

Ed Tech Rapid Cycle Evaluation Coach

Frequently Asked Questions from School Districts and Educators

QUESTIONS ABOUT RAPID CYCLE EVALUATION

1. What is a rapid cycle evaluation (RCE)?

RCEs use a rigorous, quick-turnaround approach to determine whether a technology or implementation approach meets the needs of a district, school, or classroom.

2. Why is RCE important?

Conducting RCEs empowers educators to evaluate the effectiveness of educational technologies to make informed, evidence-based decisions in actionable time frames. With the implementation of the Elementary and Secondary Education Act (ESEA), as amended by the Every Student Succeeds Act (ESSA), the need for evidence-based decision making has increased significantly. The U.S. Department of Education recently released guidance on [Using Evidence to Strengthen Education Investments](#) to help state and local education agencies, schools, educators, partner organizations, and other stakeholders choose and implement successful interventions that improve outcomes for students. Conducting RCEs using the RCE Coach is one way to gather such evidence.

QUESTIONS ABOUT GETTING STARTED

3. Who should use the RCE Coach?

The RCE Coach is designed for school- or district-level staff and for educational organizations that wish to evaluate an educational technology. The RCE Coach can test the effectiveness of an educational technology that a school already uses or to set up an evaluation for a new educational technology as part of a pilot process.

Although the tool was developed for evaluating educational technologies, you can use the RCE process to evaluate other programs, interventions, and strategies.

4. How do I begin using the RCE Coach?

Visit edtechrce.org to answer a few brief questions to create an account. Review all resources and follow the step-by-step process for setting up and conducting an evaluation.

5. What if I'm not ready to start an evaluation right now?

You can access the tools and downloadable guides to learn more about the RCE process. You can find all of the tools on the [Preview Tools](#) page. If you want a better understanding of the RCE process and what you would need to conduct your own evaluation, the following tools are particularly helpful:

- [RCE Overview](#)
- [What You'll Need to Get Started](#)

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6. What information does the RCE Coach provide?

The RCE Coach tells you whether an educational technology or way of implementing the technology had the desired effect. The RCE Coach provides summary statistics for the data you upload for your analysis and the results from the analysis to determine whether the technology is moving the needle. It also captures important contextual information about your district or school and how the technology was used, so that you can easily share and interpret the findings. All information generated by the RCE Coach is based on data you input into the tool.

7. What do I need to use the RCE Coach?

The key ingredients for using the RCE Coach include:

- The educational technology or implementation approach you wish to test
- A group of technology users and nonusers, or potential users and potential nonusers
- An outcome related to the technology that you can measure, such as district assessment scores
- A data set that can be uploaded to the RCE Coach
 - If you are setting up a forward-looking pilot, you have to identify the technology and data sources but will pull the information together over the course of the pilot. You will start with a list of participants who will be assigned to pilot the technology or not.
 - If you have already started using the technology and want to do a backward-looking evaluation, you might have all of this information in hand already. You will need a list of technology users and nonusers, a pre-test and outcome measure for each participant, and participant background characteristics.

8. How long should an evaluation take to complete?

On average, a typical time frame for an RCE would be three months from start to finish, but this depends on the nature of the evaluation and your research question. It's possible for some RCEs to be completed in weeks, whereas others might need more than three months. If the outcomes you're interested in take more than a few months to affect or measure, that will drive the timeline. Evaluations are also meant to be iterative, so you could go through the RCE process several times in one school year.

9. What if I care about longer-term outcomes, such as high school graduation, but want to see if things are working now?

RCE can still be useful if intermediate outcomes are necessary steps toward the longer-term outcome. In the high school graduation example, it might be the case that increasing attendance or academic performance in the short term is a good step toward improving high school graduation. You could use RCE to assess whether your technology or strategy is having an impact on attendance or achievement measures.

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10. How much time will I need to invest?

The amount of time needed to conduct a successful evaluation will vary based on how far along you are in the process (for example, have you already chosen the technology?); the evaluation method; the number of stakeholders with whom you need to work; and how quickly you can collect and organize your data. If your data are already available, you could complete an evaluation in as little as a few hours.

