

The Dell Technologies logo, featuring the word "DELL" in a stylized font with a diagonal line through the "E", followed by the word "Technologies".

**DELL**Technologies



A “GETTING STARTED” PLAYBOOK

# Esports in Education

What you need to know to start a successful esports program—in K-12 or higher education.



# Esports in Education

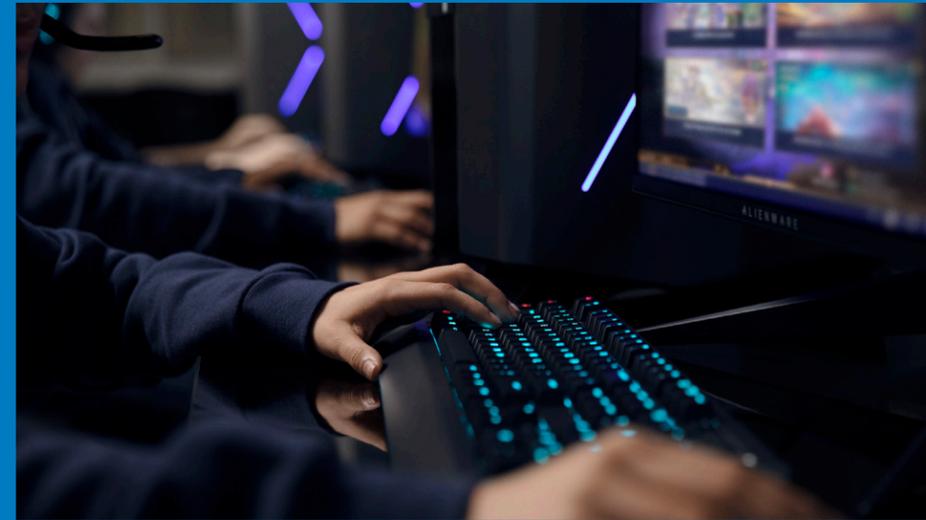
Esports is proving to be a game changer for students, schools, and the broader global community. More schools from K-12 through collegiate institutions are looking to get in on one of the fastest growing spectator sports and multi-billion-dollar industries around. Opportunities abound not just for recreational or competitive play, but also for those looking to play a role in supporting the program, from shoutcasting to video production to analytics. Esports is also having a tremendously positive impact in academics, especially in STEAM (Science, Technology, Engineering, Arts, and Mathematics). But many struggle with where to begin and what a successful program might look like for their school. If you find yourself in that camp, this playbook is meant for you. Herein we outline what questions you need to ask, how to go about getting the answers, who should be involved, how to map out a workable strategy, and how you can execute on that strategy to make the future of education and entertainment a reality for your school today.



## Esports is leading to new career and technical education (CTE) pathways

"Our approach to esports is to focus on college and career-readiness. As a result, every event that is implemented by our school district includes an educational component. College representatives and industry professionals meet with our students during our events, and provide ongoing mentoring at district campuses, and we also have a robust esports and event job-shadowing program. By using these innovative approaches to education, BISD is preparing its students for the types of careers offered by high tech companies."

**Dr. Leslie Bender Jutzi**, Chief Academic Innovation Officer, Burleson ISD (BISD)



## Table of Contents

**4** Esports in education: a passing fad or here to stay?

**6** Start the conversation.

**8** Map out a strategy.

**14** Get buy-in.

**15** Recommended configurations.

# Esports in education: a passing fad or here to stay?

Our vote is 'here to stay'. And here's why...

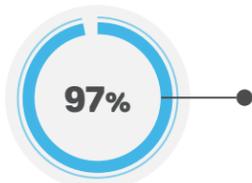
Esports is much more than competitive gaming. It's reshaping entertainment and presenting powerful new opportunities for growth in education from K-12 to higher education.

