

HELIOS EDUCATION FOUNDATION THEORY OF CHANGE: *Transition Years (Grades 5-12)*

Helios Education Foundation believes education improves lives and strengthens communities. Our work in the Transition Years is inspired by our vision of ensuring individuals across Arizona and Florida have the opportunity to attend and are prepared to succeed in postsecondary education.

The Transition Years, grades 5-12, are the area of greatest emphasis for the Foundation. Research indicates that students in these years, particularly those in middle school, may experience significant obstacles resulting from social, emotional, physical and intellectual growth and pressures. It is during this formative period that students develop their own beliefs and opinions as well as begin to make life decisions based on their access to opportunities and information. Their motivation to perform well in school is influenced by their developing interests, the desire for acceptance, the positive and negative impacts of peer pressure and a need for “supported” independence by parents, educators, their peers and the community.

The Transition Years are also when students are more at-risk of losing interest and disengaging from school. Approximately 30% of Arizona and Florida high school students do not graduate within the traditional four years, a number which climbs to 50% for Hispanic, Black and Native American students. Students who drop out of school report being bored, not challenged enough to perform at a higher level or fail to see the relevance between what they are learning and their personal and professional aspirations. All this comes at a time when there is greater attention placed on improving student academic performance, especially as it relates to the areas of Science, Technology, Engineering and Mathematics (STEM). Additionally, those students who are graduating from America’s high schools are increasingly unprepared for postsecondary education due to insufficient curriculum rigor and relevance, limited planning or access to postsecondary information, and inconsistent guidance and support from educators, parents and/or the community. In fact, it is estimated that one third of students entering postsecondary programs require some level of academic remediation.

Arizona and Florida both have significant opportunity to improve education quality, academic performance, high school completion and postsecondary degree attainment. By focusing on the Transition Years, especially middle and high school, the Foundation is better positioned to support long-term student success by improving teacher quality, strengthening academic coursework, fostering personal growth and character development, encouraging parent and community involvement, and creating a college-going culture among students, educators and families at this critical stage of the education continuum.

Educating students, families and communities about the benefits of postsecondary education is a valuable motivator for proactive planning and postsecondary preparation. Students who graduate from high school earn on average \$1 million more over their lifetime than their peers who drop out. Financial rewards, as well as personal and professional opportunities, continue to grow with increased educational attainment. Individuals with undergraduate degrees on average earn annual incomes over \$51,000 and those with graduate degrees average nearly \$79,000 annually—contributing to individual financial stability and overall economic prosperity. And with 2/3 of the jobs of the future requiring a college degree or some form of advanced training, motivating and supporting all students to successfully transition from elementary school to middle school, middle school to high school and on to postsecondary education becomes increasingly important.

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The current global environment requires our graduating students to be more adept at math and science coursework. However, American students are consistently outperformed by their international counterparts in academic performance in both math and science. Among the top 30 industrialized countries, U.S. students rank 21st in Science and 25th in Math. Arizona is ranked 42nd in the nation for 8th grade students reading at a proficient level and 38th for student's being proficient in math. Florida is ranked 30th and 36th respectively for reading and math proficiency among 8th graders. In addition, the math taught to American 8th graders is often two grades below what is taught to their peers in other leading countries around the globe.

Increased proficiency in math and science is linked to student success across the education continuum, workforce competitiveness and overall quality of life. The National Science Foundation estimates that 80% of today's workforce requires the logic, reasoning, discipline and decision-making skills developed through math and science curriculum. According to the U.S. Department of Labor, the need for workers with technical expertise will grow by 50% over the next 10 years. These, among other quality of life factors, elevate the importance of creating a pipeline of students and teachers with interests and expertise in the STEM content areas.

With respect to the student pipeline, of those who do express an interest in the STEM areas, 40% will abandon it after their first undergraduate math or science course due mainly to inadequate preparation. Of those who persist, less than 50% will actually graduate with a degree in math or science. It is also estimated that almost 50% of math and science teachers who are currently in the classroom are not qualified or certified to teach the subjects. Moreover, Arizona and Florida universities predict a significant annual shortfall, 500 and 2,300 respectively, of middle and high school science and math teachers each year. Thus, recruiting and retaining quality math and science teachers, while improving the quality and credentials of others, is critical in creating and sustaining a pipeline of educators trained in math or science.

The Foundation's interest in advancing STEM education within Arizona and Florida is driven by STEM's contribution to long-term student success and postsecondary completion. Students who take Algebra II, Chemistry and Geometry are twice as likely to be prepared for postsecondary education. Those who complete Physics are three times more prepared for postsecondary success. Increased efforts to improve curriculum rigor and relevance during middle and high school, especially in the STEM areas, better prepares all students for success in college, career and life.

Other factors which impact student success during the transition years includes strong school leadership, opportunities for personal growth and character development which are supportive of academic pathways, and consistent parent and community involvement. Strong and steady leaders at all levels within education who strive to continuously improve student achievement, maintain high expectations and create a culture supportive of postsecondary education are at the heart of any strong academic program. Arizona and Florida both anticipate hundreds of leaders including superintendents and principals will be leaving the education system within the next five years. Thus, increasing the pipeline of highly qualified school leaders is important to the Foundation in order to ensure schools, families and communities work together in supporting the academic success of students.