11. Who should I involve in my RCE?

Consider including key stakeholders or decision makers and people with the skills necessary to help you complete your evaluation. Our [What You'll Need to Get Started](#) guide will help you understand what you will need to complete your evaluation. Ideally, your evaluation team will include someone with experience handling data sets. Often, people with these skills work in offices of accountability or research. However, if you do not have experienced data analysts available, the Coach provides specific instructions for preparing your data. (No prior statistics experience is necessary.) Other desirable team members include an administrative champion; staff in curriculum design, procurement, and/or instructional technology; and teachers who implement the technology.

12. How much data analysis or statistics do I need to know?

With the RCE Coach, your statistical knowledge will not be a barrier to completing a successful evaluation. The RCE Coach is designed for people with varying data analysis and statistical backgrounds. It will be helpful to have someone who is able to put together data sets involved in the process, but user-friendly guides provide all the information you need to set up your data correctly. The RCE Coach's dashboard(s) will complete the statistical portion of your analysis for you. If you have no background in these areas, you can refer to the guides provided in the RCE Coach to help you understand the findings produced for your evaluation.

13. Can I use the RCE Coach to evaluate devices?

Devices are tools for accomplishing your goals. The RCE process is optimized for evaluating concrete educational technologies, platforms, programs, procedures, and strategies that are enabled through a particular device(s). The first step in using RCE is to get specific about what you want to accomplish and the measurable outcomes that will indicate success. If you are interested in the effectiveness of a device, it is critical to think about how the device is being used to further educational goals and to evaluate specific components.

14. Can I compare two different technologies, or different implementations of the same technology?

Yes. Sometimes it is not feasible, practical, or desirable to compare technology users with nonusers. You might be more interested in learning about the best way to implement a technology, and an RCE is a great way to do that.

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You can compare two different technologies. For example, you might wish to compare two different reading apps to see which has a larger impact on student reading scores. If you prefer one app over the other, the preferred app can be designated the treatment group's technology in your evaluation. (For example, you might prefer one app because it is less expensive, or anecdotal evidence might show that it appears to be effective.) The Coach can help you test whether one technology is more effective than the other.

You can also compare two groups that use the same technology in different ways. For example, one group of students could be assigned to use a math app as homework and the other group could use the app as part of classroom lessons. The Coach can help you test whether one implementation strategy is more effective than the other.

In both cases, you will be able to tell only whether one approach was more effective than the other, not whether the technology itself was effective. Also, if you are comparing similar technologies or strategies, the two approaches could be equally effective and your results might be inconclusive.

15. What if I'm targeting use of a technology to a specific set of students? Can I still find out if the technology is effective?

To assess the effectiveness of a technology, it's critical to have a good measure of how students would have performed without it. This can be challenging when the technology is targeted to a specific set of students. For example, if you use a specific technology with all English learner (EL) students who are not reading at grade level, you would not have a comparison group that would enable you to draw strong conclusions about the product's effectiveness. However, if you have a capacity constraint—you don't have enough licenses to use the product with all EL students or you have to roll it out over time across the district—you could set up a randomized pilot that would enable you to assess effectiveness. This [guide to opportunistic experiments](#) describes situations in which this is a good option. Even when you use a technology with a specific set of students, you could use RCE to evaluate different implementations of the product or different strategies for incorporating the technology for those students. For example, you could randomly select some of the EL students to use the reading technology more frequently than others. Alternatively, you could vary the subjects in which students use the technology.

QUESTIONS ABOUT EVALUATION DESIGN

16. What is the benefit of random assignment over the other designs?

The goal of an evaluation is to determine the impact of the educational technology based on differences in outcomes between users and nonusers. To be confident that those differences are due solely to use of the technology, you will have to reduce the chance that something else is affecting the outcome. Random assignment is the best way to achieve that because it creates groups that are similar on both observed (such as pre-test scores and gender) and unobserved characteristics (such as motivation). Matching, the other design supported by the RCE Coach,

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enables you to create groups that are similar only on observed characteristics. Therefore, the benefit of random assignment is that it will give you the highest level of confidence in your findings.

17. Is random assignment unfair?

You are likely implementing a technology because you assume it will benefit users. But for newer technologies, we might not know for sure how they will work in your context and with your students. The best way to learn whether the technology works is by piloting it—or offering it to a small group of users on a trial basis. In any pilot there are going to be people who test a technology first, while others will have to wait, a fair way to determine who gets the technology and who does not is through a [random chance process](#) (like flipping a coin). If the technology has an impact, more people can get access when you know that it will benefit them.