Students who engage in esports are developing real-world skills that prepare them for the future—including building student relationships, personal confidence, collaboration, and problem-solving skills.<sup>1</sup> Highly competitive multiplayer games like League of Legends, SMITE, and Overwatch are teaching students how to shift their focus from individual distinction towards the greater team goals. These experiences provide a new approach to engaging students in peer collaboration, communication, respect, as well as new opportunities for leadership.

The roles that exist in and around an esports program also go well beyond team play. Students who don't participate in playing the game can still take part in the success of the program. Students interested in computer science, for example, can learn how to analyze gameplay data to improve player skills, realizing that basic math and comparison metrics provide a higher-level understanding of the game dynamics to provide players with a competing edge. Others who have a keen interest in communications and social media might join as shoutcasters. The list goes on. With an esports program, students are introduced to state-of-the-art technological tools and skills that are actively preparing them for career pathways in STEAM disciplines, finance, marketing, graphic design, programming, health and wellness, and beyond.



## Is esports for everyone?



of teens play video games, according to a Pew Research Center report.<sup>2</sup> Due to its widespread popularity, esports is helping to break down barriers among diverse student groups, often including a part of the student population that may not otherwise join a team sport.

## Esports: A Numbers Game



### 557 MILLION VIEWERS

Esports can create new avenues to generate local and national media interest for your school. Did you know it's projected to attract a total viewership of 557 million by 2021. That's more viewers than every other U.S. professional sports league.<sup>3</sup>



### A \$1.4B INDUSTRY

Esports, having reached revenues of \$869 million in 2018, will soon be a billion dollar plus industry. It's also part of a much larger, two hundred billion dollar gaming industry.<sup>4</sup>



### LOW STARTUP COSTS

The start-up costs for esports programs are significantly lower than for most other school sports or activities.<sup>5</sup> For a start-up that's a fraction of most single sport entry and already has an overwhelming and quickly growing spectator interest, the positive benefits esports programs generate for schools is substantial.

# Start the conversation.

Like any new venture, start by gauging interest and initiating the flow of questions that will shape your esports program. These discussions are critical to constructing a curriculum, setting goals, and making sure your program operates and grows successfully. We recommend talking with:

## ✓ STUDENTS

The conversation must begin with the students, where interest in having an esports program is likely high. Consider creating a survey to gauge interest levels, and then bring those students who have expressed interest together to meet and discuss opportunities and goals. This can be especially helpful since these students are often equipped with the knowledge to lead these discussions and identify their wants and needs. At NYIT, for example, the esports team 'Cybears' was "born out of a student-led initiative,"<sup>6</sup> which has grown into a nationally recognized team seen on news networks including ABC, CBS, and FOX.<sup>7</sup>

## ✓ PARENTS & THE COMMUNITY

For K-12 schools, this includes talking to district leaders, school board, parents, and other community leaders. For higher education, this may include parents, administration, the athletic director, and department heads. Some may have some initial skepticism and legitimate questions that will help guide you to ensure your program starts off successful in everybody's eyes.

## ✓ IT

Esports differs from traditional sports in that its backbone of equipment and the "field" largely rely on your IT department and the technology needed. You'll want to understand what will be required from a technical perspective, including what types of gaming stations, network, infrastructure and supporting technology might be needed. Then establish a baseline, and set a goal of where you need to be in order to stand up your program.

## ✓ COLLEAGUES

Colleagues can offer valuable guidance and help. How do they see the program integrating with the academic curriculum? What impacts and concerns do they have about how this will affect the students? Should they be involved, and if so, what can they do to help?

## ✓ SCHOOLS WITH ESPORTS PROGRAMS

Because of how recent esports has grown into higher education and more recently in K-12, it can be extremely beneficial to identify those schools that have successful esports programs already, to understand first-hand what kind of lessons need to be learned and to build off their successes.

## ✓ ESPORTS LEAGUES & ORGANIZATIONS

These groups can be a direct source of knowledge in helping to grow your program and ensure you align with their policies and practices. For both K-12 and higher education, this can include the EG Federation, and for higher education, there is the National Association of Collegiate Esports (NACE). High school programs include PlayVS, the National Federation of State High Schools Associations and the High School Esports League, who published a 2019 Esports League Handbook.

