Welcome!

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• Closed-captioning is also available. At the bottom of your audience console are multiple application widgets that you can use. If you need closed caption click on the red “CC” widget at the bottom of your screen.

• A full recording of the webinar will be posted in about 24 hours at the same link used to participate live.
Using data to refine your remote learning strategies: The Evidence to Insights (e2i) Coach

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Agenda

Introductions

Key research questions during COVID-19

A brief overview of the Evidence to Insights (e2i) Coach

What you need to get started

Q&A
Key terms

- **Remote learning** is a method of instruction in which teachers and students are separated by time, location, or both and interact through technology-based and non-technology-based mechanisms.

- **Virtual learning** is instruction during which students and teachers are separated by time, location, or both and interact through Internet-connected computers or other electronic devices (National Forum for Education Statistics 2015).

- **Synchronous**: A teacher and student or students interacting at the same time (via video, phone, chat, or other medium).

- **Asynchronous**: Students work on their own, and interaction with teacher is not simultaneous (for example, via email, text message, or completing instructional packets).
Key research questions during COVID-19
School closures across the United States, April 2020

Coronavirus & School Closure

CLOSED INTO APRIL
CLOSED INTO MAY
CLOSED FOR ACADEMIC YEAR
CLOSED UNTIL FURTHER NOTICE
RECOMMENDED CLOSURE

Source: EdWeek, Map: Coronavirus and school closures 2020
Students’ projected learning losses

Melt refers to students gaining no ground during the school closures. Slide refers to students losing ground during the school closures.

Source: Tarasawa and Kuhfeld 2020
Schools are facing a lot of challenges

- Promoting students’ well-being
- Navigating federal and state guidance
- Maintaining financial health
- Providing continuity in academic services
- Ensuring equity
- Protecting students’ data and privacy
Schools are facing a lot of challenges
The research landscape: Making the most of evidence-informed insights

<table>
<thead>
<tr>
<th>Strategy</th>
<th>What might we take away from this?</th>
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<tbody>
<tr>
<td>Online learning</td>
<td>Face-to-face or synchronous time with teachers is critical</td>
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<tr>
<td>Feedback, tutoring, and support</td>
<td>Students require ongoing feedback, support, and relationships with their teachers and their peers</td>
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<tr>
<td>Project-based learning</td>
<td>Employ human-centered design principles to solve problems and foster out-of-the-box thinking</td>
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<td>Gaming or virtual simulations</td>
<td>Employ activities that engage students and use techniques drawn from behavioral science to remove friction points</td>
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<tr>
<td>Plan beyond content delivery</td>
<td>Provide resources and materials to help supplement student learning</td>
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Some key research questions

• Which remote learning strategies most effectively engage students?

• Which remote learning strategies best promote academic achievement?

• Which strategies are most effective for specific students, such as students with disabilities or English language learners?

• Which strategies support and engage parents?
Data are critical for answering key learning questions

Data we typically use

- Attendance
- Engagement
- Grades on state assessments
- Feedback
Data are critical for answering key learning questions

Data that might be available while buildings are closed

- Account logins
- Session duration
- Synchronous attendance

- Synchronous participation
- Posts on class discussion boards

- Competency-based assessments
- In-app assessments
- Assignment or project completion
- Module completion

- Surveys of students, parents, and teachers
A continuum of evidence

Percentage of students logging on to a tool at least once per day

Low confidence in results

- Anecdotal
- Pre/Post
- Descriptive

High confidence in results

- Quasi-experimental (matched comparison)
- Correlative
- Experimental (Randomized Controlled Trial)
A continuum of evidence

Percentage of students attending synchronous meetings

Low confidence in results
- Anecdotal
- Descriptive

Pre/Post
- Correlative

Quasi-experimental (matched comparison)

High confidence in results
- Experimental (Randomized Controlled Trial)
A continuum of evidence

Association between session duration and assessment scores

Low confidence in results
- Anecdotal
- Descriptive
- Pre/Post

Quasi-experimental (matched comparison)

High confidence in results
- Correlative
- Experimental (Randomized Controlled Trial)
A continuum of evidence

Low confidence in results

- Anecdotal
- Pre/Post
- Descriptive
- Correlative

Quasi-experimental (matched comparison)

High confidence in results

- Experimental (Randomized Controlled Trial)
Example research questions

• All outcomes
  – Does app A increase [fill in the blank] compared with app B?

