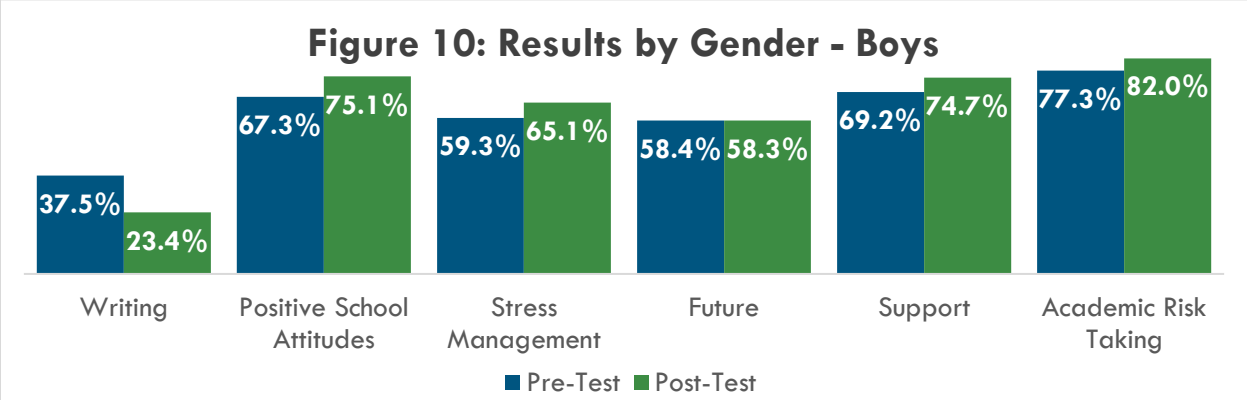


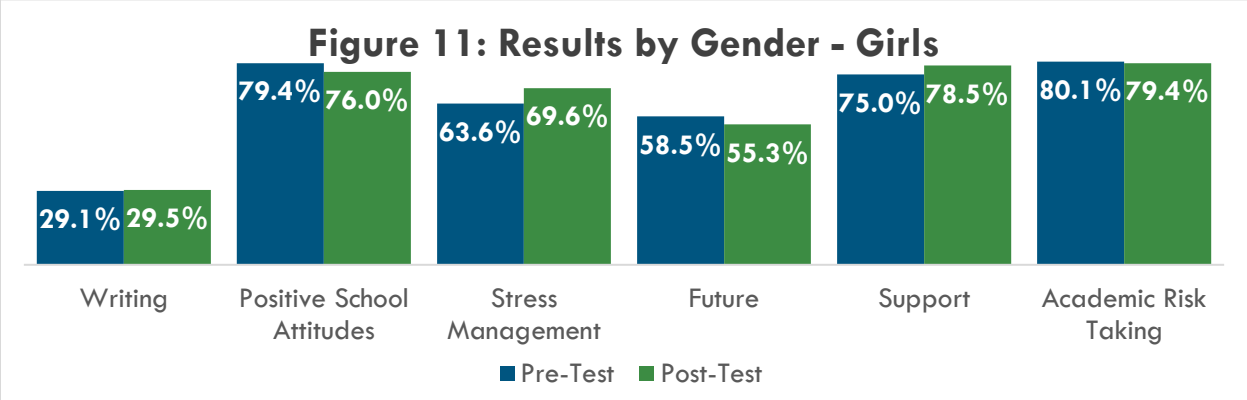
[3] Using an ANOVA, stress management was found to be statistically significant at $p < .05$, and support was statistically significant at $p < .10$. Writing was found to be statistically significant at $p < .05$.

7. Gender

This section focuses on gains broken down by gender. Overall, boys made more and larger gains on positive student attitudes, stress management, support, and academic risk taking. Similar to boys, girls posted gains—although not as high—on stress management and support. Figures 10 and 11 show how girls and boys performed on both the pre- and the post-surveys.[4] While more data are necessary, both boys and girls developed their stress management skills and were more open to seeking support following their participation in the project.





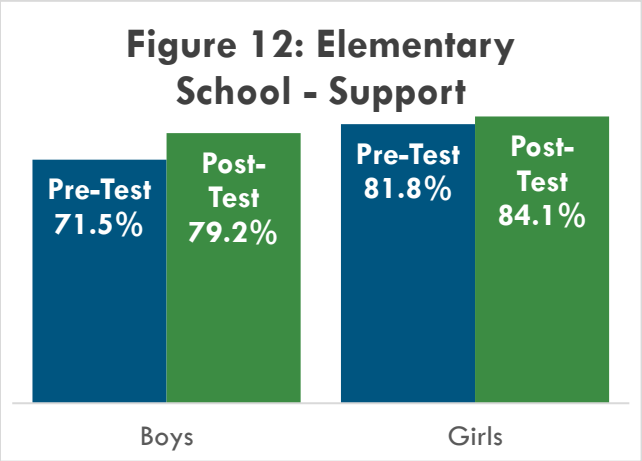


[4] Findings were statistically significant for the four (boys) constructs using an ANOVA at $p < .05$ and stress management (girls) was found to be statistically significant ($p < .10$) using an ANOVA.