## ✓ INDUSTRY LEADERS

As esports quickly grows, there are several consistent and experienced leaders within the industry, including technology brands like Dell Technologies and gaming companies like Skillshot Media, Hi-Rez Studios, Riot Games, and Blizzard Entertainment, that are skilled at understanding how to help you get started and build as you move forward on your journey.



### Tip: "Don't underestimate student interest."

"A key take away for you, if you're starting an esports program, do not underestimate the level of interest from students. Being a CTO for about 20 years, this was the biggest thing I ever underestimated in my career. In our first year, we settled on 75 students but we had to turn away 150. This next year we anticipate probably being 250 and grow from there."

**Kyle Berger**, Chief Technology Officer, Grapevine-Colleyville ISD

# Map out a strategy.

Using the answers and details provided from your conversations, you can start to define what the goals of your program will be and what's needed across four key areas: *academic, logistic, technology, and financial.*

## ACADEMIC GOALS

While esports is a sport, the connections with academic programs and applications in STEAM career fields and education are unparalleled from any other athletics program. To help identify what types of academic programs will be involved, ask questions like:

- What are the suggested career pathways for both students and faculty?
- What teaching and learning disciplines can be associated with the program?
- What new academic areas of study and research, such as design theory, could be introduced?
- What types of impact do you anticipate to your campus culture, community, and student success?
- What student performance metrics will you monitor as your program grows?



### Esports Education Resources for K-12

Dell Technologies offers resources, developed in collaboration with education and esports industry experts, to help jump-start K-12 esports programs:

- Esports Learning Guide for Teachers and Coaches
- Esports Professional Learning
- Esports Coaching Clinic

## THE LOGISTICS

Like all athletics programs, there is a list of questions to answer to plan the operation and growth of your esports program—starting with whether your program will exist within student affairs, athletics, intramural sports, or other areas. Subsequent logistical questions include:

### What games will you play?

This can include both the genre and type of games as well as the rating ascribed by the Entertainment Software Rating Board (ESRB). For example, many esports programs have rules that exclude first shooter games and will limit or not sponsor games that have an ESRB rating of Teen and above. The category or genre of esports games are useful metrics to help evaluate games. Popular designations include:

|                            |   |
|----------------------------|---|
| <b>FPS</b>                 | First Person Shooter, such as Counter-Strike  |
| <b>MOBA</b>                | Multiple Online Battle Arena, such as SMITE and League of Legends                                 |
| <b>RTS</b>                 | Real Time Strategy, such as Starcraft   |
| <b>Sports and Fighting</b> | Such as Smash Brothers and Street Fighter   |
| <b>Miscellaneous</b>       | For games that don't fit into any of these categories, such as Overwatch, Hearthstone, and Tetris |

### What leagues will you be involved with?

There are several leagues available both in higher education and in K-12. American Video Game League is for collegiate play, while PlayVS, the National Federation of State High Schools Associations, and the Esports High School League cater to high school teams. The EG Federation is for both. Beyond the league, identify the rules and regulations necessary for your students to join and compete in that league to ensure that they align with your overall program objectives.

### How long will the program run?

Depending on the goals of your program, this could mirror the seasons and events of the leagues you join, or follow your academic or athletic program's calendar.

### Who will be involved in the planning and execution?

When considering faculty, you should first identify a senior-level manager or administrator as a champion to lead the planning and execution. From there, you can start thinking about appointing or hiring dedicated coaching staff, a program supervisor for competitive and recreational play, administrative support for personnel, fiscal resource management, and facilities management, or even positions to support possible curriculum development or research opportunities related to esports and game design.



