

Research-Based Strategies for Effective Remote Learning: *Student Engagement*

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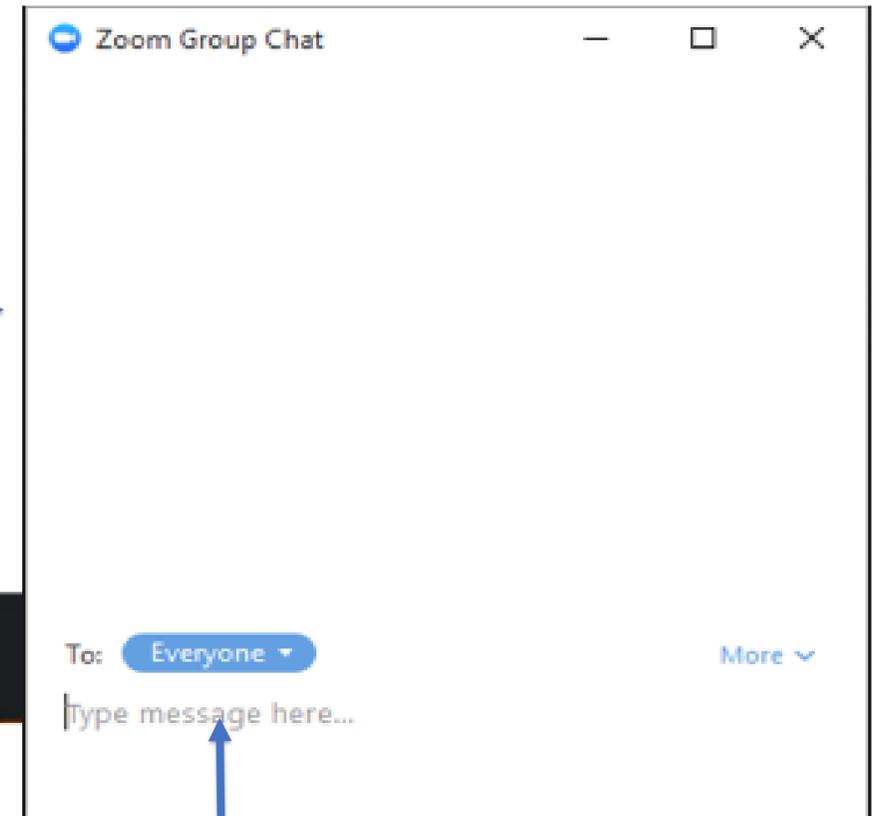
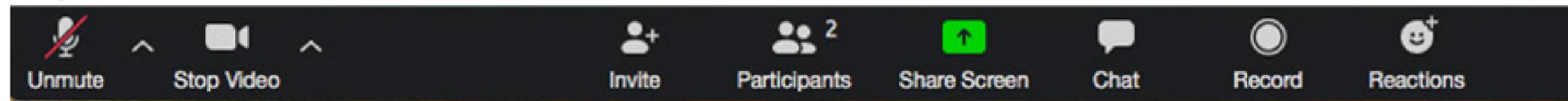


Quick tour of Zoom features

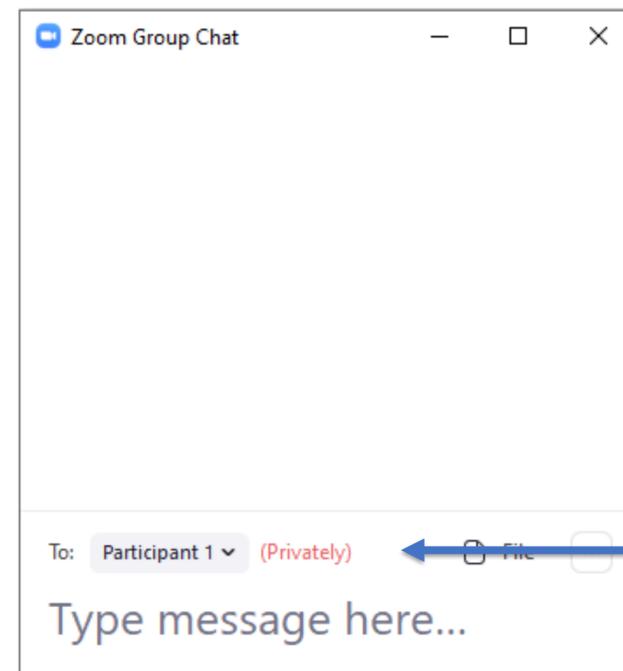
Pro Tip: Mute your mic unless speaking to limit background noise.

Mute/unmute **microphone**

To view and use **Chat**



Pro Tip: Turn video off if you are experiencing low bandwidth.



You can send a Chat message to Everyone in the meeting or select a specific person from the dropdown.

Breakout groups

- Wait for an invitation to appear on your screen and click “Join Breakout Room.”
- When the breakout room closes, you will automatically be returned to the full group.

You have been assigned to Breakout Room:

Breakout Room 2

Join Breakout Room

Agenda

- Welcome and introductions
- Train-the-trainer structure
- Overview of student engagement
- Behavioral engagement
- Emotional engagement
- Mental engagement
- Wrap-up and next steps



Poll

What is your role?

