Is playing Video Games Good or Bad for You?

Video games are frowned upon by parents as time-wasters, and worse, some education experts think that these games corrupt the brain. Violent video games are easily blamed by the media and some experts as the reason why some young people become violent or commit extreme anti-social behavior. But many scientists and psychologists find that video games can actually have many benefits – the main one is making kids smart. Video games may actually teach kids high-level thinking skills that they will need in the future.

"Video games change your brain," according to University of Wisconsin psychologist C. Shawn Green. Playing video games change the brain's physical structure the same way as do learning to read, playing the piano, or navigating using a map. Much like exercise can build muscle, the powerful combination of concentration and rewarding surges of neurotransmitters like dopamine strengthen neural circuits that can build the brain.

Below are the good and bad effects of video games, according to researchers and child experts:

Positive Effects of Video Games

- When your child plays video games, it gives his brain a real workout. In many video games, the skills required to win involve abstract and high level thinking. These skills are not even taught at school. Some of the mental skills enhanced by video games include:
    - o **Following instructions**   o **Problem solving and logic** – When kids play games such as The Incredible Machine, Angry Birds or Cut The Rope, they train their brain to come up with creative ways to solve puzzles and other problems in short bursts   o **Hand-eye coordination, fine motor and spatial skills.** In shooting games, the character may be running and shooting at the same time. This requires the real-world player to keep track of the position of the character, where he/she is heading, their speed, where the gun is aiming, if the gunfire is hitting the enemy, and so on. All these factors need to be taken into account, and then the player must then coordinate the brain's interpretation and reaction with the movement in their hands and fingertips. This process requires a great deal of eye-hand coordination and visual-spatial ability to be successful. Research also

suggests that people can learn iconic, spatial, and visual attention skills from video games. There have been even studies with adults showing that experience with video games is related to better surgical skills. Also, a reason given by experts as to why fighter pilots of today are more skillful is that this generation's pilots are being weaned on video games.   o   **Planning, resource management and logistics.** The player learns to manage resources that are limited, and decide the best use of resources, the same way as in real life. This skill is honed in strategy games such as SimCity, Age of Empires, and Railroad Tycoon. Notably, The American Planning Association, the trade association of urban planners and Maxis, the game creator, have claimed that SimCity has inspired a lot of its players to take a career in urban planning and architecture.   o   **Multitasking, simultaneous tracking of many shifting variables and managing multiple objectives.** In strategy games, for instance, while developing a city, an unexpected surprise like an enemy might emerge. This forces the player to be flexible and quickly change tactics.   o   **Quick thinking, making fast analysis and decisions.** Sometimes the player does this almost every second of the game giving the brain a real workout. According to researchers at the University of Rochester, led by Daphne Bavelier, a cognitive scientist, games simulating stressful events such as those found in battle or action games could be a training tool for real-world situations. The study suggests that playing action video games primes the brain to make quick decisions. Video games can be used to train soldiers and surgeons, according to the study.   o   **Accuracy** – Action games, according to a [study by the University of Rochester](#), train the brains of players to make faster decisions without losing accuracy. In today's world, it is important to move quickly without sacrificing accuracy.   o   **Strategy and anticipation** – Steven Johnson, author of Everything Bad is Good For You: How Today's Popular Culture is Actually Making Us Smarter, calls this "telescoping." Gamers must deal with immediate problems while keeping their long-term goals on their horizon.   o   **Situational awareness** – – Defense News reported that the Army include video games to train soldiers improve their situational awareness in combat. Many strategy games also require players to become mindful of sudden situational changes in the game and adapt accordingly.   o   **Developing reading and math skills** – Young gamers force themselves to read to get instructions, follow storylines of games, and get information from the game texts. Also, using math skills is important to win in many games that involves quantitative analysis like managing resources.   o   **Perseverance** – In higher levels of a game, players usually fail the first time around, but they keep on trying until they succeed and move on to the next level.   o   **Pattern recognition** – Games have internal logic in them, and players figure it out