**Tip:** Think about involving talented student interns to fill needed roles.

### What are your policies and rules of engagement?

Many schools are aligning their programs and players with guidelines of similar sports programs. For collegiate play, for example, schools often follow NCAA rules even though esports is not sanctioned through NCAA. This can require students to maintain a minimum GPA, achieve attendance standards without excessive absences, and ensure accounts are in good standing with no outstanding dues, fees, fines. Your policies of engagement should also describe what types of games your program will pursue, as well as how you'll promote good user behavior, digital citizenship, and sportsmanship to maintain Title IX compliance.

### How many students will you accept into the program?

This includes the number of players, and those that will play a supporting role. If numbers of interested players exceed the number of gaming stations available, consider segmenting into groups with certain groups playing on given days. Or for those looking to have a competitive team, you might have to hold tryouts to identify the best players.

### Will you have local tournaments and how do you leverage prizes/awards?

While esports remains officially unsanctioned by the NCAA largely because of cash prizes and other awards, these remain effective ways to quickly build interest and discover talent. Hosting tournaments or events are also good ways to bring in new revenue streams for your school.

## How are esports different from other NCAA / traditional sports?

**Esports** games are the intellectual property of their developers, which are typically commercial enterprises. For example, Riot Games owns League of Legends.

**Esports** leagues typically offer scholarships, cash, or equipment prizes to the top three winners, which goes against the NCAA's policies and commitment to "amateurism," which is why esports are not a sanctioned sport.

**Esports** prizes can impact student financial aid qualifications and possibly have tax implications for your institutions, depending upon how prizes are received and managed.

---

*"One of the things that we like about esports is the way that students have applied a 21st century business model to it. As a result, high school students have an opportunity to play games and earn scholarships."*

**Dr. Leslie Bender Jutzi**, Chief Academic Innovation Officer, BISD



## Esports Title Ratings

The ESRB provides ratings for game titles that can be a useful metric when evaluating which esports to sanction. The two main appropriate ESRB ratings include Everyone (E) ratings which include games that may contain minimal cartoon, fantasy or mild violence, and Teen (T) ratings which include games that may contain violence, suggestive themes, crude humor, minimal blood and/or infrequent use of strong language.

### THE TECHNOLOGY

As its name suggests, a critical foundation of esports is the technology and tools that support its operation. The underlying infrastructure, computer devices, and end-to-end security open up a new level of networking that goes beyond most school's traditional education requirements while requiring a higher level of security that can extend to all of your architecture and keep everyone safe.

### What are the primary tools for supporting your esports infrastructure?

The basic components of your esports supporting technology are the gaming stations and a fast, reliable network. For more advanced programs, like those incorporating video production or for games run on premises, you may also consider adding dedicated servers and storage.

**Gaming Stations:** The required functionality and performance specifications will largely be dictated by the type of game(s) you choose, the number of players involved, and the type of play you engage in (whether club or competitive). Check with the gaming manufacturers to confirm the needed specifications. Some games may run well on laptops while others require dedicated high-performance gaming platforms like Alienware desktops outfitted with the needed specially-designed gaming keyboards, mice, and headsets.

**Network:** Because players often compete through a wired network connection, esports networks are typically optimized with 100Mb+ of unfiltered internet access to each gaming station to minimize the impact of network latency which negatively impacts play.



**Tip:** *Don't go wireless!* With interruptions likely from other devices, WiFi is too unstable to support the heavy demands from online gaming, especially multi-player, graphic-intensive games like those played in esports.

**Servers:** Depending upon the scope of your program, servers may be needed to run on-premise games while also supporting additional activities like video editing and production, shoutcasting and livestreaming, analyzing data from gameplay as well as running analytics from social media feeds and driving audience viewership experiences.

**Storage:** Esports require resources equipped to handle the storage and transfer of large volumes of data. Both flash and hard-disk storage are used for broadcasting, management for analytics, supporting arena or audience viewership experiences, and recording player statistics and gameplay for review, playback, and training.

