



Accessible Recreation: Playing Electronic Games Independently to Increase Health & Social Connection

Assistive Technology for Kansans

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Gaming Around the World

- 2.47 billion gamers in the world by the end of 2019
- 5.9% Year-on-Year (YoY) steady growth in gaming
- 2.6 billion gamers forecast for 2020
- \$165 billion market globally for games

Electronic Gaming in the United States (1/3)

- 183 million active gamers in the U.S. who report playing regularly.
- Gamers are civically involved, exercise more than non-gamers, and get the same amount of sleep as non-gamers.
- 65% of American adults are gamers with an average age of 33 years old.

Electronic Gaming in the United States (2/3)

- 3 out of 4 American households have a gamer.
- 64% of American households own a gaming device.
- Over 70% of parents believe playing games is educational.
- Nearly 60% of parents play video games with their children at least once a week.
- 65% of women ages 10-65 play mobile games.

Electronic Gaming in the United States (3/3)

- 54% of gamers are male and 46% are female.
- Gamers spent 1-2 hours a day gaming (average of 7.11 hours per week).
- Americans over 60 spend almost an hour a day playing games (average of 5.63 hours per week).

The Social and Shared Experience of Gaming

- 2 out of 3 gamers play with others.
- Adult gamers play with their friends an average of 4.8 hours online per week or 3.5 hours in person per week.
(Remember they reported playing slightly over 7 hours per week!)

How are People Playing: What Devices and Platforms are They Using?

- Browser PC games, console games, downloaded/boxed PC games, smartphone games, and tablet games.
- Console games forecast to have 38% of the market share in 2020 (up from 36% in 2019).
- Sony PlayStation 4 (18%), Nintendo Switch (17.05%), Xbox One (6.96%) and Nintendo 3DS (3.5%).

What Do We Know About Gaming: Positive Effects for Children

- Better problem-solving skills
- Sharpened eye hand coordination
- Enhanced critical thinking skills from evaluating potential actions
- Working as a team
- Practice setting and obtaining goals

What Do We Know About Gaming: Research Suggests That Playing Games Across Multiple Genres Promotes Mental Health

- Action/adventure
- Active/physical
- Educational
- Puzzle
- Role-Playing
- Simulation
- Trivia

Popular Genres and Games by Age Groups

	Male	Female	Male	Female
Millennials	Action, Shooters & Sports Games	Casual & Action Games	God of War, Madden NFL and Fortnite	Candy Crush, Assassin's Creed, Tomb Raider
Gen-Xers	Sports, Racing & Shooters	Casual Games, including Puzzle and Classic Arcades	Forza, NBA 2K, Call of Duty	Tetris & Pac-Man
Baby Boomers	Card, Puzzle and Virtual Board Games	Card, Puzzle & Virtual Board Games	Solitaire & Scrabble	Mahjong & Monopoly

More Information About Gamers

- Over half of gamers identify as casual gamers—playing titles like Tetris, Candy Crush, and Solitaire.
- Men are more likely than women to identify as expert gamers and aspiring professionals.
- Women are more likely to categorize themselves as casual gamers.

Reasons People Give for Playing Games (1/2)



Reasons People Give for Playing Games (2/2)

- Enjoyment
- Stimulation
- Learn new skills or information
- Relaxation
- The Epic Win—completing a quest
- Social and shared experience—the importance of social supports to our overall well-being

Important Takeaway

- Research shows that we like people better after we've played a game with them. Gaming together creates a shared interest and gives everyone something to talk about and a way to spend time together.

A Little Off Track But Interesting to Know....

- Professional gamers can do very well financially.
 - Average pro gamers earn salaries ranging from \$1,000-\$5,000 per month.
 - Highest paid League of Legends players can earn \$15,000 per month plus prize money.
 - Prize money at the 2019 International eSports tournament totaled 34.33 million dollars.
 - Highest earning gamer in the World - NOtail, real name Johan Sundstein, at age 26 earned \$6,889,592 in 108 tournaments.

Gamers with Disabilities

- AbleGamers is an organization that advocates for gamers who have disabilities.
- It is estimated that 33 million gamers have disabilities.
- Gamers with disabilities can attain mastery levels of play. Sightless Kombat, a legally blind gamer or GWS in his twenties, hit the top level in the game Killer Instinct. Sven Van de Wege also a GWS beats nationally ranked players in the game Street Fighter.
- Eddy Webb, Role Play Game writer who has a hearing loss designed Vampire: The Masquerade and Pugmire.

What Would Help You Play Games More Effectively?

- Different controller or access method
- Different game console
- Accessible format
- Introduction or access to a range of games
- Individualized instruction about playing games (mentors for specific games)
- People to play games with
- Access to additional games and equipment

Assistive Technology for Kansans Equipment Loan Program

- Had accessible indoor and outdoor recreation, sports and leisure equipment such as: cameras and mounts, hand craft supports, adapted fishing and hunting equipment.
- Had switches and mounts to loan.
- But did not have any gaming equipment.

Kansas Christopher & Dana Reeve HIATT Application

- Purchase gaming equipment for assessment and loan
 - Gaming Consoles
 - Accessible Peripherals and Switches



What Will We Do?

- 6 staff from 3 regional AT Sites, ATK management, and key stakeholders (N=16) will assemble gaming kits (consoles, switch kits, games across genres) and conduct a research study to examine the possible benefits of accessible gaming.
- Work with 30 individuals who have spinal cord injuries, stroke that resulted in hemiparesis, cerebral palsy, progressive neurological impairment or traumatic brain injury. All individuals will have fine motor limitations.

What is Our Process?

- In-home and center-based assessment which will include a gaming intake form to identify their abilities, gaming experience, interests and concerns.
- Demonstrate accessible gaming devices, switches, consoles, and games and match gamers interests and activation needs to gaming equipment
- Identify specific activation needs and modify controllers as needed to promote fast action play and independence. Identify mentors and additional game supports.

Taking Gaming to the Next Level

- Goal is to master independent use of accessible controllers, switches or built-in accessibility features in games to complete actions in single and multi-player games.
- When independent use of selected peripherals in a single game setting is mastered, a family member or friend will be added to move to multi-player level.

Building the Gaming Network

- Activities to promote multi-player gaming will be conducted. Data on the number of family members, friends, and virtual peers involved and the amount of time spent playing games will be collected.
- Equipment will be loaned to participants and ATK staff will assist the individuals in locating funding for preferred gaming equipment.

Brief overview of ATK's Gaming Initiative

- For more information stay tuned ---
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- Thank you, Christopher & Dana Reeve Foundation!