by recognizing patterns.   o   **Estimating skills**   o   **Inductive reasoning and hypothesis testing** – James Paul Gee, professor of education at the University of Wisconsin-Madison, says that playing a video game is similar to working through a science problem. Like students in a laboratory, gamers must come up with a hypothesis. For example, players in some games constantly try out combinations of weapons and powers to use to defeat an enemy. If one does not work, they change hypothesis and try the next one. Video games are goal-driven experiences, says Gee, which are fundamental to learning.   o   **Mapping** – Gamers use in-game maps or build maps on their heads to navigate around virtual worlds.   o   **Memory** – Playing first person shooter games such as Call of Duty and Battlefield series enables players to effectively judge what information should be stored in their working memory and what can be discarded considering the task at hand, according to a study published in the Psychological Research.   o   **Concentration** – A study conducted by the Appalachia Educational Laboratory reveal that children with attention-deficit disorder who played Dance Dance Revolution improve their reading scores by helping them concentrate.   o   **Improved ability to rapidly and accurately recognize visual information** – A study from Beth Israel Medical Center NY, found a direct link between skill at video gaming and skill at keyhole, or laparoscopic, surgery.   o   **Reasoned judgments**   o   **Taking risks** – Winning in any game involves a player's courage to take risks. Most games do not reward players who play safely.   o   **How to respond to challenges**   o   **How to respond to frustrations**   o   **How to explore and rethink goals**   o   **Teamwork and cooperation when played with others** – Many multiplayer games such as Team Fortress 2 involve cooperation with other online players in order to win. These games encourage players to make the most of their individual skills to contribute to the team. According to a survey by Joan Ganz Cooney Center, teachers report that their students become better collaborators after using digital games in the classroom.   o   **Management** – Management simulation games such as Rollercoaster Tycoon and Zoo tycoon teach players to make management decisions and manage the effective use of finite resources. Other games such as Age of Empires and Civilization even simulate managing the course of a civilization.   o   **Simulation, real world skills.** The most well known simulations are flight simulators, which attempt to mimic the reality of flying a plane. All of the controls, including airspeed, wing angles, altimeter, and so on, are displayed for the player, as well as a visual representation of the world, and are updated in real time.

- Video games introduce your kid to computer technology and the online world. You should recognize that we are now living in a high-tech, sophisticated world. Video games make your kid adapt and be comfortable with the concepts of computing. This is particularly important for girls who typically are not as interested in high technology as much as boys.
- Video games allow you and your kid to play together and can be a good bonding activity. Some games are attractive to kids as well as adults, and they could be something that they share in common. When your child knows more than you, he can teach you how to play and this allows you to understand your child's skills and talents.
- Video games make learning fun.   Your kid likes games because of the colors, the animation, the eye candy, as well as the interactivity and the challenge and the rewards of winning. The best way to learn is when the learner is having fun at the same time. That's why video games are natural teachers. Having fun gives your kid motivation to keep on practicing, which is the only way to learn skills.
- Video games can make your kid creative. A study by the Michigan State University's Children and Technology Project found a relation between video game playing and greater creativity, regardless of gender, race or type of video game played. (In contrast, use of cell phones, the Internet and computers other than video games was unrelated to creativity, the study found).
- Video games can improve your kid's decision making speed. People who played action-based video and computer games made decisions 25% faster than others without sacrificing accuracy, according to a study from the University of Rochester. Other studies suggests that most expert gamers can make choices and act on them up to six times a second—four times faster than most people, and can pay attention to more than six things at once without getting confused, compared to only four by the average person. Surprisingly, the violent action games that often worry parents most had the strongest beneficial effect on the brain, according to cognitive neuroscientist Daphne Bavelier, who studies the effect of action games at Switzerland's University of Geneva and the University of Rochester in New York.
- Video games increase your kid's self-confidence and self-esteem as he masters games.   In many games, the levels of difficulty are adjustable. As a beginner, your kid begins at the easy level and by constant practicing and slowly building skills, he becomes confident in handling more difficult challenges. Since the cost of failure is lower, he does not fear making mistakes. He takes more risks and explores more. Your kid can transfer this attitude to real life.