## FINANCIAL CONSIDERATIONS

When making your financial plan, consider the areas outlined in the table below. As you do, it's important to understand that while the technological requirements for esports may appear substantial at the outset, "there's not a single sport within traditional sports that even comes close to [esports] low level of entry," according to the National Association of Collegiate Esports (NACE). Some schools like The University of Akron may be investing millions into esports facilities and equipment, but the average startup costs are only around \$43,000.<sup>5</sup> Depending on the equipment and experience your school has access to, there is often no need for high investment costs to get started. Likewise, due to the nature of the types of machines and technology esports programs are using, **it's easy to slowly scale** your equipment and budget as your program grows.

|  |  |   |
|--|--|---|
| <p><b>Faculty and Administration</b></p>           | <ul style="list-style-type: none"> <li>• Coaches and coaching staff</li> <li>• Program supervisor and potential supporting staff, these may separate for both competitive and recreational play</li> <li>• Administrative support for personnel, fiscal resource management, and facility management</li> <li>• Support for curriculum development and research opportunities associated with esports and game design</li> </ul> |   |
| <p><b>Technology</b></p>                           | <ul style="list-style-type: none"> <li>• Gaming stations</li> <li>• Servers</li> <li>• Storage</li> </ul>  | <ul style="list-style-type: none"> <li>• Networking</li> <li>• Video editing and data analytics software/hardware</li> </ul>  |
| <p><b>Player Equipment &amp; Miscellaneous</b></p> | <ul style="list-style-type: none"> <li>• School-branded jersey and other merchandise (like backpacks)</li> <li>• Marketing/logo design</li> <li>• Power strips</li> <li>• Room décor</li> <li>• Streaming webcams</li> </ul>   | <ul style="list-style-type: none"> <li>• Keyboards</li> <li>• Mice/mousepads</li> <li>• Headsets</li> <li>• Security locks</li> <li>• In-house events</li> <li>• Food/travel</li> <li>• Decals</li> </ul> |

## What to include in your gaming space or arena?

Gaming spaces don't need to start out big or include much more than the technology each player needs. Spaces can be as small as a 2 to 5-player kiosk or as large as 100-seat gaming arenas. Size depends on the scope and engagement of your program. In addition to gaming stations for each player, spaces that are used for competitive play can also include a coaches' station per team and large format displays incorporated around the space for audience viewing and/or coaching sessions. If you're introducing shoutcasting and broadcasting opportunities for your students, think about planning locations where commentary doesn't interrupt ongoing competition.



**Tip:** Think about leveraging your computer lab to get started. Often, the needed compute technologies and space are already available.

## TIPS FOR HIRING A COACH

Finding a coach for your esports players may be a new adventure, but it doesn't need to be a large investment or a difficult one, especially with the rise in esports popularity. Consider:



Local college students, retired professional gamers, and local competition winners.



An expert in a specific game, who will be more helpful than a "jack-of-all-trades." Someone who excels in one game will end up being more beneficial to helping your student's competitive skills than someone who claims coachable experience in several games.

**Did you know?** Several colleges and universities support or accept mentoring K-12 esports teams as college credit or community service hours.

# Get buy-in.

Interest may start with the students, but buy-in needs to come from students, parents, faculty, administration, and for K-12, school board and district leaders. Securing this kind of interest means overcoming the stigma and skepticism of how video games were perceived in the past, as a “loner’s activity,” and showing what esports has instead become: legitimate, challenging and engaging team sports that require students to interact both on campus as well as across the world.

Here are some interesting points to make as you build your case:

- Many students interested in esports are not involved in any other school or community activity. And when kids get involved the stats are impressive, indicating that a majority of students increase their overall grade-point-average, attendance, and extra-curricular engagement.<sup>7</sup>
- Unlike other athletics programs, esports is open to many students with mental and physical disabilities, and it does not discriminate and separate leagues by gender.
- It uniquely helps prepare students for a bright future by equipping them with skills that translate to disciplines across STEAM, business, health and wellness, marketing, finance, design, and more.
- Scholarships and grant opportunities are available for students in higher education, especially those preparing to major in technology and science fields like computer science or game design.

