

Video Game Academy

How Games Secretly Improve School

Transcript



HackingHighSchool.net

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Video games secretly improve your schoolwork

Welcome back to our 9th week of Video Game Education! Today, we're going to talk about how video games secretly improve your schoolwork and how your schoolwork actually improves your video games.

The biggest thing video games can do for your schoolwork is to give you CONFIDENCE.

I frequently find that students are fully capable, but don't have the confidence in their academic skills. "I can't pass the SAT," they cry, "I've never done anything like it before!"

Confidence, I think, is one of the biggest factors to doing well, especially on tests.

I'm here to tell you that your video game playing is your source of confidence. You've done so many things in video games that apply directly to school.

For example, maybe you're intimidated by a long essay assignment: but a 5-page paper is nothing after you've written a 90-page walkthrough.

Maybe you think you don't have a head for memorization and can't remember random dates and facts for tests. But you do this all the time in your games. How many hit points does character X have? What is character Y's strengths? You have the capacity to memorize scads of information, because you already have memorized so much. You have proved to yourself that you can.



So let's look at some of the ways your game playing can give you confidence.

Most of all, your game playing has given you the chance to :

- 1) learn how your brain works so you can take advantage of that
- 2) learn how to design your education to appeal to you and teach you in the best way
- 3) learn and practice specific skills you need to be successful in school.

How your brain works

Games secretly teach you how your brain works. The value? Instead of working AGAINST your brain, start working with it. Feed it the information it needs in the way it wants and you will get spectacular academic results.

For example, we learn by simulating the world. You know what the word "angry" means because you've run a simulation of that emotion in your head. What if you started running simulations in your head of a successful SAT exam? You'd start out the real SAT already miles ahead of others who are so afraid of failure that they can't think straight. Your scenario is giving you a positive mindset.

Another thing the brain needs is to put things in context. Video games don't just bring out a boss. They build you up to it. First you beat the minions, maybe with some help, then bigger and bigger bad guys until you know how to fight them well. THEN the boss comes out. In school, maybe



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the “boss” is a major test or a new topic. Can you use your homework assignments and lessons as preparation for the “boss”? Yeah, they’re supposed to be preparation, we all know this, but do you really see assignments and lessons as events that are preparing you for the “boss” test? It’s a simple shift in mindset, but once you shift, you’ll find it very powerful.

Another thing we’ve learned about the brain from video games is that you have the ability to think incredibly fast, what some adults call “twitch speed.” Maybe you feel like, yeah, you can think fast when your character’s life is in danger in a game, but not in the middle of a boring math lesson. Think again. Your brain is wired to think quickly, so you can learn anything fast. You’ve already proven this to yourself by the incredible speed you utilize in your video games. You can learn academic topics just as fast.

Another thing we’ve learned about how the brain works from video games is parallel processing: you can take in more information at the same time than you might think. Consider your video game: there’s the events on the screen you’re paying attention to. There’s often a button on your controller to change the view to look behind you. And then there’s all sorts of information flowing your way via menus and sidebars and popups on the screen. Yet you take it all in so well that you don’t even realize how much information is hitting you at once. Remember that when you’re in school and it’s so overwhelming and there’s just SO much. You can handle this. You’ve proved it. Your brain was trained to handle this by your video games. Just relax and let the information come: you can handle it.

Another thing we’ve learned about how the brain works from video games is random access. Instead of thinking linearly (first A, then B, then C), your video games have helped you develop a “hypertext” mind. You can jump around information and not lose track. While reading a book on Leonardo da Vinci, you can look up a picture of the Mona Lisa, read a Wikipedia entry on the Renaissance, and even zip over to a renaissance faire website without forgetting that you’re reading that book on da Vinci. Not only is this useful in studying and learning, but it increases your awareness and your ability to make connections between ideas and to think in patterns. And THAT, my friend, is where genius comes from.

Another aspect of your brain that we’ve learned about from video games is connection. You have access to others 24/7, so you have interesting ways to get information and solve problems. Think about how you solve problems and get information in your video games: you probably visit forums, look at walkthroughs, talk to other gamers, especially when you’re stuck in an area. You can do the same thing in school. Turn it into a conversation. Seek out the experts on the topic and ask them your questions directly. You’ll learn more and better.

