Rapid Cycle Evaluation Overview

INTRODUCTION

In an ideal world, as you decide whether to continue using an educational technology or to purchase a new license, your decision would be based on how well the product meets your needs and improves outcomes. Mathematica Policy Research, the U.S. Department of Education, and SRI International are supporting quick-turnaround evaluations to help schools test and evaluate these products. We call this process a Rapid Cycle Evaluation (RCE). The findings generated through this process may help your decision-making by providing you with evidence regarding how well an educational technology works.

We are building a free, web-based toolkit that will guide you in conducting an evaluation. As you move through the Ed Tech RCE Coach, the tools will help you to design and conduct your own product evaluations and pilot tests.

The RCE Coach can help you answer important questions such as:

☐ *Does a specific educational technology program lead to the student outcomes you want to see?*

☐ *Should you keep paying for a software tool you're already using?*

☐ *Does a software tool support more effective teacher professional development?*

☐ *How should I set up an effective pilot?*

DEFINITIONS:

A *Randomized Controlled Trial*, or RCT, is a type of study where a lottery or other random process is used to determine the groups that will be compared. With a well-implemented RCT, you can be confident that any differences in outcomes between the two groups are caused by the educational technology you're studying.

When it is not possible to create groups based on chance (as an RCT does), a *matched comparison design* attempts to create groups that are as similar as possible. It does this by using data on characteristics of students, teachers or schools to create groups that are similar on key factors that may be related to outcomes.

EXAMPLES

Several districts have already begun conducting RCEs. Examples include:

☐ A school district in Mississippi is conducting two cycles of evaluations of a personalized ELA technology used with struggling readers. For both cycles, the district is conducting *randomized controlled trials* to evaluate the effectiveness of the technology. First, they investigated the effect of using the technology in a summer school program. They compared their standard curriculum without the technology to a curriculum with the technology during a four-week summer reading program. The results of the summer evaluation will inform their use of the technology during the full school year, with the aim of informing further expansion of the program. This is a perfect example of the "cycle" part of Rapid Cycle Evaluations.

☐ A charter school system in Texas was interested in how a reading technology used by individual students as part of a supplemental reading program affected student reading achievement. The technology had already been implemented a limited number of schools, so they used a *matched comparison design* to evaluate the effects. They investigated the effects by grade, and the results informed their decision about whether to implement the technology in other schools throughout the district.

☐ A district in Illinois is interested in how several technologies that have been purchased (covering both math and ELA) contribute to student achievement. Currently they are planning to use a *matched comparison design* to evaluate the effectiveness of the various technologies.

☐ A district in Colorado wishes to test how a professional development support product can aid implementation of a new literacy curriculum. Teachers will be invited to participate in the training program, but only a subgroup will use the software. The district will analyze outcomes using teacher surveys to determine whether use of the product is associated with better results.