## Establish Partnerships with Industry Leaders

Navigating the complexities of implementing an esports program can seem daunting at first, but with the right help, it doesn’t need to be. Trusted companies like Dell Technologies and other entertainment and gaming experts are available to provide guidance and assistance. By working alongside schools like yours, whether K-12 or higher education, industry leaders can help ensure seamless and scalable deployments of interconnected esports technologies.

## Start Small, Grow as You Go

Starting your esports program small at the outset enables you to make the changes needed over the first few years of implementation and to develop a course curriculum that makes sense over time. Many teachers and officials involved at these schools quickly discover that they underestimated how popular the program would be. Therefore, it makes sense to set a goal or date after the first year to sit down and evaluate your program’s success and reevaluate your goals.

## Refine, Cross-Pollinate, and Extend Out

As your program matures and builds momentum, consider bridging across academic disciplines as well as strengthening connections or forming new ties with other schools and organizations. For K-12, you might align with other relevant courses, like marketing finance, graphic design, while for colleges and universities, you can involve other schools or research teams to explore esports. For example, the architecture curriculum at NYIT is collaborating with their esports program to help design their esports arena of the future.

## Gaming Solutions

Recommended configurations for your Esports platform



### BALANCE CREATION, ENTERPRISE MANAGEABILITY AND PERFORMANCE

#### Dell Precision Workstations

Dell Precision has over 20 years of innovations for power users. The Precision product team works directly with our customers and our strategic partners to deliver the most reliable and powerful PCs from Dell. The intelligent performance is driven by professional-level components and capabilities, featuring:

- Intel® Core™ and Xeon® processors
- Fast memory (including ECC memory options) and scalable storage
- Professional graphics from AMD and NVIDIA
- Exclusive Dell Precision Optimizer software to increase productivity
- Testing/certification process for optimized performance and mission critical reliability
- Dell Client Command Suite for commercial-level IT manageability
- Commercial product lifecycle management for predictable product transitions

Also, Precision provides for immersive productivity through our designs and capabilities to drive emerging technologies such as VR and AI and deliver outstanding performance for gaming development and consumption, including esports.



### THE ULTIMATE GAMING EXPERIENCES

#### Alienware Gaming PCs

The genesis of Alienware began over 20 years ago, in 1996, when a group of gamers decided to start what is today the world’s leading brand in high performance, award-winning, gaming PCs, and the leading innovator in the category. Based on a customer-first approach that feeds on a drive to innovate with the mission of delivering the most immersive gaming experience in the galaxy, Alienware systems feature:

- Advanced CPU Liquid Cooling (desktops) and Cryo-Tech (notebooks) cooling technologies for no-compromise gaming performance and overclocking capabilities for Intel® Core™ and AMD Ryzen™ processors alongside HyperX™ FURY XMP memory
- Alienware Command Center software to centralize the settings of your entire Alienware ecosystem including specific profiles for thermals, power, AlienFX™ lighting, per-game settings, and overclocking tools

Our fleet of Alienware systems and peripherals are also proudly used by esports leagues and professionals around the world including at the Alienware Training Facility for Team Liquid in Los Angeles. A second training facility is expected to celebrate a grand opening in Utrecht by early 2020.

## Gaming Peripherals

Enhance the esports experience with gaming peripherals.



### Alienware Gaming Monitors

Enhance the gaming experience as your players journey deeper into the game. Choose from a wide variety of sizes and formats, all with incredible resolution.



### Alienware Gaming Chairs

Alienware Gaming Chairs are a gamer's delight. The racing-style gaming chair features a wide range of adjustability that provides gamers with the best comfort and ergonomic support in every position for extended periods of time.



### Alienware 7.1 Surround Sound Headset

The Alienware 7.1 Gaming Headset combines best-in-class handpicked drivers and custom-designed acoustic chambers and earcups to deliver the audio experience that the developer intended, accurate surround sound positioning, and unparalleled clarity during even the most chaotic gameplay.



