Fact or Fiction? Video Games are the Future of Education

As kids all across the U.S. head back to school, they're being **forced** to spend less time in front of their favorite digital distractions. Or are they? Video games are playing an **increasing** role in school curricula as teachers seek to deliver core lessons such as math and reading in a format that holds their students' interests. Some **consider** this gamification of education as the way of the future and a tool that allows students to take a more active role in learning as they develop the technology skills they need to **succeed** throughout their academic and professional careers. Games are a powerful learning tool when combined with other **exploratory**, hands-on activities and ongoing instruction from a teacher acting more as a coach than a lecturer. Others, however, **question** whether a greater **reliance** on video games is in students' best interests, indicating there is little **proof** that skillful game play translates into better test scores or broader **cognitive** development.

Gamestars

Testing games as learning tools and computer use in and out of the classroom suggests that such video games will play a **significant** role in the future of education. The Quest to Learn public school in New York City offers a glimpse of how gaming is already transforming how students learn. The teachers there have been using the principles of video game design to write their curriculum since the school opened in 2009. This curriculum—organized into missions and quests—**focuses on** multifaceted **challenges** that may have more than one correct answer, letting students **explore** different **solutions** by making choices along the way. More than simply playing video games, Quest to Learn students also study game design using Gamestar Mechanic and other computer programs. After students successfully complete Gamestar missions, they are awarded avatars and other tools they can use to build their own games.

If educational video games are well executed, they can **provide** a strong **framework** for inquiry and project-based learning. Games are also uniquely suited to developing the skills necessary for navigating a **complex**, interconnected, rapidly changing 21st century. Digital **literacy** and understanding how systems work will become increasingly important in a world where many of today's students will **pursue** jobs that do not **currently** exist. Tomorrow's workers will also **likely** change jobs many times throughout their careers and will almost certainly have jobs that require some level of mastery of digital media and technology.

Limitations

So far, very few studies have **examined** whether video games **improve** classroom performance and academic **achievement**. Memory is a **crucial** cognitive skill **responsible for** the **temporary** storage of information that is needed to support everyday activities including school learning. Therefore, practice at playing games that challenge memory should, in theory, lead to improvements in classroom behavior and academic skills. However, a 2013 University of Cambridge study found that the improvements in game scores for children with low levels of working memory did not **extend** to **broader** skills. The study gave 7-9 year olds up to 25 sessions of either video games set to challenge their working memory or the same video games set at an easy level. The researchers then examined whether playing the more difficult games improved performance on the working memory as well as **enhanced** other skills, including math, reading, writing and following instructions in a classroom. The study **concluded** that brain-training video games improve children's performance only on very similar games, an effect that likely **results** from practice. Digital games cannot be treated like the latest quick fix to the education system, and games alone will not make schools more **efficient**, or even **replace** teachers. What is more, video games are not necessarily the most cost-effective option for schools with tight budgets and crowded classrooms. They require computers, tablets or other specialized technology as well as dedicated Internet servers and other communications systems. There may also be a need for additional infrastructure, **personnel** and teacher training. A full, game-infused curriculum could cost millions of dollars and **require** ongoing **support**.

The **extent** to which video games are the future of education remains to be seen. But if the present is any indication, teachers are embracing the medium and are likely to continue to do so. In fact, of those teachers who use video games in the classroom, more than half have kids play them as part of the curriculum at least once a week, according to a national survey. Perhaps the biggest **impact** of video games will be on students who have not **responded** as well to traditional teaching methods. Nearly half of the teachers surveyed say it is the low-performing students who generally benefit from the use of games, and more than half believe games have the ability to motivate struggling and special education students.

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