

Research-Based Strategies for Effective Remote Learning: *Monitoring student progress and providing feedback*

Jill Marcus
REL Appalachia

Mary Klute
REL Appalachia

Victoria Schaefer
REL Appalachia

Emma Pellerin
REL Appalachia

Beth Peery
REL Appalachia

Emnet Shibre
REL Appalachia

Kori Hamilton Biagas
REL Appalachia

Jessica Mislevy
REL Appalachia

Stephanie Wilkerson
REL Appalachia



Quick tour of Zoom features

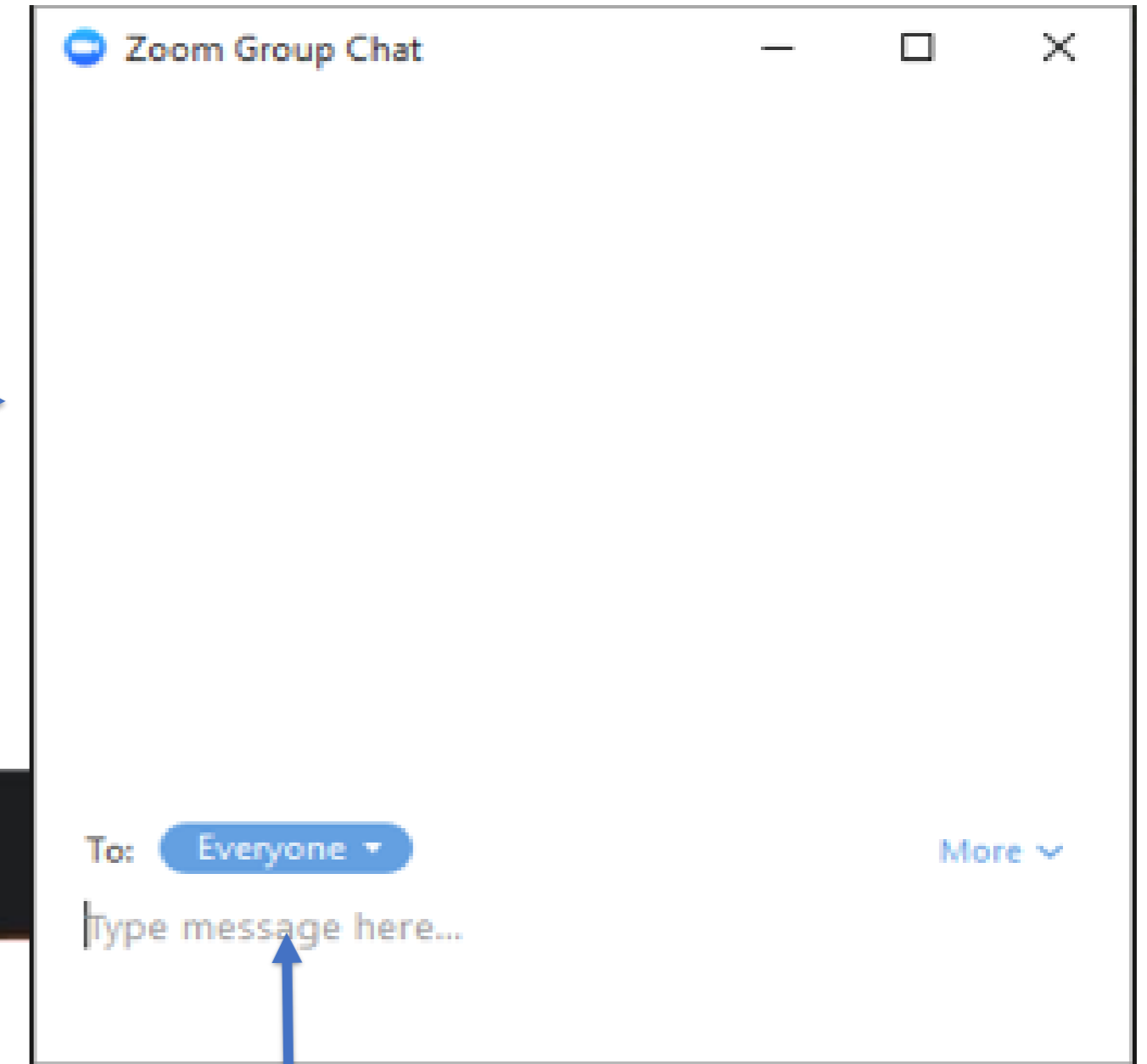
Pro Tip: Mute your mic unless speaking to limit background noise.

