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Empowering Students Through Esports: A Pilot Study on STEAM Education and Academic Growth with Easterseals Lonestar

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About The Author

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Esports has emerged as an important tool for fostering both academic and social development for students, including neurodivergent individuals. By combining structured environments, teamwork, and strategy-based challenges, competitive inclusive gaming offers an innovative approach to education that meets the unique needs of students. Esports not only engages these students in tailored learning experiences but also helps cultivate critical social skills, leadership, and adaptability, making it a valuable resource for learners of all abilities.

Research underscores emerging educational and career benefits of esports participation. Chaarani et al. (2022) found that children who played video games outperformed non-gamers on various cognitive skill assessments, highlighting the potential of gaming to enhance intellectual development. Similarly, Anderson et al. (2018) identified esports as a gateway to science, technology, engineering, art, and math (STEAM) education and careers, sparking interest and building expertise in science, technology, engineering, arts, and mathematics. Additionally, Researchers found female students who participated in gaming were more likely to enter a STEM field (University of Surrey, 2018). Esports also facilitates the development of practical, transferable skills that are highly valued in the workforce, such as collaboration, communication, and leadership (Zhong et al., 2022). For students with autism, inclusive esports provide an inclusive platform to strengthen social and cognitive skills, offering a supportive environment for personal growth and connection (Nielsen et al., 2021). These combined benefits position esports as an innovative and impactful tool for advancing education and preparing students for future success.

# An Overview of the Easterseals Lonestar Esports Pilot Program

In June 2023, Easterseals Lonestar launched a $100,000 esports STEAM workforce development pilot funded by the Texas Workforce Commission (TWC) to engage at-risk high school students of all abilities.[1] This one-year pilot program partnered with local school districts to recruit students for an esports league that integrated opportunities to explore STEAM careers.

A critical element initiative was its commitment to inclusivity, ensuring accessibility for both neurotypical and neurodivergent students. The program created a structured and predictable environment tailored to the needs of individuals with autism and other neurodevelopmental conditions.

Easterseals partnered with three Austin Independent School District schools—Manor New Tech High School, Cedars International Academy High School, and Navarro Early College High School—recruiting 39 students to form 11 esports teams. The program delivered 60 hours of STEAM-related instruction, hosted numerous practices and three competitions, and included a diverse group of participants, with 10% being neurodivergent, 69% identifying as Hispanic, and 13% as female.

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(1) The Texas Workforce Commission's grant was instrumental in launching the Easterseals Lonestar Esports Initiative. With the support of TWC, the initiative was able to develop a robust curriculum focused on combining gaming with educational outcomes, particularly in STEAM fields. The initiative sought to engage students who may not traditionally be drawn to academic subjects, using their interest in gaming as a way to teach valuable skills such as coding, game design, and project management. The backing from TWC also ensured that the program could provide the necessary resources to schools, including equipment, software, and technical support. The Texas Workforce Commission's involvement underscores a growing recognition that esports can be a powerful educational tool, especially for underserved and neurodiverse populations. By funding the Easterseals Lonestar Esports Initiative, TWC made a strategic investment in the future workforce by equipping students with the skills necessary to succeed in the modern digital economy. This model demonstrates how public-private partnerships, supported by governmental funding, can lead to innovative educational reforms that are accessible to a wide range of learners.

Chart 1. Student Participants in the Easterseals Lonestar Esports Program
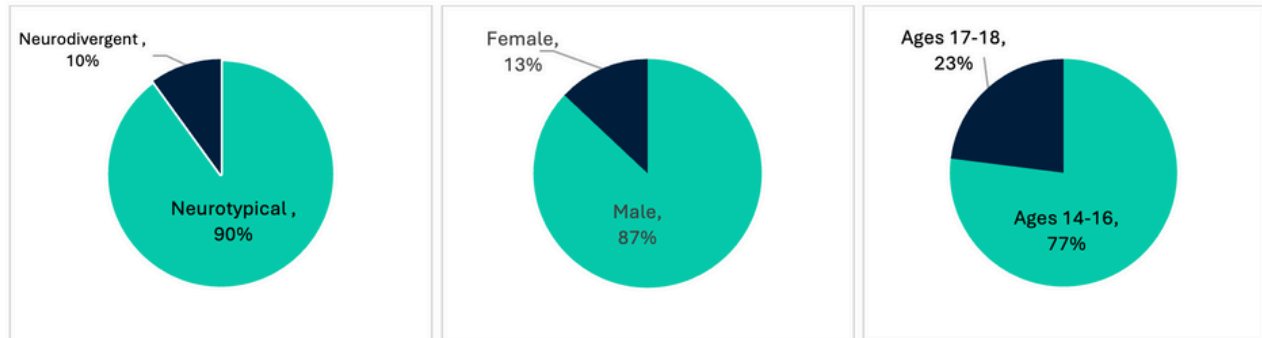
Students engaged in esports practices, scrimmages, and tournaments while participating in STEAM-focused activities, including coding, game design, and entrepreneurship. Leadership development was emphasized, with students creating team structures, managing tournaments, and hosting events like a student-led end-of-year competition. The program exceeded its goals for sessions, instructional hours, and competitions, while maintaining strong academic support through regular grade checks.