18. What questions can I answer using the RCE Coach?

The RCE Coach will enable you to answer the following question: Is this educational technology moving the needle? The RCE Coach can answer this question based on any type of user and any outcome of interest you are measuring.

19. Are there situations when RCE is not a good choice?

Yes. RCE is best suited to answering narrow questions—often looking at the effect of a specific technology or strategy—on an outcome that can be expected to be affected quickly. RCE might not be a good choice to assess the effectiveness of a district-wide initiative that has many components. However, you might be able to use RCE to evaluate whether the specific components of that initiative are achieving their goals. These results can then help you improve how you implement the initiative. In this way, RCE can play an important part in a broader culture of learning and improvement. For example, RCE could not effectively evaluate the impact of rolling out one-to-one computing district-wide, but it might be able to help you assess the effect of a new class assignment application, enabled by the one-to-one initiative, on student homework completion. For more complex or comprehensive research questions, it could be valuable to work with a research partner. The [Regional Educational Laboratories](#) or a local university can connect you with researchers in your area.

20. How large does my sample have to be? My school might be too small to use the RCE Coach.

Many factors contribute to the recommended sample size. These include whether you are interested in individuals (such as students) or groups of individuals (such as classrooms or schools); how large of an effect you expect the technology will have; and how much the characteristics of students, teachers, or schools vary. In general, a larger sample is better. The more students, teachers, or schools you have in your sample, the more likely it is that you will receive an answer to your research question (rather than inconclusive results). However, samples do not necessarily have to be huge, and having some data is better than having no data. For example, we have seen successful evaluations with as few as 30 students.

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21. I am rolling out a technology to all 5th-grade students. What kind of evaluation can I run?

To conduct an evaluation you must be able to compare a group using the technology to a similar group not using the technology. If all students in a specific grade are using the technology, you would not have any nonusers with which to compare them. You could consider rolling out the technology in phases; that way you would have a short period during which you have users and nonusers. You could also implement the technology in different ways, and compare outcomes to support one implementation method over the other. For example, you could have some students use the technology for 60 minutes per week and others use it for 120 minutes per week. Depending on how you choose who uses the technology for a specific amount of time, you could use the randomized pilot or matched comparison pathways that the Coach offers.

22. If all of my students are using the technology, can I use usage data to categorize my treatment and control groups—by designating low-usage users as my control group?

Though this gives you some information, it does not provide the convincing evidence you need to conclude that the educational technology is leading to the observed outcomes. This approach, however, could be a good starting point for developing further ideas to test in a subsequent pilot. This is because assigning students to groups based on their technology use increases the likelihood that unobserved differences in students affect outcomes. Other factors could lead some students to use the technology less, and those factors might also affect outcomes. For example, for a technology that students use at home, poor technology or limited internet access could lead to lower use. Those factors could also be associated with poorer student outcomes. If that is the case, you wouldn't be able to determine whether it was low usage or technology and internet access in general that caused the observed outcomes.

23. Does the RCE Coach enable me to analyze the effects of the technology on subgroups, such as boys or English learners?

You can analyze subgroups using the Coach; however, to do this in the current version of the Coach you will have to go through each step of the Coach for each subgroup of interest. You will need a data set specific to each subgroup to analyze outcomes by subgroup. (For example, to analyze effects by gender, you will need one data set that has only male students and another data set that has only female students.)

24. Can I look at multiple outcomes?

The RCE Coach is currently designed to analyze one outcome at a time. However, you can easily select one outcome, get results, produce a findings brief and then repeat that process for a second outcome. If this is a feature you would like to see, please let us know at EdTechRCE@mathematica-mpr.com.

25. Do I need to use the same pre-test and post-test to measure the outcome?

No, you do not need to use the same pre-test and post-test. The effect of the technology is based on the comparison of two groups, not on pre-test versus post-test measures. The Coach uses the

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pre-test scores to create similar groups (in the case of a matched comparison design) or to check that both groups are equivalent (in the case of a randomized pilot). The Coach also accounts for pre-test scores in the final analysis. Whenever possible, the pre-test should measure the same thing as the post-test. For example, if you are interested in student math achievement, the Coach recommends that you use a math test for the pre-test and the post-test, but it does not have to be the same math test.

26. One school (or one class) in my district is using a technology. Can I compare the students in this school (or class) with other students in the district?

