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 ones. 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:

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

- 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.
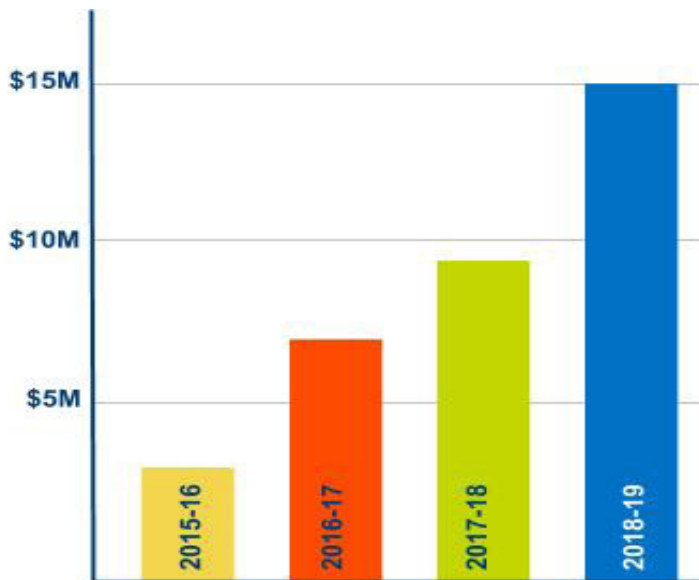
College and Career Readiness

The field of esports can offer students the academic and technical skills necessary to succeed 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

Starting an Esports Program

Esports College Scholarships

Source: *National Association of Collegiate Esports*

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, teams begin to purchase more dedicated PC gaming systems, monitors, networking, and even event displays that allow for enhanced competition.

Purchasing for esports programs is often different than for other education technology. With esports, system performance can correlate directly to athlete performance in a game. As a result, purchasing tends to be more modular—after the initial purchase of a powerful PCs based on Intel® Core™ i7 or i9 processors, schools and teams tend to upgrade individual components including the latest processors, faster graphics cards, and increased memory and storage. This type of incremental improvements can help teams to remain competitive 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

Additional resources about esports and gaming can be found at: www.intel.com/gaming