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Research also indicates there are benefits to viewing academic achievement and personal and character development as complementary. Recognizing the importance of both can provide a greater impact on improving student achievement and the successful transition to postsecondary education. Students who have strong academic skills, make good decisions, manage peer influence, understand the relevance of school to their future, and have the capacity to navigate the barriers to attaining postsecondary education are generally more confident in their ability to follow a postsecondary education pathway.

Finally, families and communities are influential in guiding the academic and personal development of students in a manner which leads to postsecondary education success. Families and communities who are involved early in the Transition Years are more likely to share in the responsibility of helping students realize their potential by setting high expectations, supporting a college-going culture, guiding discussions about postsecondary education planning, and ultimately, increasing the likelihood of long-term student success.

OUR FOCUS

Helping Arizona and Florida youth successfully transition between the various stages of the education continuum, Helios Education Foundation strives to have more students graduate from high school and go on to complete postsecondary education. We will actively participate in programs and initiatives which support the success of students within the Transition Years as well as increase their preparedness for postsecondary education. We aspire to create a college-going culture among students, families and schools, ultimately improving the quality of life of individuals and within communities. As a result, the Foundation will contribute our leadership, expertise, partnership and resources to advance the following areas within the Transition Years:

- **Increasing Curriculum Rigor and Relevance with an Emphasis on STEM Education** – We will work to improve middle and high school science and math curriculum, with an emphasis on grades 5-10, while increasing its relevance for students in achieving their personal and professional goals, meeting postsecondary education requirements and addressing 21st Century needs.
- **Creating and Sustaining a Pipeline of Quality STEM Educators** – We will work to enhance the skills and expertise of educators who are currently teaching math and science while cultivating a pipeline of teachers specialized in the STEM content areas. We will seek opportunities to attract and retain talented professionals to teach in these areas, especially in under-resourced schools.
- **Cultivating Strong Middle and High School Leadership** – We will work to attract, prepare and retain highly effective leadership within middle and high schools by enhancing their ability to increase student success and academic achievement as well as foster a postsecondary education supportive environment among families and students.
- **Fostering Personal Growth, Character Development and College Readiness** – We will support the success of middle and high school students through academically aligned programs and initiatives that also strengthen social development, foster personal growth and aid in character development. Helios will strive to create a college-going culture to increase college readiness and access to postsecondary opportunities and pathways for students.

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- **Improving Family and Community Engagement in Student Success** – We will work to actively engage families and communities in the success of our students by educating them about their role in challenging students, providing consistent encouragement and support, and helping them navigate the school system.

MEASURING OUR IMPACT

The impact of Helios Education Foundation's investment in the Transition Years will be measured through methods which capture changes in demographics, individual and social outcomes, and qualitative and quantitative information. Successful outcomes will reflect positive change, improved quality and leveraging of resources. Secondary research and evaluation methodologies will be utilized strategically to guide our efforts and to advance our understanding of key trends or opportunities within the Transition Years impact area. In addition, the Foundation will strive to be a trusted partner, knowledge source, thought leader and innovator, providing a legacy of learning for generations to come. The Foundation's work in Arizona will be statewide, with more targeted opportunities identified based on the needs of our programs and partners. Within Florida, Helios' energies are more focused, directing our efforts to support the Tampa Bay area including Citrus, Hernando, Pasco, Pinellas, Hillsborough, Polk, Manatee and Sarasota Counties.

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Across both states, the Foundation will monitor its short- and long-term progress within the Transition Years programs and initiatives which it funds in Arizona and Florida based on the following indicators:

Helios Priority	Indicators
Increasing Curriculum Rigor and Relevance with an Emphasis on STEM Education	<ul style="list-style-type: none"> • Increase the percentage of students who pass pre-Algebra by the end of 7th grade and the number who pass Algebra I by the end of 9th grade • Increase the percentage of underserved students who participate in AP, IB and dual credit courses and pass the exams each year • Increase the percentage of 8th grade students testing at a proficient level in math and science on FCAT and AIMS standardized tests
Creating and Sustaining a Pipeline of Quality STEM Educators	<ul style="list-style-type: none"> • Increase the percentage of middle school and secondary teachers qualified in math and science in traditionally under-resourced schools • Increase retention rates of math and science teachers through professional development and mentoring • Increase the percentage of college students in Arizona and Florida who declare STEM teaching as a major
Cultivating Strong Middle and High School Leadership	<ul style="list-style-type: none"> • Increase the percentage of leaders at all levels of education including assistant principals, principals and superintendents who have leadership credentials • Increase the percentage of education leaders who actively promote postsecondary education pathways to students and families
Fostering Personal Growth, Character Development and College Readiness	<ul style="list-style-type: none"> • Increase in the college-going attitudes, beliefs and behaviors of students and families • Increase awareness about the various pathways to postsecondary education among students and families • Increase the percentage of students taking ACT, SAT and PSAT standardized tests and demonstrating academic progress
Improving Family and Community Engagement in Student Success	<ul style="list-style-type: none"> • Increase the percentage of families and organizations who are informed, engaged and supportive of postsecondary pathways for students

For a list of statistical, demographic and research sources used in this statement, contact Linda Thompson at lthompson@helios.org.