Another principle of how the brain works is the idea of active learning. Your brain is wired for active learning. So when you’re actively doing something, you learn it better. You learn to play your video game better by playing than by reading a manual. Do the same thing with school. Often, at school, you’re given the manual, given a textbook but can you turn it into an activity, something where you’re taking action on? Do things like conduct experiments, analyze the data instead of listening to summaries of it.



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Another aspect we've learned about how the brain works from video games is payoff. If something has a payoff, you're motivated to do it. You stay up all night just to level up in your game. If you want that excitement and intensity for school, too, look for—and create, if necessary—payoffs in the things you do. What motivates you? What is payoff for you? An extra level, then make sure your education has “levels” in it (I'll talk more about that in the next section on education design). Create payoffs for yourself, and you will have an intense motivation to do well in school.

Another aspect we've learned about how the brain works from video games is comfort with technology. The technology of video games doesn't scare you, the way it might intimidate your parents. Technology is a second language to you, and it offers so much information. Because you're so comfortable with the technology of gaming, you'll be comfortable with other technologies that are important for academics, like the Internet. Studies indicate that the younger you are, the more likely you're okay with electronic information, while the older you are, the more likely you prefer to stick to the printed page. How can you take advantage of this to improve your education? There's more information available to you for free on the Internet than has ever been available to anyone in the history of anything. There's all this knowledge and information that's just there for the taking. Go out and get it.

Last aspect of the brain is a focus on play. Video games are fun because they're play, but if you look at them closely, they're actually a lot of work. hard work. So why is it so much fun? Game design. You can turn the hard work of your education into a game that's just as fun if you design it right.



Education Design

So, let's design your education. Whether you're homeschooled or in public school, you, as a teenager, can take the power to design your own education. Don't just sit back and let your education happen to you. Design it. True, homeschoolers usually have more power, more opportunity to do so, but even public schooled students can design their education.

First, take a step back from your education. Look at it as if it were a game to be won.

Basic Game Design

Ask yourself, what are the rules of this “game”? What are your objectives? Long-term (4 years)? Medium term (this year)? Short term (this week)?

How do you get feedback? Do you need more or different feedback? Think of the feedback in your video game: when you lose, that's feedback that you're not doing something right; sometimes other people will give you feedback as you play; sometimes you'll have a character teaching you and who will give you feedback.

What kind of feedback are you getting in your education? What can you do in order to get the feedback you need? Can you create “levels” for yourself, based on your goals? For example, if your long-term goal was to get into Harvard, let's call that Level 20. What would level 10 look like? You'd have completed about half the requirements to enter Harvard at that point. What would level 1 look like? Go level-up.



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Where's the challenge or competition? What problems does your education solve for you? Is there anything in school that has ever given you a rush or targeted your adrenaline, even just a little bit? Focus on that. Find a way to emphasize the thing that gave you a rush, emphasize that aspect that really challenges you.

How do you interact with others? With your teacher (or parents)? With kids your age? With experts in the topics you're learning about? Can you interact with experts more often? Experts are so accessible now through emails, cold calling, networking—there are so many ways to find experts—and if you learn from them, you'll learn far better.

How do you interact with the information you receive? Is that really the best way?

What is the “story” or plotline of your education? In other words, what is your education about? What is the point of your education?

Advanced Game Design Principles

Co-design: can you become an active producer in your education, not just a passive consumer? You're not just sitting there, listening to lectures, but you're actually creating something.

Customization. change your education to be what you want. What DO you want out of it?

Identity. The idea of identity is really important when you're trying to learn things—it's an important thing that your video games taught you that you can take to your education.