8. Gains by Select School Level & Gender

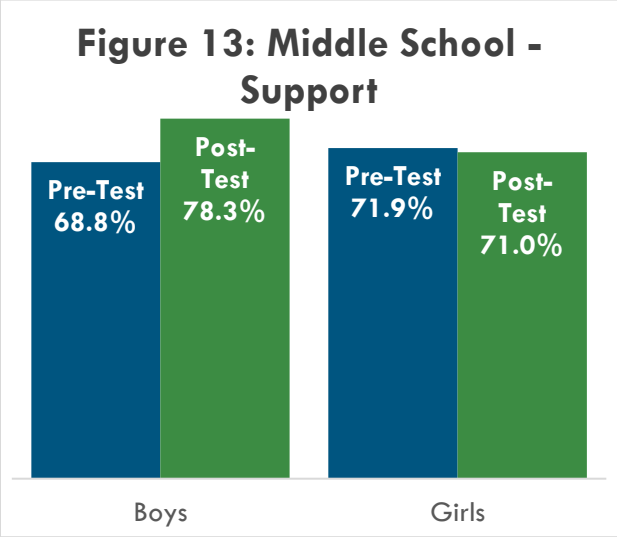
8.1 Elementary School

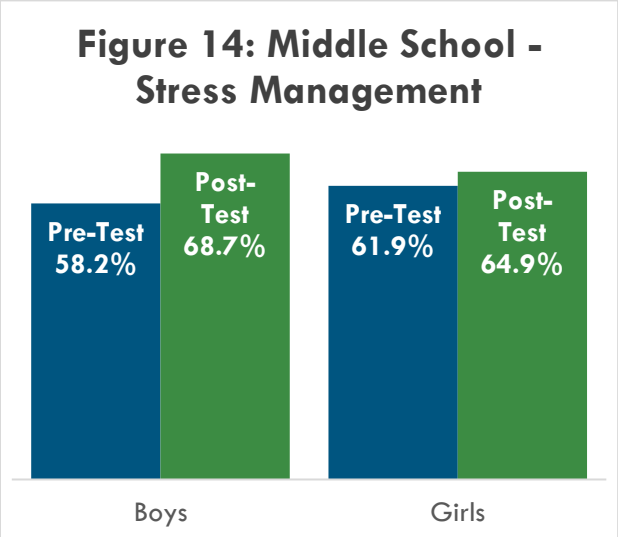
To determine which groups of students are the most receptive to Imagine Project participation, results were broken down by gender and school level. Using this structure, there was only one statistically significant construct (support) among the elementary school students. Figure 12 shows that boys posted larger gains than girls (though elementary school girls posted higher levels on this construct in both the pre-test and post-tests).[5] As previously discussed, these limited findings are likely due to younger students' developmental ranges and that elementary-aged students are more focused on developing their writing skills.



8.2 Middle School

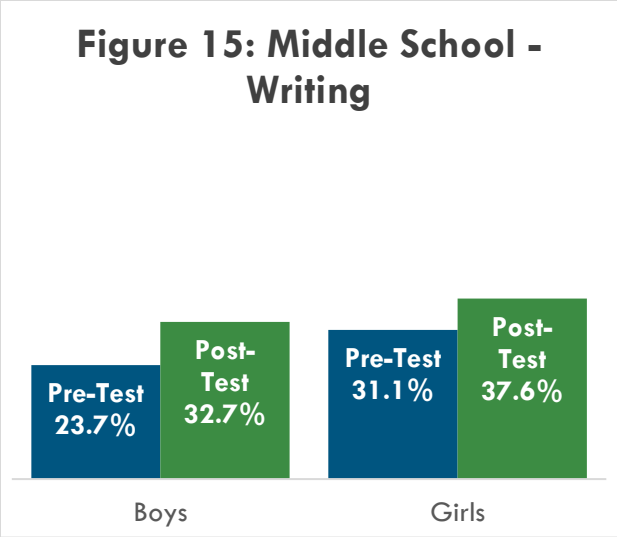
Middle school boys are clearly the group that posted the most significant gains following their participation with the Imagine Project. Gains in support (Figure 13) and stress management (Figure 14) are the largest, with more moderate gains in writing (Figure 15) and academic risk taking (Figure 16).[6]

