

Esports in K-12 Education

How Intel® Technologies are Powering an Emerging Education Phenomenon

Esports: A Definition

Multi-player, online video games played competitively as part of a team.

What is Esports?

Gaming has always included a competitive element, even in the earliest video games such as Pong*. However, it wasn't until the early 2000s that technological innovation provided the environment for esports to thrive. Broadband internet allowed gamers to join multiplayer competitions first through LAN connections (e.g., a "LAN party") and later through wireless connections. Gaming consoles like Xbox*, PlayStation*, and Nintendo* created their own online networks to keep pace. Streaming services like Twitch* and YouTube* popularized watching others play video games. Additionally, a host of new games such as StarCraft*, FIFA*, and Counter-Strike* and game types including first person shooter and multiplayer online battle arena capitalized on the vastly improved power, performance, and graphics of modern computing. While still rapidly evolving, the esports industry is now mature enough to include niches for almost anyone with any affinity towards gaming, no matter their age, interests, or level of enthusiasm.

The Benefits to K-12 Education

There's little argument about the benefits of extracurricular activities for high school students. Studies have shown that students who are involved in extracurricular activities are more successful in a number of ways, including:

- Higher graduation rates and higher attendance
- Improved scores in math and reading
- More students aspire to higher education
- Higher focus in class
- Higher self esteem with fewer engagements of smoking and drinking

Apart from tangible benefits such as these, students who engage in extracurricular activities—be they athletic, artistic, scholarly, or otherwise—experience an essential sense of belonging. They must learn to negotiate the dynamics of a team; they must reliably attend meetings and practices; and, they are held accountable for a summative performance of some kind (a debate, a playoff, a theatrical performance, or a spelling bee).

Esports represent a unique opportunity to capitalize on an after-school happening that is already occurring and formalize the gathering to a school-sponsored, constructive activity.

Key Technology Requirements

Esports gaming stations typically require:

- Microsoft* Windows* 10 Pro operating system
- Powerful processors such as Intel® Core™ i7 and i9 systems
- 16 GB of memory or more
- The latest video cards
- Monitors with high refresh rates
- Specialized keyboards, mice, headsets, and chairs

Esports Associations in K-12

- High School Esports League (HSEL)
- North American Scholastic Esports Federation (NASEF)
- PlayVS

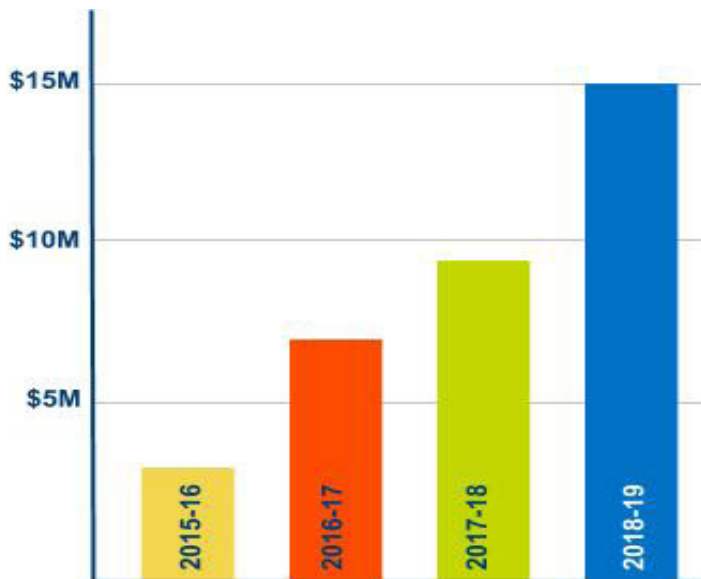
College and Career Readiness

The field of esports can offer students the academic and technical skills necessary to succeed in the academic and technical skills necessary in STEM and non-STEM related learning opportunities and careers. The North America Scholastic Esports Federation (NASEF) is developing a Career Technical Education (CTE) curriculum that involves a multi-year sequence of courses for students in grades 8-12 that will integrate core academic and technical knowledge with 25 courses, organized around four major esports sectors:

- Strategists
- Organizers
- Content creators
- Entrepreneurs

Esports College Scholarships

Source: *National Association of Collegiate Esports*



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Starting an Esports Program

When starting an esports program, high schools generally have little trouble attracting students. According to the Pew Research Center, 81% of teens have access to a gaming system and 72% of teens are actively playing video games outside of school. In fact, it's the students who are leading the effort to bring esports to their school around the globe. Many leagues provide resources to students to help get an esports club or team started. HSEL's handbook walks students through the entire process, covering topics such as identifying an advisor, hosting their first meeting, and preparing for their first competition.

Hardware Selection

Often schools adopt a gradual approach to implementing an esports program. They might start small, providing a space for students to bring in their own gaming consoles and compete against one another after school. As the esports team becomes more competitive, the natural next step is moving to PC-based gaming which allows for more powerful cross-platform competition.

Purchasing for esports programs is different than for other education technology. With esports, system performance can, in many cases, correlate directly to athlete performance in a game. As a result, purchasing tends to be more modular. Instead of purchasing all new devices, a school may begin with a powerful Intel® Core™ i7 or i9 device and upgrade the graphics card or add more memory over time.

Where to Get More Information

For more information about Intel® solutions for education: www.intel.com/education

To learn more about esports and K-12 education: www.k12blueprint.com/esports