• Student performance
  – Does assigning four hours of content per day increase assessment performance compared with assigning two hours of content per day?

• Student engagement
  – Does having one check-in per day increase students’ engagement compared with having two check-ins per week?
  – Does delivering content synchronously increase students’ engagement compared with delivering content asynchronously?
  – Do letter grade policies increase students’ engagement compared with pass/fail policies?
  – Does using a mobile-friendly app increase students’ engagement compared with using a non-mobile-friendly app?

Phoenix’s high school district under our member Chad Geston has launched an ambitious “Every student, every day” effort that is exactly what it sounds like: every kid in the district having a check-in with an adult, every day.

—EdWeek

“We realize that if we tell kids today, ‘Hey, your grade can’t be any lower than it is now,’ or if we tell them we’re not going to grade them for the rest of the year, we’re going to have a big chunk of kids check out,”

— Curtis Hicks, asst. superintendent, Salem City district, VA, via EdWeek
A brief overview of the e2i Coach
Using evidence to your advantage

What works

In your context

For whom
The Coach will recommend an approach to evaluate your program or practice.

Institute of Education Sciences

The Coach will help you design an evaluation based on the outcomes you are interested in and your unique context.

The Coach will automatically conduct your analysis and provide you with results.

The Coach will compile your results and all of the information you have entered into one succinct report.


You can be a leader in making evidence-based decisions. With the Evidence to Insights Coach you will make better, more informed choices and see bigger changes in what you care about.

Visit e2icoach.org
The purpose of this evaluation is to determine whether the MathU program, an online platform, increases math achievement among students.

Team: e2icoach.team@gmail.com

EVALUATION STEPS

1. GETTING STARTED
2. PLANNING YOUR RESEARCH
3. PREPARING YOUR DATA
4. ANALYZING YOUR DATA
5. SUMMARIZING YOUR FINDINGS

Are you ready to get started?

Here's what's coming up:

- Provide information on the program or practice you want to evaluate
- Select the outcome you want to change
- Determine how you will measure that outcome
- Use information about how the program or practice is or will be implemented to identify the right evaluation approach

What you need:

- Basic information on the program or practice you're evaluating
- An outcome you want to change, and information on how it will be measured
- An understanding of how the program or practice is or will be implemented

Time required
15 minutes
The e2i Coach

- The e2i Coach takes you through a five-step evaluation process that puts the questions you want to answer at the center. Use it to do the following:
  - Investigate the implementation or impact of programs and practices you’re using
  - Craft your own research questions
  - Define your own metrics for success
  - Create research teams within your school or district
  - Share your insights with and learn from a community of educators

- Check with the appropriate staff in your district about data use restrictions.
  - The e2i Coach does not store your data.
  - You should not upload personally identifiable information to the e2i Coach.
Evidence of effects

Participating in synchronous content

Participating in asynchronous content

Similar

Not similar
Example research questions

- **All outcomes**
  - Does app A increase [fill in the blank] compared with app B?

- **Student performance**
  - Does assigning four hours of content per day increase assessment performance compared with assigning two hours of content per day?