- Teacher
- School Administrator
- District Administrator
- Other



Meet the team



Jill Marcus
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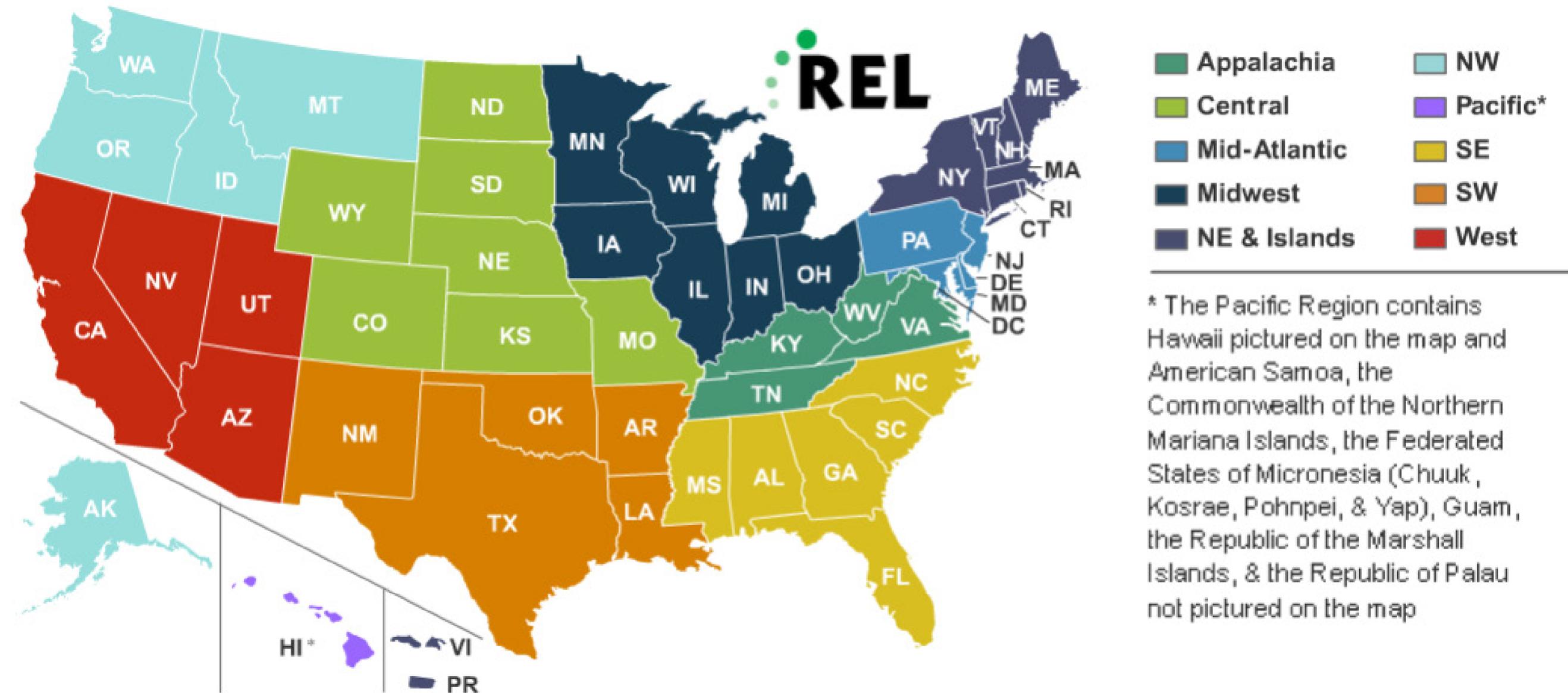


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The Regional Educational Laboratories



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Regional Educational Laboratory Appalachia
At SRI International

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U.S. DEPARTMENT OF EDUCATION

What Tools Have States Developed or Adapted to Assess Schools' Implementation of a Multi-Tiered System of Supports/Response to Intervention Framework?

A Publication of the National Center for Education Evaluation and Regional Assistance at IES




Supporting Your Child in Developing Math Skills For Future Success

Math success opens doors to college and careers.
The technical and professional jobs of the future demand more mathematical knowledge and problem solving skills.



- Children who believe they can be successful in math are more willing to put in effort, even when they struggle, and this results in better performance.¹
- Success in elementary school math predicts future achievement in middle and high school math and other subjects.^{2,3}
- Students who complete higher level math in high school earn higher incomes in the future.⁴
- The number of STEM (science, technology, engineering, and mathematics) jobs is growing and half of all STEM jobs are available to workers without a four-year college degree. STEM jobs pay 10% more than other jobs available to these workers.⁵

Families can support children in developing math skills for the future by⁶:

- praising effort and modeling positive math attitudes.
- encouraging children to seek help and try new strategies when they are stuck.
- confronting stereotypes about who is good at math.

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¹Boaler, J. (2015). Mathematical mindsets: Unleashing students' potential through creative math, inspiring messages and innovative teaching. San Francisco, CA: John Wiley & Sons.