Key partnerships with industry leaders such as Epic Games and HyperX connected students with professionals in the gaming and STEAM industries, offering insights and mentorship. Students also interacted with local STEAM career volunteers and guidance counselors, building individualized post-secondary plans.

A standout feature of the initiative was its use of the STEAM Stack education platform, enabling students to learn coding and other technical skills interactively. By integrating these skills into the immersive esports' environment, students applied theoretical knowledge to practical scenarios, such as game development, digital design, and team collaboration. This approach bridged the gap between classroom learning and real-world application, making education more tangible and engaging, especially for students who struggle in traditional academic settings.

Findings of the Easterseals Esports Pilot Program

Upon the completion of the esports pilot program, Easterseals Lonestar conducted a comprehensive survey of participants, including students, teachers, and school administrators. The survey provided valuable insights into the program's strengths, its impact on participants, and areas for improvement as it scales for future implementation.

Overall Satisfaction and Program Effectiveness

The survey revealed high levels of satisfaction among participants. Over 85% of students reported significant improvements in their leadership, teamwork, and communication skills. Additionally, 90% expressed a stronger interest in STEAM-related careers, particularly in areas such as game design, coding, and digital media production. This indicates that the program successfully met its goal of exposing students to practical applications of STEAM skills through esports.

Further underscoring the program's effectiveness, 95% of students indicated they would recommend the esports program to their peers. Teachers and administrators echoed these sentiments, with 80% of participating schools expressing interest in expanding their esports programs in the next academic year. The overwhelmingly positive feedback highlighted the program's ability to engage students in meaningful ways, fostering both personal development and academic curiosity.

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Participant Interest in STEAM Careers

The pilot program demonstrated a clear impact on students' interest in STEAM careers. Prior to the program, only a small percentage of students had exposure to opportunities in game design, coding, and related STEAM fields. By the end of the program, participants reported a heightened awareness of these fields and the pathways to pursue them. Guest speakers, hands-on instruction, and immersive esports-related activities contributed to this shift, making technical careers more accessible and appealing to students of all abilities.

Chart 2. Student Participant Interest in STEM Careers After Program
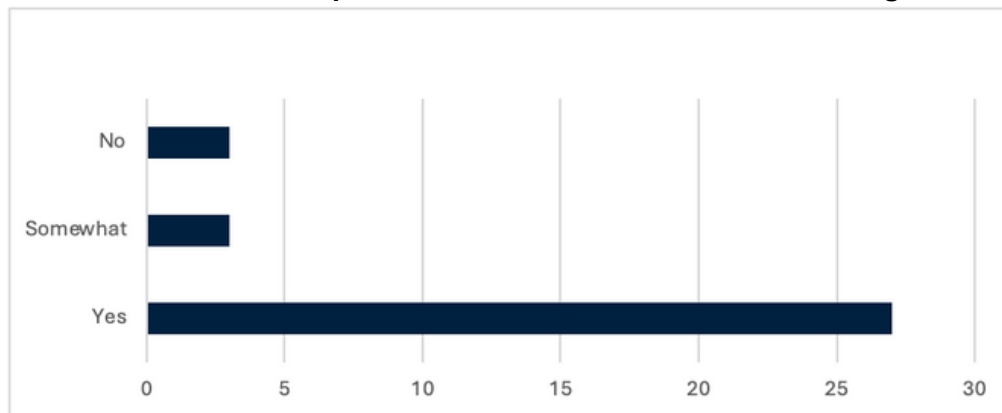
Other Types of Student Participant Interest After Program

Survey results showed that participants developed a sustained interest in esports and STEAM fields even after the program concluded. Students particularly valued opportunities to take on leadership roles, organize tournaments, and work collaboratively with peers. Teachers noted that students who previously struggled with engagement in traditional classroom settings found the program's structure and content more motivating and relevant to their interests.