### Alienware Wired/Wireless Gaming Mouse

The Alienware Wired/Wireless Gaming Mouse is a no-compromise, fully featured gaming mouse created to provide gamers with the best wireless gaming experience.



### Alienware Low-Profile RGB Mechanical Gaming Keyboard

The Alienware Low-profile RGB Mechanical Gaming Keyboard is a full featured, maximum performance keyboard that incorporates the latest generation low-profile Cherry MX keys in a floating key architecture with anti-ghosting and per-key lighting.



#### Don't see what you need?:

Dell offers a wide range of gaming peripherals from Dell and industry leading partners.

## Infrastructure Solutions

Maximize performance of your IT environment for a seamless, secure gaming experience.



### GAMING AT THE VARSITY LEVEL

#### Dell EMC Networking Solutions

Dell EMC PowerSwitch open networking and firewall solutions deliver enterprise-grade high performance to support peak competitive gaming action.



### VIDEO CONTENT CREATING AND DISTRIBUTION

#### Dell EMC Isilon Storage and Dell Precision Workstations

Elevate streaming beyond casual for team promotion, recruiting, marketing, coaching, game analytics and more. Dell EMC Isilon storage, paired with Dell Precision workstations, supports real-time creation and distribution of compelling content across multiple formats including broadcasting or video on demand (VoD).



### ARENA CONTROL AND VIEWER EXPERIENCE

#### Dell Boomi and Dell EMC Infrastructure Solutions

Leverage the portfolio of Dell Technologies companies to provide your viewers with the best experience. Control the arena, integrate gaming stats into apps and systems and bring your viewers closer to the action.

It's an exciting time to be joining the fast-growing esports movement. We are living in the 'digital era,' and while digital transformation is a top priority across all industries—esports is a powerful embodiment of that transformation. Dell Technologies and Intel® are helping schools like yours make the digital transformation real today. From the world's leading higher education esports programs to schools starting out in K-12 esports, we have the transformative technology solutions and the experience to make the future of education and entertainment a reality in your school today.



## Learn more

[DellTechnologies.com/HiEd](http://DellTechnologies.com/HiEd)  
[DellTechnologies.com/K12](http://DellTechnologies.com/K12)



## Contact

your Dell Technologies  
Education Expert



## Follow us

@DellEMCEdu

1. Connected Learning Alliance: Not Your Traditional Athletics Program: The Value of Esports in Education. <http://bit.ly/2ZySPpe>
2. Pew Research Center: Teens, Social Media & Technology 2018. <https://pewrsr.ch/325Ffat>
3. Whitman Syracuse University: With Viewership and Revenue Booming, Esports Set to Compete with Traditional Sports. <http://bit.ly/30GdZPQ>
4. Newzoo: Newzoo's Esports Business Predictions for 2021. <http://bit.ly/2zIGHt4>
5. The James G. Martin Center for Academic Renewal: Collegiate Esports Programs Are Here to Stay. <http://bit.ly/2KWMo7m>
6. New York Institute of Technology Athletics: The Cybears. <http://bit.ly/2L4U0n2>
7. We are Teachers: Video Games Are the New Competitive Sport in Schools. <http://bit.ly/2NCsnVh>

THIS WHITE PAPER IS FOR INFORMATIONAL PURPOSES ONLY, AND MAY CONTAIN TYPOGRAPHICAL ERRORS AND TECHNICAL INACCURACIES. THE CONTENT IS PROVIDED AS IS, WITHOUT EXPRESS OR IMPLIED WARRANTIES OF ANY KIND.

Copyright © 2019 Dell Inc. or its subsidiaries. All Rights Reserved. Dell Technologies, Dell, EMC, Dell EMC and other trademarks are trademarks of Dell Inc. or its subsidiaries. Other trademarks may be trademarks of their respective owners.