²Classens, A., & Engel, M. (2013). How important is where you start? Early mathematics knowledge and later school success. *Teachers College Record*, 115(4), 1-29. <http://eric.ed.gov/?id=EJ1020177>

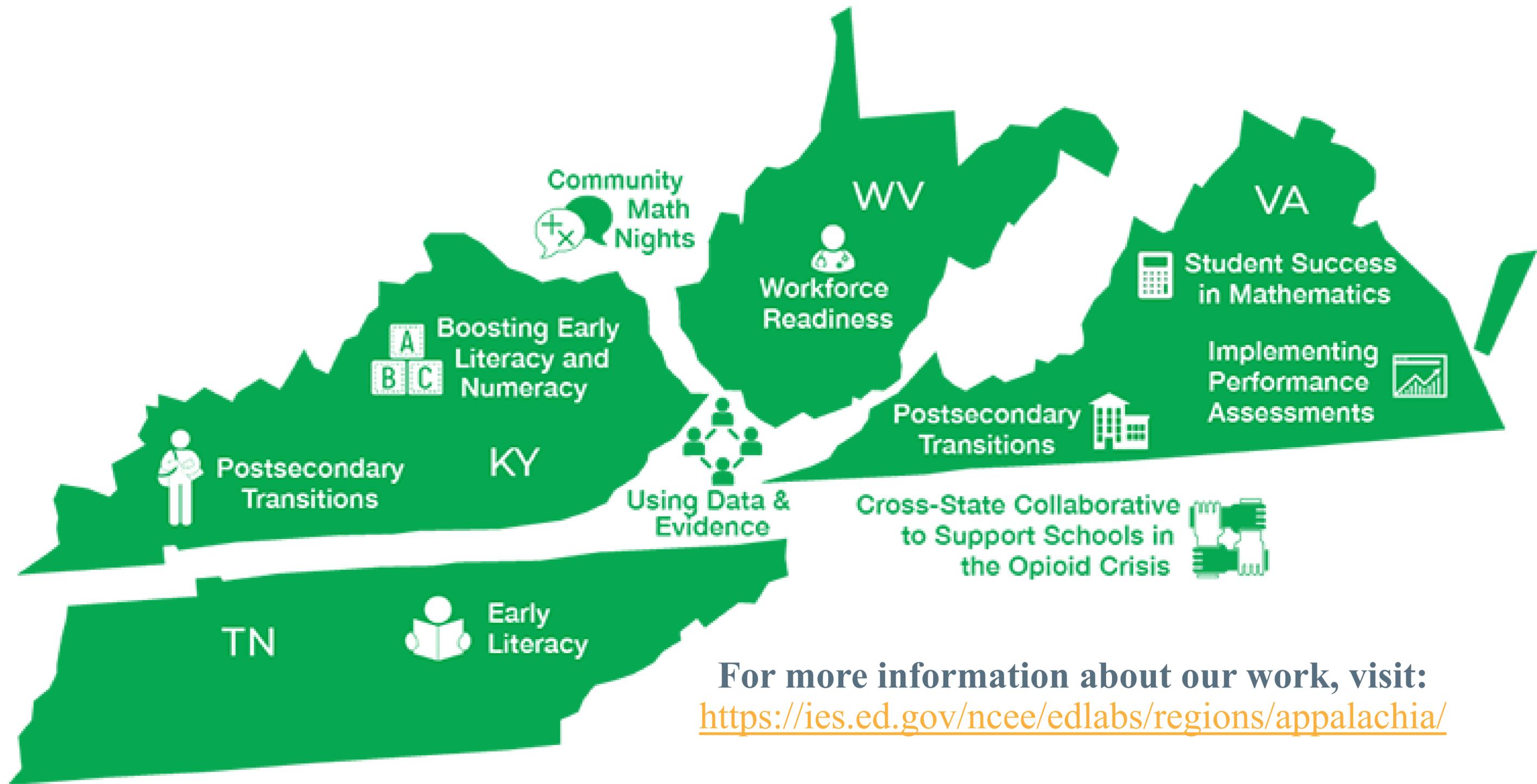
³Giegler, R. S., Durcan, G. J., Davis-Kean, J. E., Duckworth, K., Classens, A., Engel, M., & Chen, M. (2012). Early predictors of high school mathematics achievement. *Psychological Science*, 23(7), 671-677.

⁴Achieve, Inc. (2004). Closing the expectations gap: An annual 50-state progress report on the alignment of high school policies with the demands of college and work. Washington, DC: Author.

⁵Rothwell, J. (2012). The Hidden STEM Economy. Brookings Institution, Washington, DC.

⁶Epatin, J.L. (2001). School, family, and community partnerships [1st ed.]. Boulder, CO: Westview Press.

