



Teaching What Teachers Can't

Few adults understand the importance of computer games.

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The Pros and Cons

Kamaila Sanders' 2012 *Business Insider* article "[Here's How You'll Get Smarter By Playing Video Games](#)" explains the following benefits of video games:

- critical thinking
- problem solving
- building confidence
- social collaboration
- learning through failure
- taking on new roles
- gateway to computer engineering

In a 2016 *Psychology Today* article titled "[This is Your Child's Brain on Video Games](#)," Victoria Dunckley, MD says, "Video games leave kids revved up, stressed out, and primed for a meltdown." She argues that computer games foster negative habits and retard development of the cerebral cortex through:

- reward addiction
- intense sensory stimulation

- lack of focused attention
- excessively rapid pace
- hyper-arousal

Could these authors be referring to the same thing? No, they're not. The average video gamer is 33 and getting older. That means there are a lot more gamers over 20 than under 20.

Most of the video games vilified for their violence and anti-social message are created for adolescent adults or adult adolescents. Well-adjusted children do not like these games. How well-adjusted are the adults who do? Recognize the market apart from the medium because the medium is not limited by it.

The Neurology

In her TED talk, "**Your Brain on Video Games**", cognitive researcher Daphne Bavalier explains both the positive and negative aspects of video games. While cautioning against excessive immersion, she demonstrates how these games can help us learn, focus, and multitask.

Brain imaging tests show that 10 hours of video game playing over a 2-week period improves one's ability to sustain, orient, and shift attention. These effects sustain for five months without additional game play. Visual tests show video game playing improves eyesight significantly.

Conversely, multi-media use has an entirely different effect as it degrades brain function in important respects. There are many distinctions to be made and, she says, "General wisdom carries no weight."

Ronaldo Tumbokon provides an extensive, 2019 summary of the good and bad effects of video games. It's titled "**25+ Positive and Negative Effects of Video Games**," and is at the Raise Smart Kid website. The most serious criticisms pertain to impediments in the development of self control, social values, and imagination. I will address these with my own personal observations.

My Son's Experience

Let me offer my own "not general" wisdom. My 8-year-old son Pythagoras started playing video games this year and so far, with my help, has played half a dozen games ranging from 2 to 100 hours of game-play each. These games were his choice and are age-appropriate. They do not contain gore, violence, bad language, or deviant behavior.

Py has grown tremendously through playing video games on the Nintendo Switch. He started with a simple treasure hunt game called *Captain Toad Treasure Tracker*. This taught him manual dexterity and the notion of there being a different logic in the game from what he assumed. This was a basic introduction to broader thinking.

Next, I got him involved in *Legend of Zelda, Breath of the Wild*, a game for 10+ while my son is only 8. This game scales beautifully from an open situation with no rules, through graded encounters where one learns the rules only by trial and error (there are no instructions for the game at all), and finally to complex logical, manual, and visual dexterity challenges.

Zelda taught my son what research is as we had to study the challenges by going online, watching walk-throughs, reading the advice of others, and developing patience. I was impressed that Py actually finished the game, but it took him months and several melt-downs in which he felt frustrated and hopeless. In the end he prevailed, and he feels that he did this himself. This is exactly what traditional education aims to accomplish at its best, but rarely does. In addition, because he pushed himself into and through frustration, he was able to endure harder lessons than any school would be able to successfully impose.



Phantom Rabbid Song, from *Mario + Rabbids Kingdom Battle*

100 Nights At The Opera

Lastly, Py has been playing a game called *Mario + Rabbids Kingdom Battle*. This video game has returned to the board game model. It is single player (all of these three games have been single player) but it is turn based: you take one turn and then the computer takes one turn. It is more explicitly strategy-based than any other game he has played.

In this game you have to maintain your attention because the game does nothing more than play music to entertain you while you're thinking. Here is a point that has escaped the attention of both video game critics and supporters.

This game's music came as a shock: it's opera, and the opponent "boss" sings it well! Imagine the effect on kids' musical appreciation and auditory discrimination when future video games play Bach or Mozart in the background. Zack Scott, one of the most popular YouTube video-gamers comments, "there should be more of this." Millions of kids are listening to him.

The game is logical and difficult, and it gets increasingly harder as you progress. Py was used to succeeding by brute force, but this game would not let him. In this game you must not only "win" the battles, you must win them well. That is, you must not just prevail, you must prevail with skill. That blew me away: my son was learning that he had to do *better* than his best.

Mario + Rabbids Kingdom drove Py to tears on numerous occasions. Each time I would coach him through by helping him do research to find out what he was missing. I told him that not everyone can finish this game, and he might reach a point where he could not go any further. He has not finished this game, and he may not, but he's 3/4 of the way through, which is farther than I expected. If he complete it, great; if he cannot, that will be a huge learning opportunity as well.

Py is no longer as frustrated by his failure, which I think is tremendously important. I believe, but I have not yet tested, that he is not as upset now about losing as he once was. I don't know any easy way to teach a person to do their very best and not to be frustrated by failure. This is a brain-expanding concept!

Trust

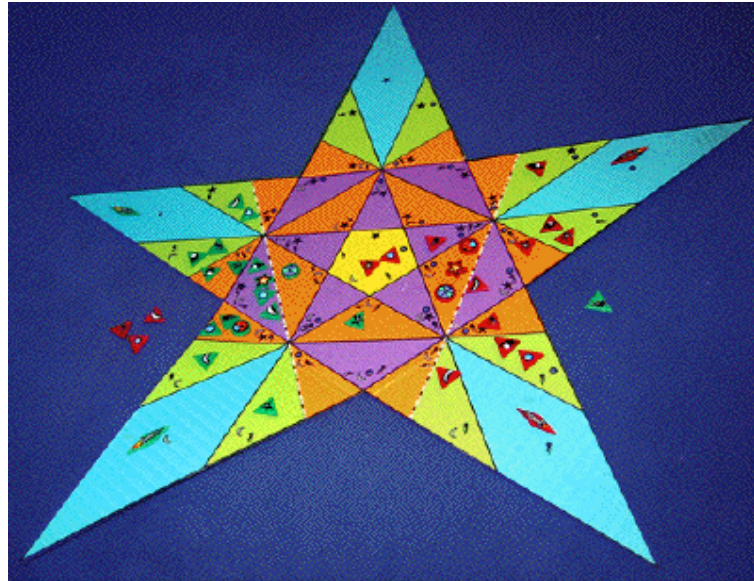
Kids have limited autonomy and need to be given more autonomy. See “**23 Dangerous Things You Should Let Your Kids Do.**” An important part of the natural world is being able to explore and make mistakes. Games provide a “world” in which kids have autonomy, where they can make mistakes, and pursue their own learning program.

In the context of these particular games, I trust the judgement that my son has developed. If he wants to spend 3 hours playing the game, I support him. When I see him start to “lose it,” I pry him away and make him do something else. At that point he’s pretty well exhausted and, if I entice him with something that’s fun and relieving, he’s ready to leave it behind.

“To be playful is not to be trivial or frivolous, or to act as though nothing of consequence will happen.

On the contrary, when we are playful with each other we relate as free persons, and the relationship is open to surprise; everything that happens is of consequence.”

— James Carse, in *Finite and Infinite Games: A Vision of Life as Play and Possibility*



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