Mute/unmute microphone

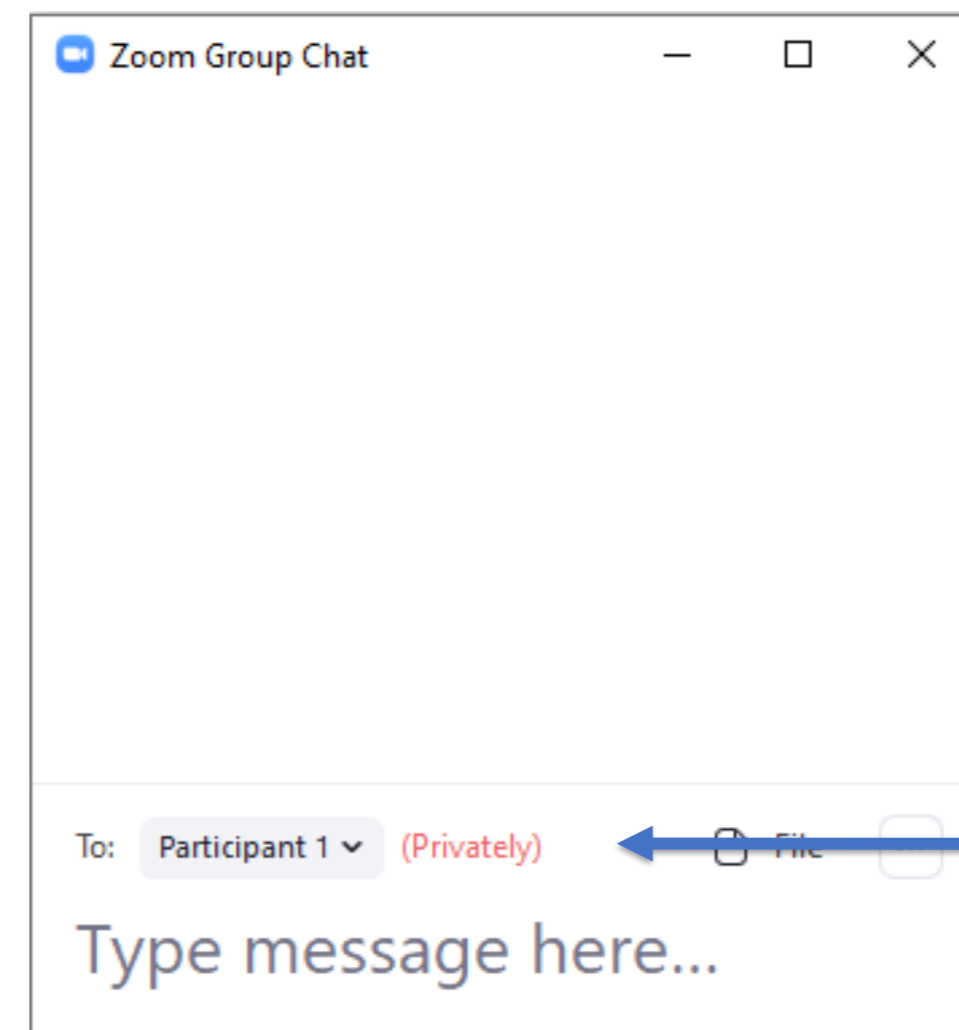
To view and use Chat



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 formative assessment
- Effective strategies for monitoring student progress
- Effective strategies for providing feedback
- Wrap-up and next steps



Poll

What is your role?