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<https://ies.ed.gov/ncee/edlabs/regions/appalachia/>



Train-the-Trainer Structure

Train-the-trainer structure

- The student engagement workshop is divided into three sections, each focusing on a different type of engagement:
 - Behavioral engagement
 - Emotional engagement
 - Mental engagement
- The three sections can be presented all together or separately.
- We have provided you with:
 - A slide deck you can use in your trainings
 - Handouts
 - Facilitator's Handbook

Facilitator's Handbook



Research-based Practices for Effective Remote Learning: Student Engagement

Facilitator's Handbook

Regional Educational Laboratory Appalachia at SRI International

December 2020

Contract No. ED-IES-17-C-0004

- How to use the facilitator's handbook
- Welcome and introductions
- Overview
- Section 1: Behavioral engagement
- Section 2: Emotional engagement
- Section 3: Mental engagement
- Wrap-up and next steps
- Best practices in facilitation
- Handouts
- Sample workshop invitation
- Alternative suggestions for creating breakout rooms and polls



Additional supports



Office hours for trainers to share ideas and problem-solve



FAQ document based on your follow-up questions



Email emma.pellerin@sri.com with any questions



Overview of Student Engagement

Focus of today's workshop

- A great deal of research has been conducted on the topic of online learning, but not in the context of a pandemic.
 - Much research on online learning has been conducted in higher education.
 - Not all of the strategies we present today have been rigorously tested with K–12 students.
- The research on online learning highlights different factors that can improve student engagement including:
 - Features of software platforms.
 - Strategies educators can use.
 - The role of parents or online learning mentors.
- Our focus today will be on what educators can do to support student engagement.

Types of engagement

Behavioral Engagement

- Physical energy exerted to complete classwork requirements.
- Examples: attendance, participation, completing work, following procedures, time on task.

Emotional Engagement

- Emotional energy associated with feelings about the classwork.
- Examples: boredom vs. enjoyment or interest, anxiety/frustration vs. confidence, sadness vs. happiness.

Mental Engagement

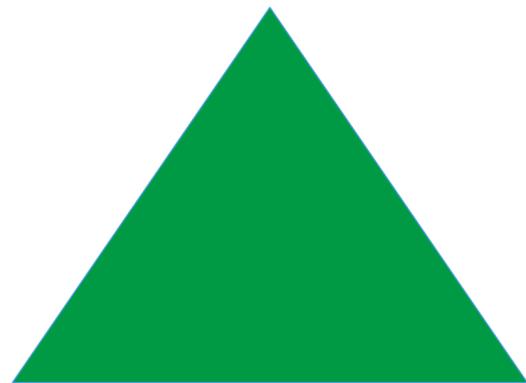
- Mental energy exerted when involved in classwork activities.
- Examples: attention, absorption, concentration, persistence, cognitive/metacognitive strategy use.

(Borup et al., 2014; Borup et al., 2020)

Model of student engagement in online learning (part 1)

Mental

- The green triangle represents student engagement independent of support from others.