The idea of identity is taking on another person's persona. For example, when you play a game, you take on a character. Perhaps you are a wizard or spellcaster. So you start acting like one, spend you money like one, and learn skills that are necessary to being a spellcaster. In a similar way, can you apply that to being a scientist? Can you BE a scientist when you're studying biology? Can you think like one, act like one, analyze like one? What would you need to change when studying biology to BE a scientist, to play the role of a scientist? This is really important and can help you learn a lot as you study academic topics. Remember the idea of identity of taking on the character of someone else, of taking on their identity: a scientist, a writer, a mathematician, an artist. All these different roles you can take on in your academic study can really help you. Act like it's just a character in your game and you will go very far in your studies.

Flow. Make sure you set yourself up for Flow. Remember that psychology concept? It's doing something on the outer edge of your competence level, but still within your abilities; in other words, it's something that's hard, but not TOO hard. When you do something that puts you in a state of flow, it will be a thoroughly satisfying experience. Make sure your education is always challenging, never too easy, and you will do much better. This sounds counter intuitive, because when you're struggling in school you usually want to make it easier, but when you make it as hard as you can be without being overwhelming, you will find it to be thoroughly satisfying.

Create cycles of expertise. In your video games, you practice skills, like beating minions, over and over until you're an expert and they're automatic. Can you think of your education in the same way? Do algebra over and over



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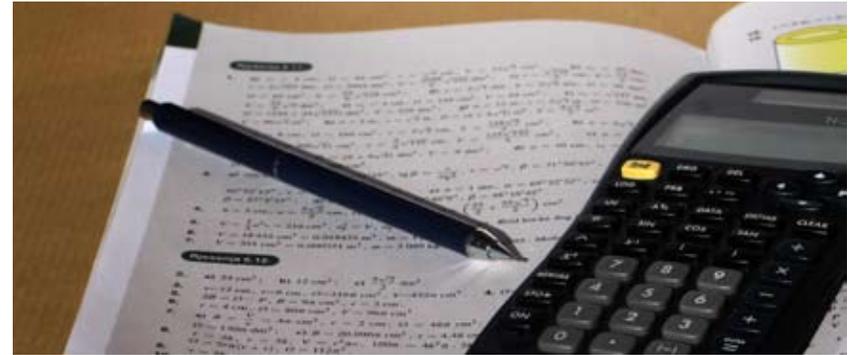
until it's automatic for the test? Remembering that this is an effective way to learn in video games can help you when you have to do things over and over again—like algebra—and it helps make that homework seem less arduous.

There are other advanced game design principles you'll find useful to improve your education: go visit lesson 2 for details on the principles like sandboxes, skills as strategies, system thinking, and meaning tied to action.

Skills for Success

In addition to teaching you how your brain works and how to create the best education, video games improve your schoolwork because they teach you the necessary skills for success in school:

- How to think critically.
- How to complete tasks.
- How to analyze.
- How to think like a scientist: as James Paul Gee put it, your video games teach you how to "hypothesize, probe the world, get a reaction, reflect on the results, reprobe to get better results," which is exactly the scientific method.
- How to understand the world in terms of scenarios, which is very important to help your brain understand things.



- How to research, especially through connections with others.
- Why you should care about data. School is all about data transfer: teacher and textbook to student. As a gamer, you likely avidly care about data: statistics, theorycraft, background information like how difficult one enemy is to fight compared to how strong you are....all this is data. It's transfer of information from another source to you. It's what school is about. You already care so deeply about it that you spend money and time on it. Remember this in school when you're consuming data—remember that you do like it.
- How to think about relationships and make connections. You do this as you decide which character to play in a game based on her strengths and weaknesses. You do this as you strategize based on the other team's builds. This is essential for academic success. The best essays I ever wrote were ones where I made a connection I (and sometimes the teacher) had never thought of before. The best way to understand and remember the academic subjects you're learning is to think about the connections and relationships in all that information.

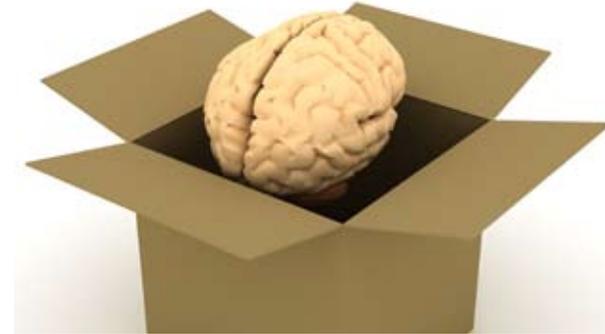
School secretly improves your game

So, tell me: have you ever wondered what the point was of all this academic stuff? Sometimes, it feels like it'll be useful "someday," but never today. Well, here you are: school is improving the way you play video games.

