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### Play to Learn

Games have always been a major source of entertainment in humans. From simple games like *Catch*, to more complex games like *Baseball*. Each game provides their own fun to people in differing ways. In schools, games are used as a fun way to help memorize details and help de-stress students from stressful school life. As time went on, things got more advanced. Now games of today prefer a digital medium, but it doesn't seem like schools are taking advantage of the digital medium. As such, video games need to be utilized more in schools as a tool for learning as they would be a great benefit to teachers and students.

To begin with, video games have been shown by students to be a fun tool for learning. Using video games for assisting in subjects allows students to gain an immediate form of feedback when they make mistakes. This also allows students to improve more rapidly and get more gratification when solving the previously challenging problems. In a paper titled *Effects of a 3-D Video Game on Middle School Student Achievement and Attitude in Mathematics*, Gillispie states, “Students were very willing to repeat missions in an attempt to improve their overall scores, thus drill-and-practice of the concepts occurred, but in a way in which students enjoyed and willingly embraced” (26). The increase in enjoyment and fun is not only limited to one type of game. It has also been shown to increase learning in other places. In another article titled *Commercial video games and cognitive functions: video game genres and modulating factors of cognitive enhancement*, Eunhye Choi states that video game players showed more motivation

and brain improvement in relation to the amount of fun and stress those same video game players had (par. 6).

Next, video games have been used as a medium that shows students creativity. It can either be in a very subtle way with things like the art that goes into the games, or it can be in more obvious ways with games like *Minecraft: Education Edition*. Some students can even benefit from games like *Minecraft*. A study involving the use of *Minecraft* found that, “... the students were found to have either benefited from using *Minecraft* to develop creativity and depth of insight ... or stayed steady” (Ellison 6). While *Minecraft* is the biggest and most accessible form of creative gaming. There are also other cases of creativity appearing with regards to video games. In an article covering using video games as a mediator between students and creativity, researcher Fengyan Gao findings reveal that, “... there is a significant relationship between CGs [Computer Games] and CSE [Computer Self-Efficacy] and AE [Academic Engagement] with the mediating role of learners’ creativity” (14244).

Furthermore, video games have been proven to be a good tool to show problem solving skills. During an inquiry of the effects of student attitude towards math as a result of learning through video games. An observation was made. The observation says that, “Once they understood the concept of prime numbers, their actions were more purposeful and they advanced through the stage more quickly in successive attempts. Thus, an understanding of the math concepts became observable in their game play” (Gillispie 24). When building video games, one must learn a form of language that can be translated into something that can be run on the computer. This is called a programming language. A study called *The effect of simulation games on learning computer programming: A comparative study on high school students’ learning performance by assessing computational problem-solving strategies* done by Pellas and

Vosinakis shows that a substantial number of participants show problem solving skills in regards to the computational problems they were given (2448).

Finally, video games have shown to help increase focus. As was stated in an earlier paragraph, video games give immediate feedback. But how does this help focus? It helps by giving students something new to think about instead of focusing on the same subject for too long. The effect of video games on focus can already be seen in the professional gaming world. Choi states that differing levels of video game players show differing levels of allocation and sustaining of attention to subjects, with the higher level players showing higher cognitive abilities (par. 5). Focus can be found in other forms. The amount a student is focused and involved in the learning process is called Academic Engagement. In an earlier mentioned article by Fengyan Gao, it states, “It can be said with 95% confidence that there is a significant relationship between the two variables of CG [Computer Game] experience and the variable of AE [Academic Engagement]” (14241).

Video games are very beneficial to teachers and students and should be used more. They are a great medium to express oneself, and to learn new things. Video games can also be fun in the process. In the last two decades, video games have exploded in popularity. Replacing movies as the number one source of entertainment. Do you believe school would have been more fun if games were the main source of learning?

## Works Cited

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