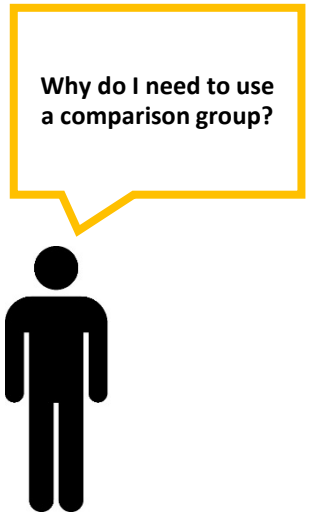
MATHEMATICA Policy Research

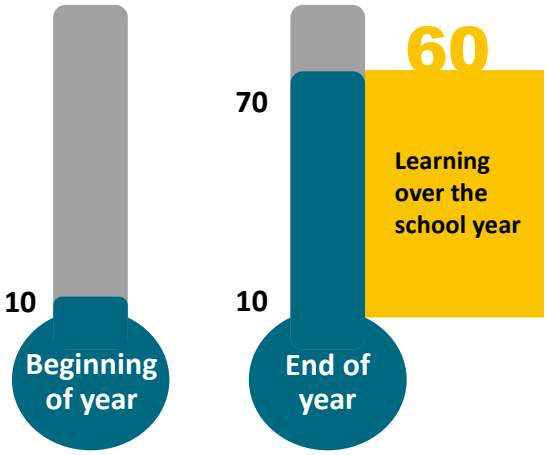
OCTOBER 2017

THINGS to CONSIDER



Using a Comparison Group

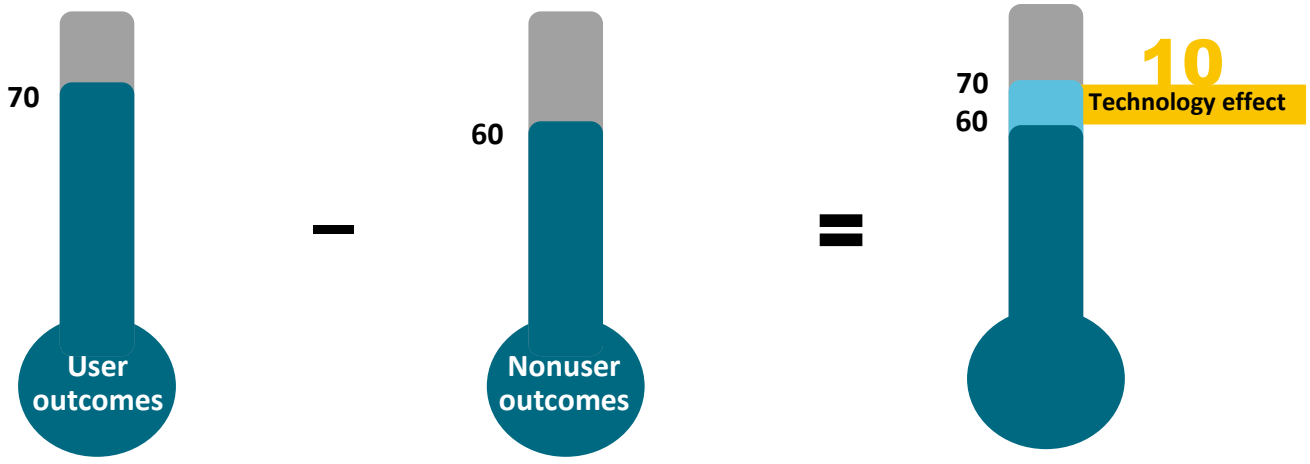
When we are interested in understanding how outcomes changed as a result of using an educational technology, we may wonder why we can't just look at growth over the course of the year for the individuals who used the technology.



If we look at how outcomes change over the year, we may see growth. But in general, we would expect to see growth regardless of technology use. If we look at the scores for only those people who are using the technology, there is no way to determine how much of the growth we see is a result of the technology and how much is a result of regular teaching and learning (and other educational technologies and programs) in the classroom. Without a comparison group, we may erroneously conclude that all of the change we see is a result of the technology.

Using a comparison group enables us to separate the effects of the technology from the growth we would see regardless of technology use.

A well-chosen comparison group will tell us how the outcomes would have looked in the absence of the technology, allowing us to determine what amount of change can be attributed directly to the use of the technology.



By using a good comparison group, we can reasonably conclude that any differences in outcomes between users and nonusers are due to the technology and not to other factors, such as teacher and school quality, other academic supports, or background characteristics.