- **Student engagement**
  - Does having one check-in per day increase students’ engagement compared with having two check-ins per week?
  - Does delivering content synchronously increase students’ engagement compared with delivering content asynchronously?
  - Do letter grade policies increase students’ engagement compared with pass/fail policies?
  - Does using a mobile-friendly app increase students’ engagement compared with using a non-mobile-friendly apps?
Summarizing your findings

There is a 78 percent probability that synchronous content increased assessment scores by 10 points compared with asynchronous content.
Keeping equity at the forefront

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<thead>
<tr>
<th></th>
<th>Outcomes meaningfully decreased</th>
<th>Outcome did not meaningfully change</th>
<th>Outcomes meaningfully increased</th>
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<tbody>
<tr>
<td>A</td>
<td>10</td>
<td>10</td>
<td>80</td>
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<td>B</td>
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<td>F</td>
<td>7</td>
<td>71</td>
<td>22</td>
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</tbody>
</table>
My Evaluations

POM math achievement Pilot of MathU View Evaluation
107% completed

Start a new evaluation or view all of your existing evaluations below.

ADD NEW EVALUATION VIEW MY EVALUATIONS

My Teams
Building evidence often requires a team. If you are working with others, you can create a team for collaborating on evaluations. Add team members now, or once you get started on a new evaluation.

PILOT OF MATHU e2icoach.t... General U... 3/26/2020...

Community Findings Briefs
See findings from other e2i Coach users who have completed and shared their findings briefs.

VIEW ALL BRIEFS

Help us improve your e2i Coach experience
By learning more about you and how you are using the e2i Coach, we can continue to improve this platform and make sure you are able to get the answers you need.

Share feedback on the e2i Coach
Add any feedback you have on the Coach
When to use the e2i Coach

You are here

Prospective

Visit e2icoach.org

You will be here

Retrospective
What you need to get started
Data requirements

- Who used which tools or strategies
- Previous performance or engagement
- Characteristics likely to influence outcomes
- Student group indicators
- Students’ outcomes
A word of caution

• If you are comparing two different technologies, your outcome must be consistent across both technologies.

• Avoid making comparisons that have only one student, classroom, or school in the treatment group and one student, classroom, or school in the comparison group.
Summary of key takeaways

• We need new evidence on which remote learning strategies are working to supplement the existing evidence base.
• Technology provides many opportunities to regularly collect detailed feedback on students’ progress and engagement.
• A matched comparison approach will give us the most confidence that one strategy is preferable to another.
• Using a matched comparison approach is easy with the e2i Coach.
• You don’t have to do these analyses now, but you do need to collect the data now.

One of our failures as a field—education researchers—is that we don’t learn from failures…What I don’t want to do is let all these natural experiments, these naturally occurring events that create these radical transformations … just to come and go without trying to capture information about what worked, what didn’t work, why.

–Mark Schneider, director of the Institute of Education Sciences
Action steps

Collect good data on what remote learning strategies are being used, including which ed tech products are used as well as the pedagogy around those products.

Talk to your ed tech vendors to make sure you’ll be able to access data for your students and how you’ll gain access.

Appraise the types of outcome data that will be available to you and develop methods of collecting any additional data that might be needed.
Closing
Thank you!
COVID-19: Evidence-Based Resources

The U.S. Department of Education’s Institute of Education Sciences funds a network of 10 Regional Educational Laboratories (RELs). Each REL serves a designated region of the country and works with educators and policymakers to support a more evidence-based education system. In response to COVID-19, the RELs have collaborated to produce this series of evidence-based resources and guidance about teaching and learning in a remote environment, as well as other considerations brought by the pandemic.

UPCOMING WEBINARS

Supporting Educators in Implementing Reading Across the Content Areas

This REL Pacific webinar will provide an overview of research on strategies to support educators in implementing reading across the content areas for all students, including special populations such as English learners and students with disabilities.

Where can I find more resources?


https://compcenternetwork.org/covid-19

Visit e2icoach.org
Contact us if you have any questions

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  – MManley@mathematica-mpr.com

• Brian Gill
  – BGill@mathematica-mpr.com
References


Disclaimer

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https://ies.ed.gov/ncee/edlabs/regions/midatlantic/