Chart 3. Student Participant Interest After Program
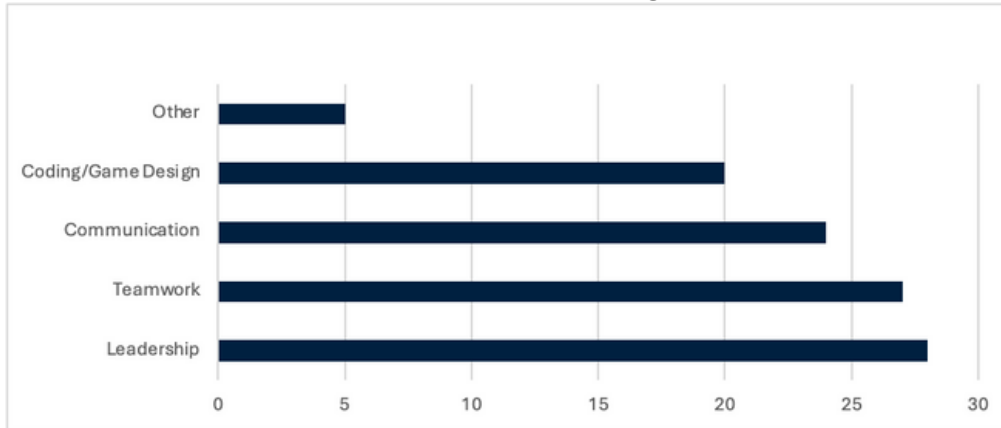
Impact on Academic Performance

The pilot program also tracked students' academic progress throughout the year. Regular academic performance checks revealed a positive correlation between participation in the esports program and improved academic outcomes. Over 70% of students stated they maintained or improved their grades during the program, particularly in subjects related to math, science, and digital literacy. Teachers attributed this progress to the program's focus on teamwork, discipline, and problem-solving—skills that transfer directly to academic success.

Chart 4. Program Impact on Academic Performance
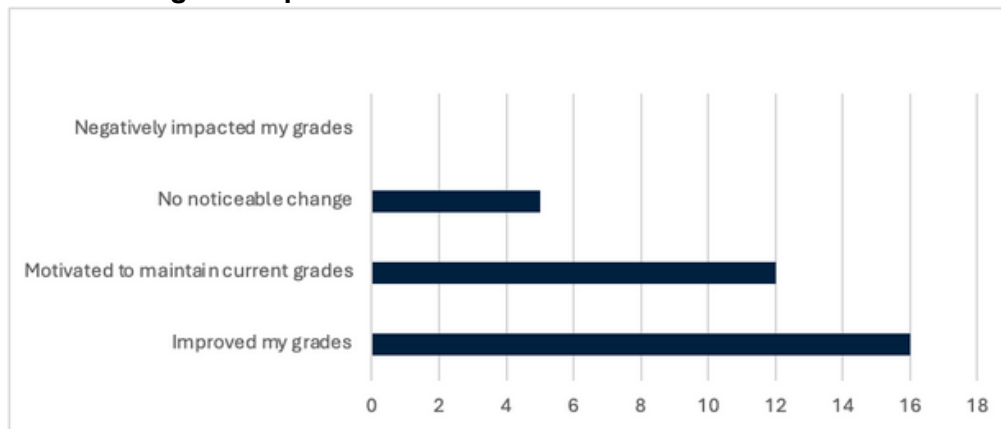
Recommendations

The Easterseals Lonestar Esports pilot has demonstrated success in its initial implementation, offering students—especially neurodivergent individuals—a unique opportunity to engage in an inclusive, educational, and socially enriching environment. While the pilot program was successful,[1] the survey highlighted key areas for growth. Recruitment efforts could be further enhanced to reach a broader pool of students, particularly those who may not traditionally engage in STEAM activities.