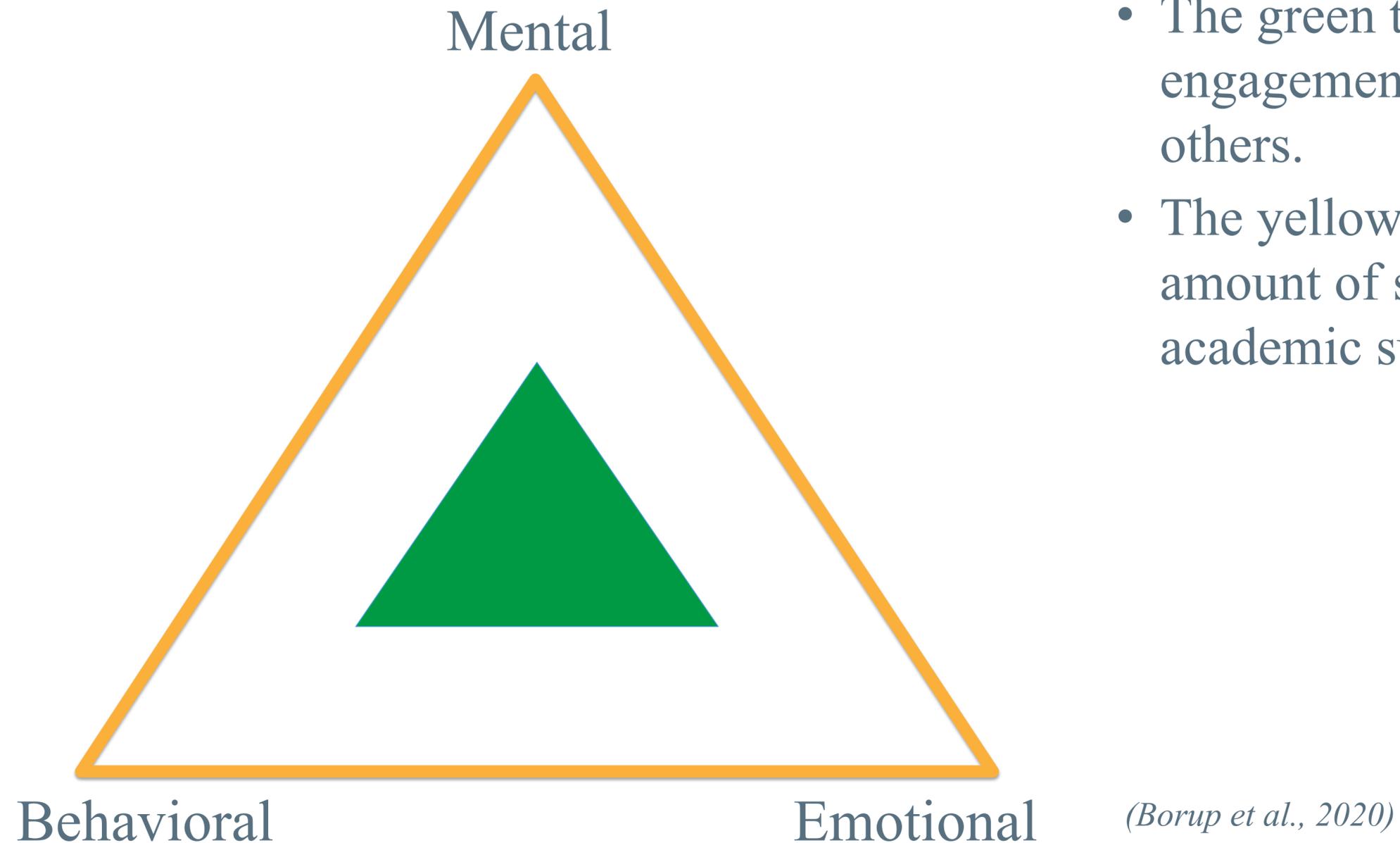


Behavioral

Emotional

(Borup et al., 2020)

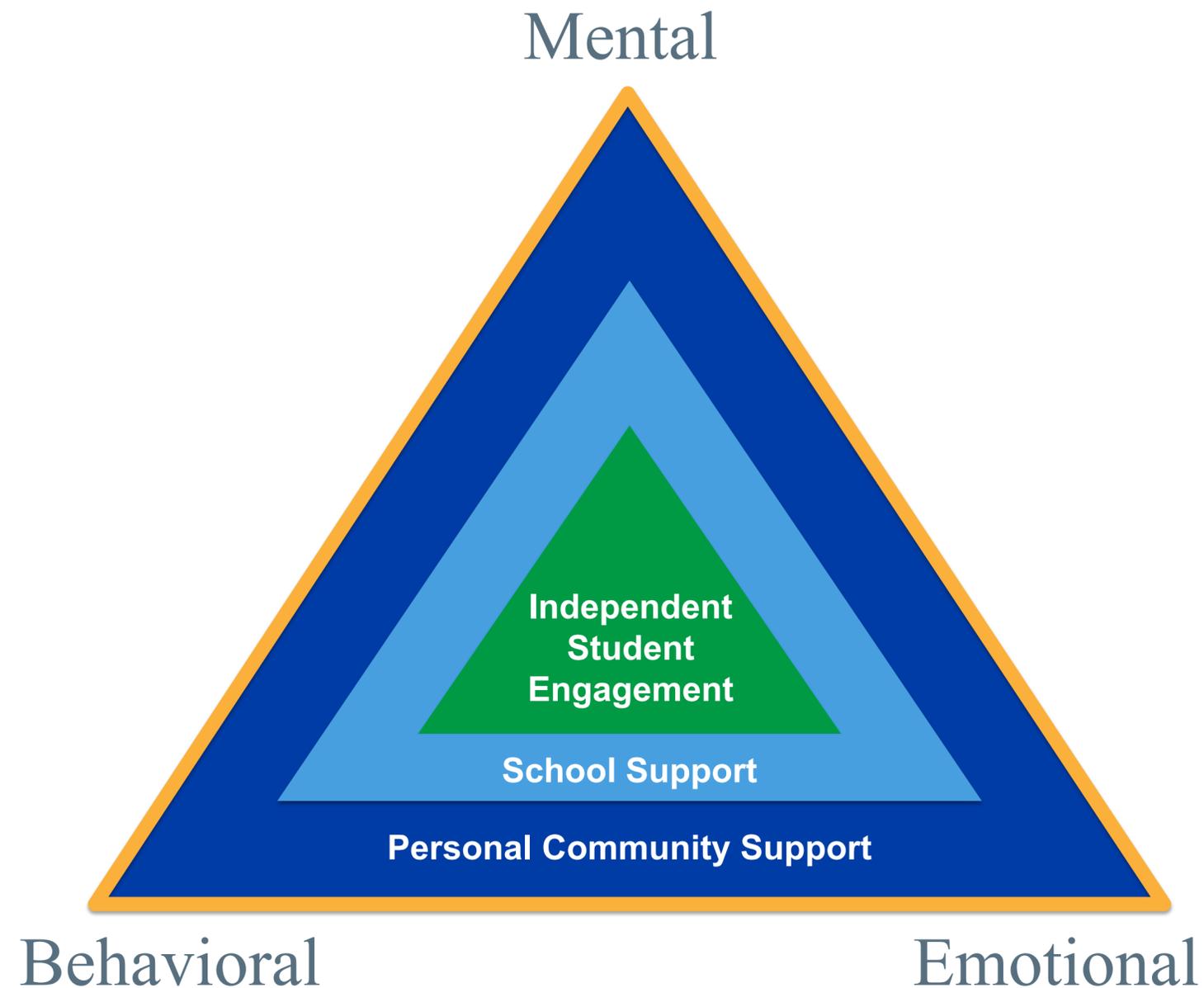
Model of student engagement in online learning (part 2)



- The green triangle represents student engagement independent of support from others.
- The yellow triangle outline represents the amount of student engagement necessary for academic success.