School taught you how to focus, manage yourself, and be productive.



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The benefits of focus? In addition to the environment outside the game, there are a lot of things in your game to distract you. All those helpful sidebars and menus can pull your attention away if you focus on them too much. The discipline that school has taught you, along with the ability to see and focus on what's important, helps you navigate menus practically without seeing them, so you can keep your head in the game.

The benefits of managing yourself? You are the game. It's just a bit of software and hardware without you. If you are unable to manage yourself, you will lose the game. You'll find yourself too distracted or suddenly engaged in unintentional self-sabotage.

The benefits of productivity? Producing results. This is what you've done all your life with assignments, tests, and projects at school—producing results. This is what gaming's about: produce results, preferably results like a victory, results like a level up or extra lives. Ask yourself: how do you get yourself to compete tasks and produce results? How can you apply that to your game, especially areas where you're stuck. Do you research more? Do you just slug it out? Do you seek help?

The benefits of critical thinking? Seeing what information to emphasize and what to not pay attention to: essential. Perhaps one of the reasons adults have a hard time playing video games—they don't know which information is really important and what is trivial.

The benefits of knowing how to research? While this is obviously an important skill in school, it's sometimes hard to recognize when you would use it in gaming. But every time you visit a forum, looking for help,

you're doing research. Every wiki you visit is actually an exercise in research. So how do you research best? What have you learned in school about researching and filtering through information? How does that apply to your research for your game?

Remember all that talk about situated meanings, how our brains need an experience, real or imagined, to be able to understand something?

Playing video games is the ideal experience to help you understand many—if not most—of the ideas and concepts you're learning in school. They key is to pay attention.

As you learn things in school, take the time to wonder about how you might apply them to helping you improve your gaming skills. School is about learning what you need to understand the world and how it works, right? Well, video games are a slice of the world, and often are their own worlds in microcosm. So the things you're learning about how the world works apply to how your video game world works. The questions in the worksheet can help.

The three general questions to always ask yourself:

How does this help me understand how the world works? Does that apply in my video game world?

How does this show how people think? Are my fellow gamers thinking that way? How can I use that information to beat them (or support them, if they're my allies) in the game?



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Is there any situation like this in my game? How are the situation and game similar? What useful information can I transfer from the situation to my game?

Specific questions (the general questions, applied to more specific situations)

Can I use this information as a strategy in my game?

If math: can I use this information or skill to analyze my gaming? Once I've analyzed it, how can I use this information to improve my game? When can I use this information or skill to make fairly accurate estimates?

If English: does this information about communicating help me communicate better in my game? Communicate to other players? Communicate to my parents about how much I enjoy the game so they'll let me play more? Communicate to the gaming community on forums and websites?

How does this piece of literature show how people think? Are my fellow gamers thinking that way? How can I use that information to beat them (or support them, if they're my allies) in the game?

One blogger (at <http://www.lifehack.org/articles/lifestyle/10-skills-you-need-to-succeed-at-almost-anything.html>) said that writing involves "the development of the ability to organize one's thoughts into a coherent form and target it to an audience in the most effective way possible." How do you apply that in your game? How do you organize your thoughts in the game (thoughts ranging from "How many hit points does this character

have?" to "What does my ally think he's doing?" and "If I wait to buy this item, I'll have enough gold to..." And how do you communicate your thoughts effectively? Ever play with someone who spent the whole time bashing you? Yeah, you weren't about to do what they told you. How can you get people to follow your lead—without them even realizing you're leading them? That's the ultimate benefit of English to your game.

If history: how is this information relevant to me today? Does knowing the background/history of my video game world improve my gaming in a similar way? Can I apply the strategy from this war in my game? If not, could I alter it to make it applicable?