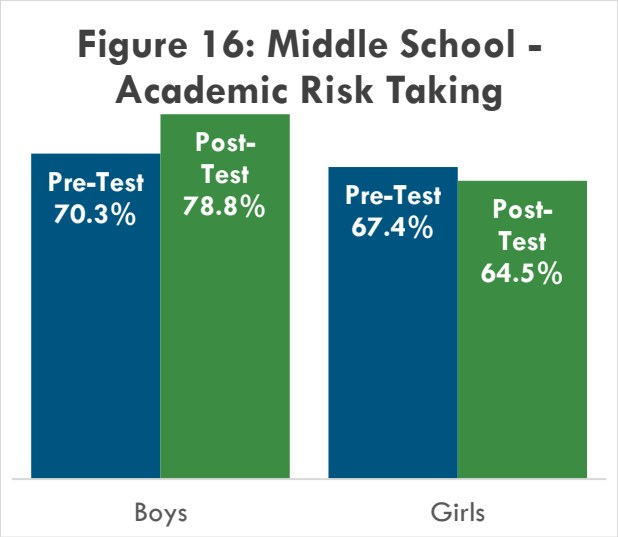




[5] The gains elementary school boys made in support was found to be statistically significant ($p < .10$).

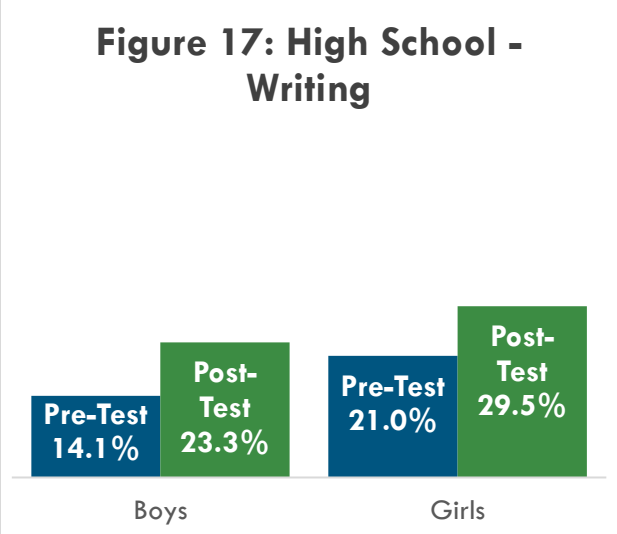
[6] The gains boys made for stress management and support were significant at $p < .05$, while the gains made in writing and academic risk taking were significant at $p < .10$.

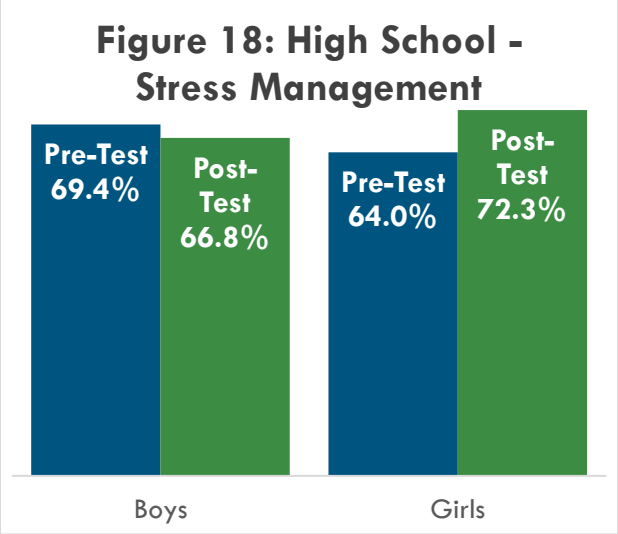




8.3 High School

While boys did make some gains on these constructs, it appears that this program had a greater impact on high school girls than high school boys, particularly in writing (Figure 17) and stress management (Figure 18).[7] As a group, girls made statistically significant gains in stress management. While high school boys showed a decline in stress management, it was not statistically significant.





[7] Both the gains made by high school girls were statistically significant at $p < .05$.

9. Conclusions and Recommendations

Overall, the Imagine Project benefits its youth participants, especially middle school boys and high school girls. The differences in gains may be due to the differences in ages of maturity and development between boys and girls. This requires further investigation. Additionally:

- Younger students benefit by expanding their understanding and enthusiasm for writing. This is likely because younger students are taught the mechanics of writing.
- More data are needed—specifically a higher number of middle school and high school participants—in order to confirm these findings in the future.
- The results may be impacted by the time of year. Therefore, it is recommended that surveys be randomly administered during different months or quarters.
- The Imagine Project is providing a key educational opportunity for these students by providing skills that may alleviate the primary concerns cited by students in Figures 3 and 4.

Works Cited & Consulted

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- Educational Longitudinal Survey
- General Social Survey
- High School Longitudinal Survey
- National Center for Education Statistics
- National Household Education Survey

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