(Borup et al., 2020)

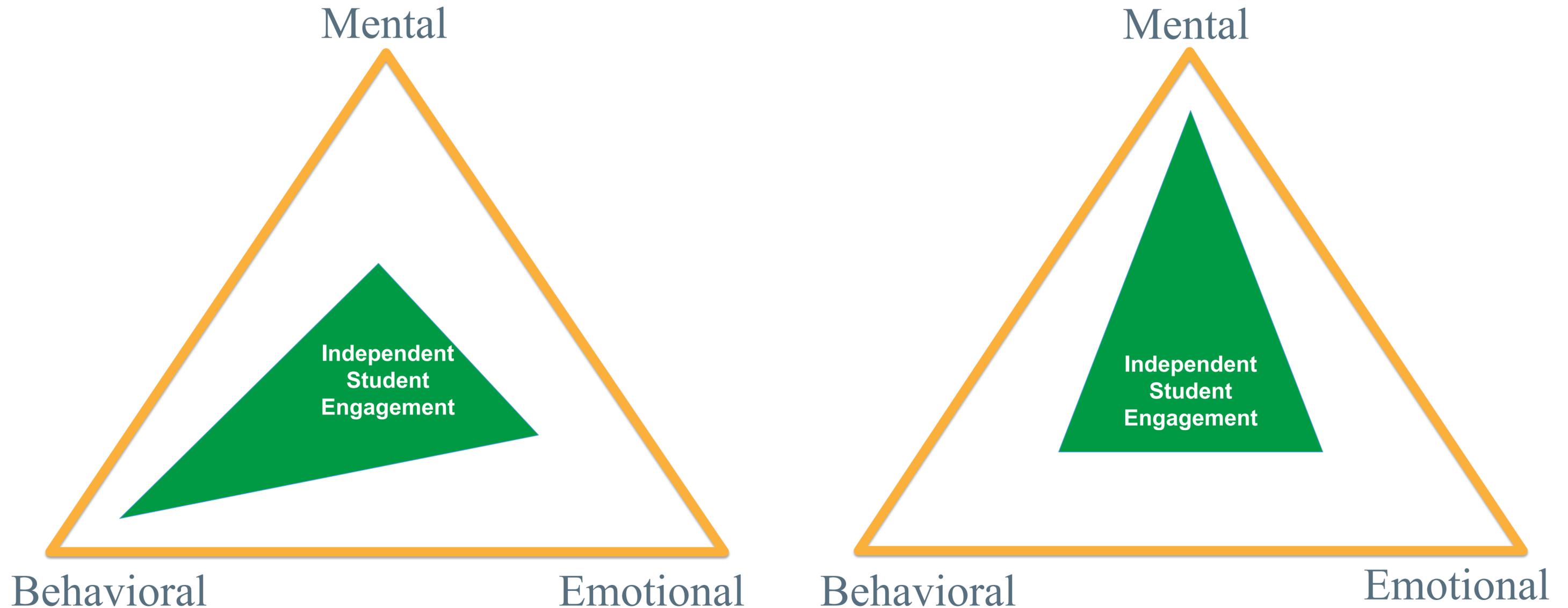
Model of student engagement in online learning (part 3)



- The green triangle represents student engagement independent of support from others.
- The yellow triangle outline represents the amount of student engagement necessary for academic success.
- The light blue triangle represents student engagement resulting from school support.
- The dark blue triangle represents student engagement resulting from personal community support.

(Borup et al., 2020)

Students' needs for support may vary across types of engagement



(Ben-Eliyahu et al., 2018; Borup et al., 2020)

Poll

Thinking about the students you work with now and the modalities being used for teaching, which type of engagement do you think is the easiest to influence in an online environment?

- **Behavioral:** Energy exerted to complete classwork assignments.
 - Examples: attendance, participation, completing work, following procedures, time on task.
- **Emotional:** Energy associated with feelings about the classroom.
 - Examples: boredom vs. enjoyment or interest, anxiety or frustration vs. confidence, sadness vs. happiness.
- **Mental:** Energy exerted when involved in classwork activities.
 - Examples: attention, absorption, concentration, persistence, cognitive/metacognitive strategy use.

(Borup et al., 2014; Borup et al., 2020)



Behavioral Engagement

What is behavioral engagement?

Energy exerted to complete classwork requirements:

Attendance

Participation

Completing work

Following procedures

Time on task

(Borup et al., 2014; Borup et al., 2020)



Why should we focus on behavioral engagement?