To conduct an evaluation you have to be able to compare a group using the technology with a similar group not using the technology. If only one school or class is using the technology, it will be impossible to disentangle the effect of the technology from the effect of characteristics that are unique to that group (such as the quality of the school or teacher). However, if you have data from a situation like this, you can use it to start to build evidence. Comparing results from one school or classroom with another group can provide suggestive evidence. To build more confidence in those results, we recommend that you set up a forward-looking pilot that includes more than one classroom or school in each group.

27. Can I compare 7th-grade students who use the technology this year to 7th-grade students who did not use the technology last year?

The RCE Coach does not currently support these types of comparisons for causal analysis. Environments change over time. If you compare 7th graders one year to 7th graders the following year, any differences you see could be due to differences in the students, or to other programs, policies, practices, or contextual factors that changed from one year to the next. However, if you have data from a situation such as this, you can use it to start to build evidence. Comparing results from across years can provide suggestive evidence. To build more confidence in those results, we recommend that you set up a forward-looking pilot that compares students from the same year.

QUESTIONS ABOUT INFORMATION SHARING

28. How can I share the results of my evaluations?

The RCE Coach enables you to generate a portable document format (PDF) file of your findings or print the results from any web browser. We recommend that you follow your existing protocols for sharing results in your district or organization.

29. How is student information handled in the RCE Coach?

The RCE Coach does not require personally identifiable student information in the data set you will need to upload (called user data files in the Privacy Policy) to use the tool. The RCE Coach provides guidelines on how to prepare and upload data sets (user data files), including specific measures for de-identifying students and avoiding personally identifiable information (PII). However, the RCE Coach cannot prevent you from uploading data sets that include PII. As you prepare to create your

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evaluation report or brief, the Coach will ask you to enter information (this is called user input in the Privacy Policy). The RCE Coach will provide tips along the way to help you avoid inadvertently entering PII. Finally, the evaluation reports or briefs that the tool produces (called user output in the Privacy Policy) will contain only student information that is sufficiently aggregated so that it is nonidentifiable.

30. How does the RCE Coach handle privacy and Federal Educational Records Privacy Act of 1974 (FERPA)?

The RCE Coach does not require personally identifiable student information to use the tool or create evaluation reports or briefs that contain PII. When you carefully follow the instructions provided by the tool, your use of the tool complies with FERPA. The RCE Coach includes a [Privacy Policy](#) and [Terms of Use](#) for users to acknowledge when setting up an account. Please visit our [Privacy Policy](#) and [Terms of Use](#) for more information.

31. What happens to the data files that I upload into the RCE Coach?

The data sets or data files you upload (called user data files in the Privacy Policy) are stored exclusively in a temporary cache. They are not stored permanently anywhere in the tool. The data contained in your user data files will be used only to produce the analysis, brief, or report that you requested. The user data files are not used for any other purpose. When you are finished and leave that page, your user data files are permanently erased from the temporary cache.

32. What happens to reports after the evaluation? Who owns the information?

You always own all of the information that you put into the RCE Coach and all of the information that comes out of your use of the RCE Coach. However, the terms of use and Privacy Policy provide that you give Mathematica Policy Research the right to use, so long as it is aggregated and or de-identified, the information you entered into the RCE Coach (the Privacy Policy calls this your user input) and the evaluation reports and briefs created by RCE Coach (the Privacy Policy calls this your user output) for educational, academic, and research purposes and to help other users or to promote research and development of technology like the Ed Tech RCE Coach. Your user input (information you entered) and user output (your evaluation reports and briefs) are stored permanently on Amazon Web Services under your RCE Coach account. Remember, your data set or data files you uploaded (the Privacy Policy calls these your user data files) are not stored anywhere, but are deleted when you finish using the RCE Coach. Also, your evaluation reports and briefs could be reviewed by the What Works Clearinghouse (WWC) if the evaluation meets its screening criteria and could be included in the [WWC | Find What Works](#) database. Please visit our [Privacy Policy](#) and [Terms of Use](#) for more details.

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QUESTIONS ABOUT GETTING ADDITIONAL ASSISTANCE

33. I want to know what I am getting into. Is there an overview of all of the steps?

Check out [What You'll Need to Get Started](#) for an overview of the skills and data you will need to conduct a successful evaluation. You can also find a list of all of the tools under [Preview Tools](#).

