Scientists explore how violent video games are exemplary aggression teachers

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Like other fathers and sons, Douglas Gentile and his father have spent many hours arguing about video games. What makes them different is that Douglas, an Iowa State University assistant professor of psychology, is one of the country's top researchers on the effects of media on children. His father, J. Ronald Gentile, is a leading researcher on effective teaching and a distinguished teaching professor emeritus of educational psychology at the University of Buffalo, State University of New York.

Through their discussions, they realized that video games use the same techniques that really great teachers use.

"That realization prompted us to ask the question, 'Should we therefore be surprised that violent video games could teach aggression to players?'" said Doug Gentile, who is also director of research for the National Institute on Media and the Family, and co-author of the book "Violent Video Game Effects on Children and Adolescents: Theory, Research, and Public Policy" (2007, Oxford University Press).

Violent video games teach aggression

The Gentiles decided to test that hypothesis. Through a study of nearly 2,500 youths, they found that video games are indeed effective teaching tools. Students who played multiple violent video games actually learned through those games to produce greater hostile actions and aggressive

behaviors over a span of six months.

They co-authored a paper on their research titled "Violent Video Games as Exemplary Teachers: A Conceptual Analysis," which will be published in an upcoming issue of the Journal of Youth and Adolescence. It is already available online to the journal's subscribers.

"We know a lot about how to be an effective teacher, and we know a lot about how to use technology to teach," said lead author Douglas Gentile. "Video games use many of these techniques and are highly effective teachers. So we shouldn't be surprised that violent video games can teach aggression."

The paper presents conceptual and empirical analyses of several of the "best practices" of learning and instruction, and demonstrates how violent video games use those practices effectively to teach aggression. It documents how violent video games motivate learners to persevere in learning and mastering skills to navigate through complex problems and changing environments -- just like good teachers do.

The study describes seven parallels between video games and effective teachers, including the ability to adapt to the level of each individual learner -- requiring practice distributed across time -- and teaching for transfer to real-world situations.

Studying nearly 2,500 youths

To test their hypothesis, the Gentiles studied three groups of youths -- 430 third through fifth-graders; 607 eighth and ninth graders; and 1,441 older adolescents with an average age of 19. Elementary and middle school children were recruited from nine Minnesota schools, and older adolescents from Iowa State University.

In the longitudinal elementary school sample, students, their peers, and their teachers completed surveys at two points during the school year. The surveys assessed the subject's aggressive thoughts and self-reported fights, and their media habits -- including violent video game exposure. Teachers and peers were also asked to rate the participants' aggressive behavior.

Controlling for age, race, sex, total amount of time spent playing all video games, and prior aggressive behaviors, the research found that the amount of rated violence in the games played predicted increased aggression. Among elementary students, playing multiple violent video games increased their risk of being highly aggressive -- as rated by peers and teachers -- by 73 percent, when compared to those who played a mix of violent and non-violent games, and by 263 percent compared to those who played only non-violent games.

"Because we had longitudinal data, we were able to show that students who play multiple violent games actually changed to have a greater hostile attribution bias, which also increased their aggressive behaviors over prior levels," the researchers wrote.

And because learning occurs from video games, regardless of whether the effects are intentional or unintentional, the Gentiles added that this "should make us more thoughtful about designing games and choosing games for children and adolescents to play."

But this study is not all bad news for video game technology. Because video games were found to be such effective teaching tools, the Gentiles propose greater educational use of today's smarter technology found in those games -- technology that "thinks" along with students, adapting instruction to each student's current skills, strategies or mistakes.

While some schools are already incorporating this type of educational

programming, the researchers report that it's not widely used. The authors urge educators not to wait for more advancement before using such technology with students in the classroom.

Source: Iowa State University