- Research on behavioral engagement in general, not just in online learning, suggests that:
 - Low behavioral engagement is associated with skipping class, suspension, grade retention, and dropping out of school.
 - Teachers' ratings of behavioral engagement in early grades were associated with whether students later dropped out of school.
 - Teacher supportiveness is associated with behavioral engagement among K–12 students.
 - Classroom structure (such as setting clear expectations and responding consistently when students violate expectations) is associated with behavioral engagement.

(Fredericks et al., 2004)

How can educators support behavioral engagement in online learning?

- Troubleshooting and orienting.
- Organizing and managing.
- Monitoring and encouraging progress.

(Borup et al., 2020)

How to promote behavioral engagement: Troubleshooting and orienting

- Provide technology to families who need it.
 - Laptops, tablets, or hot spots.
- Provide support for accessing and navigating courses.
 - Ensure that students (and families) know how to navigate any academic resources, including:
 - Knowing how to find resources they need on whatever platform is being used, and
 - How to find feedback on their work.

(Borup et al., 2020; Quality Matters and the Virtual Learning Leadership Alliance, 2019)



How to promote behavioral engagement: Organizing and managing

- Support students to use self-regulated learning strategies, including:
 - Setting goals,
 - Identifying strategies to achieve their goals (for example, identify a peer to study with, break down large assignments into smaller chunks),
 - Monitoring progress toward goals, and
 - Reflecting on accomplishments, informed by self-observation as well as peer and teacher feedback.
- Ways to support student use of self-regulated learning strategies:
 - Individualized digital learning plans, and
 - Individual meetings with students to jointly set goals and monitor progress.



(Abrami et al., 2011; Chambers et al., 2020; Means et al., 2009; Quality Matters and the Virtual Learning Leadership Alliance, 2019)

How to promote behavioral engagement: Monitoring and encouraging progress

- Communicate frequently regarding student progress.
 - Ongoing, open, proactive, and continuous communication with parents and counselors.
 - Communicate study practices that parents can use to support students' learning.
 - Clear feedback to students that explains how their work does or does not demonstrate mastery.

(Borup et al., 2020; Means et al., 2009; Quality Matters and the Virtual Learning Leadership Alliance, 2019)



Breakout group activity: One times three

In breakout groups, share your thoughts about behavioral engagement in remote learning:

- One thing that's working for you.
- One thing that is still a challenge.
- One thing that you want to try next.

Would this "One times three" structure work for you and your students? What adaptations might be needed?

Any follow-up questions or further discussion points?

Check-in

Poll question 1: How well do you understand how to improve students' behavioral engagement?

- Extremely well
- Moderately well
- Somewhat well
- Slightly well
- Not at all

Poll question 2: How successfully do you think you can adapt these strategies for a remote learning context?

- Extremely successfully
- Moderately successfully
- Somewhat successfully
- Slightly successfully
- Not at all successfully



Emotional Engagement

What is emotional engagement?

Energy associated with feelings about classwork:

Boredom versus enjoyment or interest

Anxiety or frustration versus confidence

Sadness versus happiness

(Borup et al., 2014; Borup et al., 2020)



Why should we focus on emotional engagement?

- Research on mental engagement in general, not just in online learning, suggests that:
 - Students who are more emotionally engaged may see more value in learning activities.
 - Emotional engagement can include a sense of belonging to the school.
 - The extent to which students value schooling and feel more connected to the school is associated with greater student achievement.

(Borup et al., 2020; Fredericks et al., 2004)

How can educators support emotional engagement in online learning?

- Facilitate communication and develop relationships.
- Instill excitement for learning.

(Borup et al., 2020; Dixon, 2010; Murphy et al., 2008)

How to promote emotional engagement: Facilitate communication and develop relationships

- Cultivate social presence.
- Develop relationships with students and families by communicating with them outside of class.
- Add synchronous elements when the class is primarily asynchronous.
- Engage in deliberate rapport building.
- Develop ways for students to engage with each other.
- Develop relationships.

(Abrami et al., 2011; Banna et al., 2015; Bernard et al., 2009; Borup et al., 2020; Dixon, 2010; Kerhrwald, 2008; Murphy & Rodriguez-Manzanares, 2008; Quality Matters and the Virtual Learning Leadership Alliance, 2019)



How to promote emotional engagement: Instill excitement for learning

- Provide opportunities for social interaction through fun activities.
- Daily motivational videos.
- Communicate with students about their interests and provide instruction aligned with those interests.

(Abrami et al., 2011; Banna et al., 2015; Bernard et al., 2009; Borup et al., 2020; Dixon, 2010; Kerhrwald, 2008; Murphy & Rodriguez-Manzanares, 2008; Quality Matters and the Virtual Learning Leadership Alliance, 2019)



Breakout group activity: *Five Whys* of emotional engagement

To promote emotional engagement with my students, I _____

Why? Because _____

Would this *Five Whys* structure work for you and your students? What adaptations might be needed?

Check-in

In the chat:

What would you tell a new teacher about how to improve their students' emotional engagement?

Q: Any questions/issues so far?



Mental Engagement

What is mental engagement?

Energy exerted when involved in classwork activities:

Attention

Absorption

Concentration

Persistence

Use of cognitive/metacognitive strategies

(Borup et al., 2014; Borup et al., 2020)



Why should we focus on mental engagement?

