

More on the Effects of Videogames

Last year I posted an article on the videogame habits of 8 to 18 year olds (See “Can Kids Become Addicted to Videogames?” below). Now comes a longitudinal study from psychologists at Denison University in Ohio on the effects of videogame usage on academic performance. What makes this study unique is that it selected boys who had little prior experience with videogames and measured their school performance and behavior for four months after giving some of them Play Station 2’s to keep at their homes. Sixty-four boys ages 6 to 9 years old participated with the permission of their parents. The parents were told that the study was about academic and behavioral development and that all the families would receive a PS 2 for their participation. This way none of the families actually knew the study was about videogames. All the boys were administered tests of reading, spelling and math, and their parents and teachers completed questionnaires about their behavior. Half of the boys were then given the PS 2’s and asked to keep diaries of their daily after school activities for four months. The other half were promised the PS 2’s at the end of the experiment (four months later). After four months all the boys were tested again, and parents and teachers filled out the same questionnaires.

Results:

First, all of the boys in the two groups showed similar abilities in reading, writing, and math before the PS 2’s were introduced.

Second, 90 % of the boys who got the PS 2’s purchased more videogames during the four months and averaged about 40 minutes a day playing them. Interestingly, even the boys who didn’t get the PS 2’s spent some time playing videogames during the study (about 9 minutes per day average), indicating that they had access to games elsewhere.

Third, the boys with PS 2’s spent only about 18 minutes per day on homework while the boys without videogames spent nearly 32 minutes per day on homework.

Fourth, Boys without the PS 2’s showed increases in their reading and writing scores over the four months, whereas the boys playing the videogames showed no increases in either reading or writing skills. Plus their teachers rated the gamer boys as falling behind in reading and writing by the end of the study. There were no differences in math abilities at the end of the study.

Finally, there were no differences in behavior between the two groups at the end of the study as reported by either the parents or the teachers.

The implications of the study are clear. Time spent on videogames instead of homework after school will lower academic performance, at least for reading and spelling. So why not math? The authors cite other research indicating that time spent on homework benefits language skills more than numerical skills. Math homework requires a lot of sustained concentration, that is, time when the student just has to sit and think. For that

reason many students may put off their math homework and instead do the spelling lists or reading assignments. Thus videogames may not affect math learning as much because the kids aren't devoting that much time to math anyway. Whatever the reason, the study demonstrates that videogame availability takes away from time that would otherwise be spent doing homework, which in turn prevents children from making academic gains in school.

Weis R. & Cerankosky B.C. 2010. Effects of videogame ownership on young boys' academic and behavioral functioning: A randomized controlled study.
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