The following recommendations are designed to further enhance the program's impact, address key challenges, and position the initiative for future growth. Each recommendation is rooted in the insights gained from the pilot program, with a focus on improving recruitment, fostering partnerships, and ensuring long-term sustainability. These recommendations provide a strategic roadmap for scaling the program while maintaining its core mission of inclusivity and skill-building in the evolving world of esports and technology.

1 Expand Recruitment Efforts for a More Diverse Student Body

The pilot program met about 52% of its participation[2] goals, with 13% of participants being female and 10% neurodiverse. To create a truly inclusive program, deeper engagement with school administrators and district leaders is essential. By involving these stakeholders, the program can be more widely promoted among students and parents, including those with disabilities. Highlighting the academic and social benefits of esports can attract neurodivergent students who may not have access to other inclusive activities.

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[2] There were challenges in recruiting students due largely to the complexities of launching such a program, especially one aimed at integrating neurodivergent and neurotypical students through a structured esports curriculum as well as a delayed start to the program. As a result, the program initially struggled to meet its enrollment target of 75 students. Despite these early obstacles, the program showed significant growth by August, with a total enrollment of 39 students—or 52% of the target.

2 Maintain Flexibility in Program Design

Flexibility and adaptability were critical to the program's success, allowing leadership to adjust strategies in real time. For example, intensified recruitment efforts in underserved communities boosted enrollment and improved diversity. Continuing to adopt this flexible approach will ensure that the program can respond to emerging challenges and opportunities, reinforcing its mission of providing equitable educational opportunities for all students.

3 Foster Partnerships with Community and Industry Leaders

Building partnerships with community organizations, local nonprofits, and industry leaders will be crucial for sustaining the program. Collaborating with tech and gaming companies can enhance the program's appeal by providing mentorships, internships, and sponsorships. Additionally, leveraging digital platforms and social media campaigns can raise awareness about the program's benefits, encouraging greater involvement from students, parents, and schools.

4 Advocate for Dedicated Funding Streams

Despite its success, the program was discontinued due to changes in eligibility criteria. Policymakers should establish dedicated funding streams or modify eligibility criteria to ensure that promising programs like this can continue. By highlighting the program's ability to create an inclusive environment while equipping students with essential STEAM skills to meet workforce demands, advocates can make a compelling case for ongoing support.

5 Develop Longitudinal and In-Depth Data Collection to Measure Impact

To assess and improve the program's effectiveness, a robust system for longitudinal data collection is essential. Tracking students over time will provide insights into the long-term impact on academic performance, social development, and career readiness. Additionally, more detailed data collection on program success—such as participant feedback, skill acquisition metrics, and post-program outcomes—will help refine strategies, secure funding, and demonstrate the program's value to stakeholders.

The Easterseals Lonestar esports pilot's growth and development demonstrate that esports, when thoughtfully integrated into the educational system, can provide neurodivergent and neurotypical students with valuable academic, social, and leadership opportunities. By utilizing gaming as an educational tool, the program ensures that students are not only developing expertise in STEAM subjects but also acquiring the interpersonal and leadership skills required to thrive in collaborative work environments. This is particularly important as the modern workforce increasingly values employees who can navigate complex social dynamics and contribute to team-based projects.

With 85% of students reporting improved leadership and teamwork skills, 90% expressing greater interest in STEAM careers like game design and coding, 95% of students saying they would recommend the program to peers, and 80% of schools expressing interest in expanding their esports programs, these findings highlight the program's effectiveness in fostering personal and academic development while emphasizing the need for refined recruitment and communication strategies as it scales.

The Easterseals Lonestar esports pilot program proved to be an impactful initiative, demonstrating measurable success in developing students' leadership, technical skills, and academic performance. As the program moves forward, these findings provide a strong foundation for refining and scaling the initiative to reach even more students and schools across the region.

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Acknowledgements

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About The Community Impact Policy Institute

The Community Impact Policy Institute is the thinktank and research arm of The Fedcap Group, conducting leading research to provide solutions in breaking down barriers to economic well-being. The Institute, and its partners, have conducted groundbreaking analysis and solutions to many pressing needs including building wage and wealth for disadvantaged communities, effects of minimum wage increases, early childhood education, employment opportunities for individuals with disabilities, socially responsible investing, immigration and its impact on the economy, and more.

The Community Impact Policy Institute also provides technical assistance and training, products and hands on support to government agencies and community-based providers working to change their delivery of services and enhance the community integration of people with individuals with barriers to employment.

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