- Research on mental engagement in general, not just in online learning, suggests that:
 - Students who exhibit more mental engagement develop a deeper understanding of academic content.
 - Use of metacognitive strategies has been shown to be associated with greater student achievement.
 - Students' mental engagement is higher when teachers both present challenging work and create a socially supportive classroom environment.

(Fredericks et al., 2004)

How can educators support mental engagement in online learning?

- Instructing
- Collaborating



(Borup et al., 2020)

How to promote mental engagement: Instruction

- Provide office hours for feedback and extra help.
- Provide feedback using various formats (such as written or verbal feedback).
- Provide clear, accurate feedback about students' developing competencies, expertise and skills.
- Engage students in active learning.
- Incorporate multimedia learning principles.
- Provide opportunities to both challenge students and for them to be successful.
- Provide relevant tasks and instructional materials to help students identify with the school and content to be learned.



(Abrami et al., 2011; Borup et al., 2020; Dixon, 2010; Quality Matters and the Virtual Learning Leadership Alliance, 2019)

How to promote mental engagement: Collaboration

- Support discourse that focuses on importance and utility of content and activities.
- Include opportunities for structured group work and cooperative learning.
- Provide clear guidelines about the content for online discussions.
- Model good interaction in online discussion groups.

(Abrami et al., 2011; Chambers et al., 2020; Lou et al., 2001)



Breakout group activity: 15 percent solution

- What is your 15 percent?
- Where do you have discretion and freedom to act? What can you do without more resources or authority?
- Would this “15 percent solution” structure work for you and your students? What adaptations might be needed?

Check-in

In the chat:

Relating to mental engagement, I believe that _____ because _____.

Q: Any questions/issues so far?



Wrap-up and Next Steps

Summary

Three types of engagement:

- Behavioral
- Emotional
- Mental

Different strategies are used to support different types of engagement.

Supporting Student Engagement

Students need some level of behavioral, emotional, and mental engagement to be successful in school. Students can manage some engagement themselves, but they may need support to become fully engaged. This handout lists strategies that educators can use to support students to bridge that gap.* The support educators provide to students will vary depending on whether students need support for behavioral, emotional, or mental engagement.

 Behavioral Engagement	 Emotional Engagement	 Mental Engagement
Such as attendance, participation, and following procedures	Such as enjoyment, interest, and confidence	Such as concentration, persistence, and self-reflection
<ul style="list-style-type: none">• Provide necessary technology• Teach technology skills• Teach self-regulated learning strategies, such as goal setting and monitoring progress toward goals• Communicate with families about student progress and strategies for supporting student engagement with schoolwork• Follow up with students to encourage better engagement	<ul style="list-style-type: none">• Cultivate social presence by offering clues to your history, personality, and current circumstances• Communicate with students and families outside of class to develop relationships with them• Add synchronous elements to lessons (or class periods)• Intentionally build rapport• Develop ways for students to engage with each other• Make learning exciting and relevant	<ul style="list-style-type: none">• Provide office hours• Offer feedback through 1:1 meetings or over email• Support self-reflection• Engage students in active learning• Incorporate multimedia learning principles• Provide opportunities for challenge and for success• Provide relevant tasks and materials• Organize group work and cooperative learning• Provide clear guidelines for discussion• Model good online interaction

*Abrami et. al., 2011; Banna et. al., 2015; Bernard et. al., 2009; Borup et. al., 2020; Chambers et. al., 2020; Dixon, 2010; Kehrwald, 2008; Lou et. al., 2001; Means et. al., 2009; Murphy & Rodriguez-Manzanares, 2008; Quality Matters, 2019

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Poll

Thinking about the behavioral, emotional and mental energy you exerted during today's workshop, how engaged were you?

- Extremely engaged
- Moderately engaged
- Somewhat engaged
- Slightly engaged
- Not at all engaged

Next steps

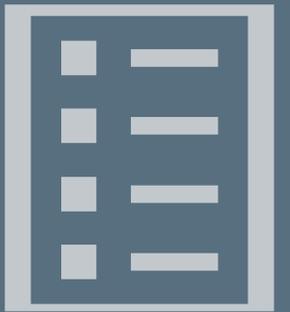
What could you do during your training to model engaging strategies teachers can use with their students in remote learning contexts?



Additional supports



Office hours for trainers to share ideas and problem-solve



FAQ document based on your follow-up questions



Email emma.pellerin@sri.com with any questions

Upcoming workshops

- January 2021: Monitoring academic progress and providing feedback to students.
- March 2021: Designing effective instruction for a hybrid model.

For our growth...

Please complete the stakeholder feedback survey (linked here and provided in the chat):

We appreciate your feedback as we continue to improve our work to meet your needs!



Acknowledgements

The REL Appalachia team acknowledges and thanks the partnership organizations, schools, and districts that took part in this collaborative coaching. Their voices and experiences were essential to the development of this resource.

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- Kevin Cline, Jefferson County School District
- Lori Hill, Sevier County School System

Thank you!



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