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Viewpoint

Funding early learning course for success

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Jake Witherell

As chief operating officer of Schell Games in Pittsburgh, I work with a team of highly talented artists, programmers, producers and game designers who are adept at creating fun, yet educational, games for some of the world's most respected companies.

Yet, for Schell Games to continue its innovations many years from now, we need to make sure tomorrow's workers have the science, technology, engineering and math (STEM) skills needed to succeed in our industry.

To that end, I strongly support increasing state investment in high-quality early learning programs.

According to the Center on the Developing Child at Harvard University, the first five years of life are a unique period of brain growth; we know that 700 synapses — the neural connections that support later learning and behaviors — are developed every second.

Because this early stage is so critical, the achievement gap between children from advantaged and disadvantaged backgrounds shows up as early as 9 months old. One study recently published in Nature Neuroscience found that the brain surfaces of children in low-income families were on average 6 percent smaller than those of children in higher-income families.

Children can be 18 months behind by the time they enter kindergarten, with significant gaps in both math and reading. And children who are not kindergarten-ready are less likely to read well by third grade, indicating they will be less likely to graduate from high school — making it almost impossible to have a fully productive career.

Further research from Harvard confirms the brain is particularly receptive to learning math and logic between the ages of one and four. Young children are natural investigators and scientists who learn through play, asking an average of 76 questions per hour. They make sense of the world around them by making predictions, checking them, and using evidence to make inductions and deductions.

Reaching children at this stage teaches them they can be scientists before they might internalize any message that "math is hard" or science is "not for them."

According to Massachusetts Business Roundtable research, in the next 10 years, STEM jobs will grow by 17 percent, compared with 9.8 percent for all other occupations. Across the U.S., in all occupations, there are 3.6 people for every 1 job. However, in STEM, there is only 1 person for every 1.9 jobs. So while demand is high for STEM workers, the supply is too low.

Providing children with opportunities to quality early learning experiences in STEM enhances later interest in STEM careers. These programs integrate STEM learning throughout the day in all learning activities, with teachers who maximize activities to foster STEM skills and efforts to engage families in appropriate learning activities at home.

Close to 65 percent of our young people will stay in Pittsburgh and become part of our future workforce. Increasing state investment in these programs would prepare them for successful 21st century careers. And when our children succeed, we all succeed. Please join me in voicing your support for increased early learning investment.