

## 2 hours of TV a day in late childhood linked to lower test scores later

September 3 2020, by Lisa Mundy, George Patton

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Credit: AI-generated image ([disclaimer](#))

Children aged eight and nine who watched more than two hours of TV a day or spent more than one hour a day on a computer had lower scores than their peers on reading and numeracy at ages 10 and 11, our study has found.

Our results, published in [PLOS ONE](#), were collected as part of the [Childhood to Adolescence Transition Study \(CATS\)](#) based at the [Murdoch Children's Research Institute](#).

We found children who watched TV two hours per day at eight and nine years of age performed lower in reading two years later compared with children who had watched little TV. This was equivalent to the loss of a third of a year in learning. There was no impact of watching TV on numeracy.

Children who used a computer for at least one hour per day had a similar loss in numeracy scores two years later compared with their peers. There was no association between [computer use](#) and reading.

In contrast, we found no links between playing video games and children's learning.

Although much has been written about the consequences of digital media use for kids' physical and mental health, little attention has been paid to its potential impact on education.

## **How we conducted our study**

The Childhood to Adolescence Transition Study (CATS) includes 1,239 children. These children entered the study in 2012 when they were eight years old.

For our study, we used information collected across the first three years of CATS when the children were eight to 11 years old. We asked parents to report on their child's use of TV (including streaming on the computer), computer use (for email, [school work](#), internet access and chat) and video games.

We obtained information about the academic scores by linking with [NAPLAN, the National Assessment Program—Literacy and Numeracy](#).

In our analyses, we took into account the child's age, gender, earlier emotional and behavioral problems and their socioeconomic status. We also accounted for previous academic performance, which is important because children struggling with school work may choose to use more media.

The time children spend using electronic media tends to increase in late primary school (from around age 10) and with the move to secondary school. During these years children typically have more control over the types of media they use.

Academic problems often first emerge during these years too, predicting school dropout and longer-term academic performance.

At ages eight to nine and 10 to 11, around 40% of children watched more than two hours of TV a day.

Around 17% of eight to nine year olds used a computer for more than an hour a day—two years later, this had almost doubled to 30%.

One in four eight to nine year olds played video games for more than one hour a day—this rose to one in three in 10 to 11 year olds.

We also looked at the short-term effect of using media on learning. Children aged 10 to 11 who watched more than two hours of TV or used a computer for more than an hour a day had lower scores in numeracy compared with their peers (but none on reading)—equivalent to the loss of a third of a year of learning.

These findings remained even when accounting for prior media use.

There was no evidence of short-term links between video games and academic performance.

These results suggest it is cumulative (or long-term) TV use that is linked with effects on reading rather than short-term.

## **We don't have all the answers**

This study doesn't answer all the questions about electronic media and children's learning. Because we relied on parents to report on their children's media use, we don't know as much about how and why children were using media heavily. This is significant because actively engaging with and producing content rather than just passively viewing media, is likely to be [positive](#) compared with just passively viewing media.

This will continue to be important as children get older and start to use [social media](#) more (most [social media accounts](#) specifying users must be at least 13 years old). Using [social media](#) to create and post material online, as well as connecting with friends can bring mental health benefits.

This may also explain why heavy use of television, which is passive, predicted poor learning but there were no effects when it came to gaming, which is an active use. Our study didn't capture how computers were used but browsing the internet and watching online videos are also passive activities, possibly explaining the link between computer use and learning.

Other possible reasons for the link between heavy TV and [computer](#) use and learning could be because they reduce time spent doing other activities such as physical activity, sleep or homework. They also have the potential to diminish concentration.

## What our study means

Before the pandemic, electronic media use was already the most [popular leisure-time activity](#) for 7 to 18 year olds but the pandemic has meant children now spend around [50% more time with screens](#).

Electronic media have been essential for us all in coping with the pandemic. It allows us to work from home, access information and services, and maintain relationships with family and friends. For children, it has meant being able to continue their education through lockdowns and school closures.

Yet, our findings highlight the challenges for parents and teachers in guiding [children](#) in their use of electronic media. For parents, a family [media plan](#) is a useful tool where they can set limits on use, rules around when and where devices can be used, and help a child select [quality content](#) where they are more actively engaged.

Not all media use is the same in terms of benefits and risks. With active use, electronic [media](#) can become tools to create, to connect and to learn, bringing great benefits. However, where [electronic media](#) takes on merely a childminding role, poorer health, social and emotional development, and learning seem likely to follow.

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