34. A lot of terms are unfamiliar to me. Is there a printable glossary that I can use as a reference?

Yes. The RCE Coach uses technical terms only when absolutely necessary. In these cases, there is often a definition that you can view by placing your cursor over the word. For more extensive definitions, you can view our [printable glossary](#). The technical vocabulary is commonly used in educational research and becoming familiar with these terms will help you understand other research as well.

35. I don't have the answers to all of the questions.

a. Are there some responses that are required and others that are not?

Yes. Answering all of the questions will enable you to produce the most complete findings brief, but only some questions are required to complete the analysis. Some tools will be locked (and allow you only to peek at the contents) until you answer required questions. However, if you skip many questions, it will likely be difficult to interpret and share your findings.

b. Can I skip a question and return later?

Yes. The RCE Coach is designed so you can move through and answer questions as you have answers.

c. Will the RCE Coach remember which questions still have to be completed?

Yes. The RCE Coach tracks the questions you have completed and prompts you for key information when it is required.

36. Who do I contact if I need help using the tool?

You can leave questions and your contact information in the Feedback tab on the right margin of each page and someone from the RCE project team will contact you. You can also periodically check the frequently asked questions for updated responses.

37. How can I pilot the RCE Coach and receive technical assistance?

The RCE Coach is freely available for anyone to use. Resources are available to support a number of districts during 2017 in conducting RCEs with the RCE Coach. If you are interested in receiving technical assistance to help you get started, please complete the Ed Tech RCE Pilot Project Form to share some preliminary information with the RCE project team. We will release a request for proposals in the near future for winter and spring pilots. We are particularly interested in forward-looking pilots that can take advantage of the new features released in January 2017. In addition, we would like to support districts that wish to test educational technologies with a variety of

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goals, such as teacher productivity and teacher professional development, as well as student achievement.

QUESTIONS ABOUT BEING A PILOT PARTNER

38. What are the criteria for being selected as a pilot partner?

Your district would be a strong candidate if you:

- Are considering piloting a new technology and are open to using a lottery-based approach to assign use of the technology
- Have implemented a technology in some schools or classes but not others, providing opportunities to compare outcomes for similar students or teachers who have access to the technology with others who don't
- Are interested in testing different approaches to implementing a technology, such as different teacher training programs or different communication strategies

39. What kinds of software applications are being considered?

We are interested in evaluating technologies that are relatively untested and can provide high quality data on whatever outcomes the technology aims to impact. Technologies can be aimed at student achievement, social-emotional learning, teacher professional development, teacher productivity, or another district goal.

40. What does participation entail?

Participating districts will work with our research partners to conduct one or more technology evaluations for your school(s). We will seek your input on the toolkit being developed to support RCEs, giving you an opportunity to help shape this important national initiative. Your staff may participate in teleconferences with developers and build capacity to obtain and interpret system data generated by technologies. We will summarize findings from the RCEs in short reports and make those reports available to the public.

FREQUENTLY ASKED QUESTIONS FROM EDUCATIONAL TECHNOLOGY COMPANIES

41. Can my company use the RCE Coach to evaluate our educational technology product?

Yes, the RCE Coach is free and available for anyone to use. However, it is specifically designed for educators (school districts, educational leaders, and individual educators). We encourage companies to partner with school clients that are willing to evaluate your product using the RCE Coach.

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42. As an educational technology company, what can I expect from school clients that use the RCE Coach to evaluate my product?

School clients will likely request specific usage data that they need to create the data sets that they will upload into the tool. Based on results of evaluations, some school clients might suggest modifications to your technology to improve intended outcomes.

43. What schools and companies are currently participating?

We are unable to release this information publicly. However, our [Shared Evaluations section](#) identifies some participating schools, school districts, and products.

44. When and where are evaluations published for public viewing?

Evaluations are available for viewing on the Shared Evaluations page and more evaluations will be added as they are completed. Users can opt in or out of sharing evaluations publicly.

45. Why should vendors participate in the RCE pilot process?

- The field is moving in the direction of evidence-based decision making.
- The ESEA, as amended by [ESSA](#), is putting increased emphasis on evidence, and an increasing number of schools will be making evidence-based decisions about adopting educational technology.
- The RCE process will help you to implement more efficient pilots.
- You can give us feedback to improve the tool, implementation, and pilot process.
- There is no cost for you to participate.
- You will receive valuable information that you can use to inform product development.

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