- Games that involve multiple players encourage your child to work cooperatively to achieve his goals. Your kid learns to listen to the ideas of others, formulate plans with other kids, and distribute tasks based on skills. Some online games are even played internationally, and this can introduce your kid to players of different nationalities and cultures. This fosters friendships among different people.
- Video games that require your kid to be active, such as Dance Dance Revolution and Nintendo Wii Boxing give your kid a good workout. When playing these active games for 10 minutes, your kid spends energy equal to or exceeding that produced by spending the same amount of time on a three miles an hour treadmill walk.
- Kids are not necessarily drawn to video games because of their violence. The attraction lies in their being rewarded by awesome displays of explosions, fireworks, and yes, blood splattering. Also, violent games have the most emotional appeal for kids. But these factors are only secondary to what kids actually enjoy in these games – the opportunity to develop and master skills and have the freedom to make choices in the game universe.
- Violent video games may act as a release of pent–up aggression and frustration of your kid. When your kid vents his frustration and anger in his game, this diffuses his stress. Games can provide a positive aggression outlet the same way as football and other violent sports.
- Playing video games is safer than having your teens do drugs, alcohol and street racing in the real world.

Negative Effects of Video Games

- Most of the bad effects of video games are blamed on the violence they contain. Children who play more violent video games are more likely to have increased aggressive thoughts, feelings, and behaviors, and decreased prosocial helping, according to a scientific study (Anderson & Bushman, 2001). The effect of video game violence in kids is worsened by the games' interactive nature. In many games, kids are rewarded for being more violent. The act of violence is done repeatedly. The child is in control of the violence and experiences the violence in his own eyes (killings, kicking, stabbing and shooting). This active participation, repetition and reward are effective tools for learning behavior. Indeed, many studies seem to indicate that violent video games may be related to aggressive behavior (such as Anderson & Dill, 2000; Gentile, Lynch & Walsh, 2004). However, the evidence is not consistent and this issue is far from settled.   Many experts

including Henry Jenkins of Massachusetts Institute of Technology have noted that there is a decreased rate of juvenile crime whch coincides with the popularity of games such as Death Race, Mortal Kombat, Doom and Grand Theft auto. He concludes that teenage players are able to leave the emotional effects of the game behind when the game is over.   Indeed there are cases of teenagers who commit violent crimes who also spend great amount of time playing video games such as those involved in the Columbine and Newport cases. It appears that there will always be violent people, and it just so happen that many of them also enjoy playing violent video games.

- Too much video game playing makes your kid socially isolated. Also, he may spend less time in other activities such as doing homework, reading, sports, and interacting with the family and friends.
- Some video games teach kids the wrong values. Violent behavior, vengeance and aggression are rewarded. Negotiating and other nonviolent solutions are often not options. Women are often portrayed as weaker characters that are helpless or sexually provocative.
- Games can confuse reality and fantasy.
- Academic achievement may be negatively related to over-all time spent playing video games. Studies have shown that the more time a kid spends playing video games, the poorer is his performance in school. (Anderson & Dill, 2000; Gentile, Lynch & Walsh, 2004). A study by Argosy University's Minnesota School on Professional Psychology found that video game addicts argue a lot with their teachers, fight a lot with their friends, and score lower grades than others who play video games less often. Other studies show that many game players routinely skip their homework to play games, and many students admitted that their video game habits are often responsible for poor school grades.
- Although some studies suggest that playing video games enhances a child's concentration, other studies, such as a 2012 paper published in Psychology of Popular Media Culture, have found that games can hurt and help children's attention issues — improving the ability to concentrate in short bursts but damaging long-term concentration.
- Video games may also have bad effects on some children's health, including obesity, video-induced seizures. and postural, muscular and skeletal disorders, such as tendonitis, nerve compression, carpal tunnel syndrome.
- When playing online, your kid can pick up bad language and behavior from other people, and may make your kid vulnerable to online dangers.
- A study by the Minneapolis-based National Institute for Media and the

Family suggests that video games can be addictive for kids, and that the kids' addiction to video games increases their depression and anxiety levels. Addicted kids also exhibit social phobias. Not surprisingly, kids addicted to video games see their school performance suffer.

Kids spending too much time playing video games may exhibit impulsive behavior and have attention problems. This is according to a new study published in the February 2012 issue of the Journal of Psychology and Popular Media Culture. For the study, attention problems were defined as difficulty engaging in or sustaining behavior to reach a goal.