- Teacher
- School Administrator
- District Administrator
- Other



Meet the presenters



Victoria Schaefer
REL Appalachia



Emma Pellerin
REL Appalachia



Mary Klute
REL Appalachia



Jill Marcus
REL Appalachia



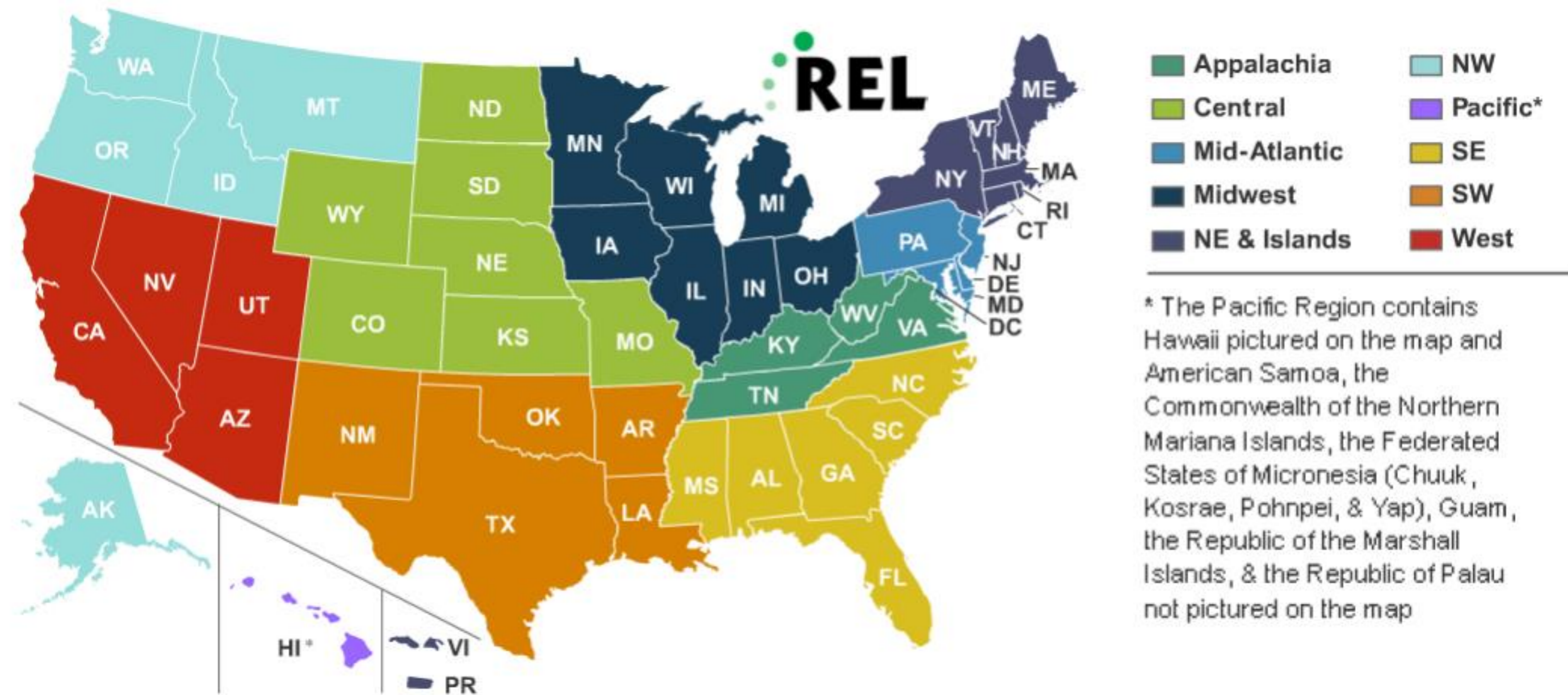
Beth Peery
REL Appalachia

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.

- Nancy Dishner, Niswonger Foundation
- Richard Kitzmiller, Niswonger Foundation
- Gina Pavlovich, Niswonger Foundation
- Brooke Drinnon, Niswonger Foundation
- Mia Hyde, Comprehensive Educational Resources
- Krisi Wallin, Greene County Schools
- Angie Wills, Johnson County Schools
- Denise McKee, Hawkins County School District
- Kevin Cline, Jefferson County School District
- Lori Hill, Sevier County School System

The Regional Educational Laboratories



The 10 RELs work in partnership with stakeholders to support a more evidence-based education system.

Administered by the U.S. Department of Education, Institute of Education Sciences (IES)

Find us on the web! <https://ies.ed.gov/ncee/edlabs/regions/appalachia/>

Applied Research

Training, Coaching, and Technical Support

Dissemination


IES Institute of Education Sciences
At SRI International

Regional Educational Laboratory Appalachia
At SRI International

REL 2020-017
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.^{2,3,4}

Students who complete higher level math in high school earn higher incomes in the future.⁵

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.⁶

Families can support children in developing math skills for the future by⁷:



- 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.

REL APPALACHIA
Regional Educational Laboratory

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(6), 1-29. <http://eric.ed.gov/?id=EJ1020177>

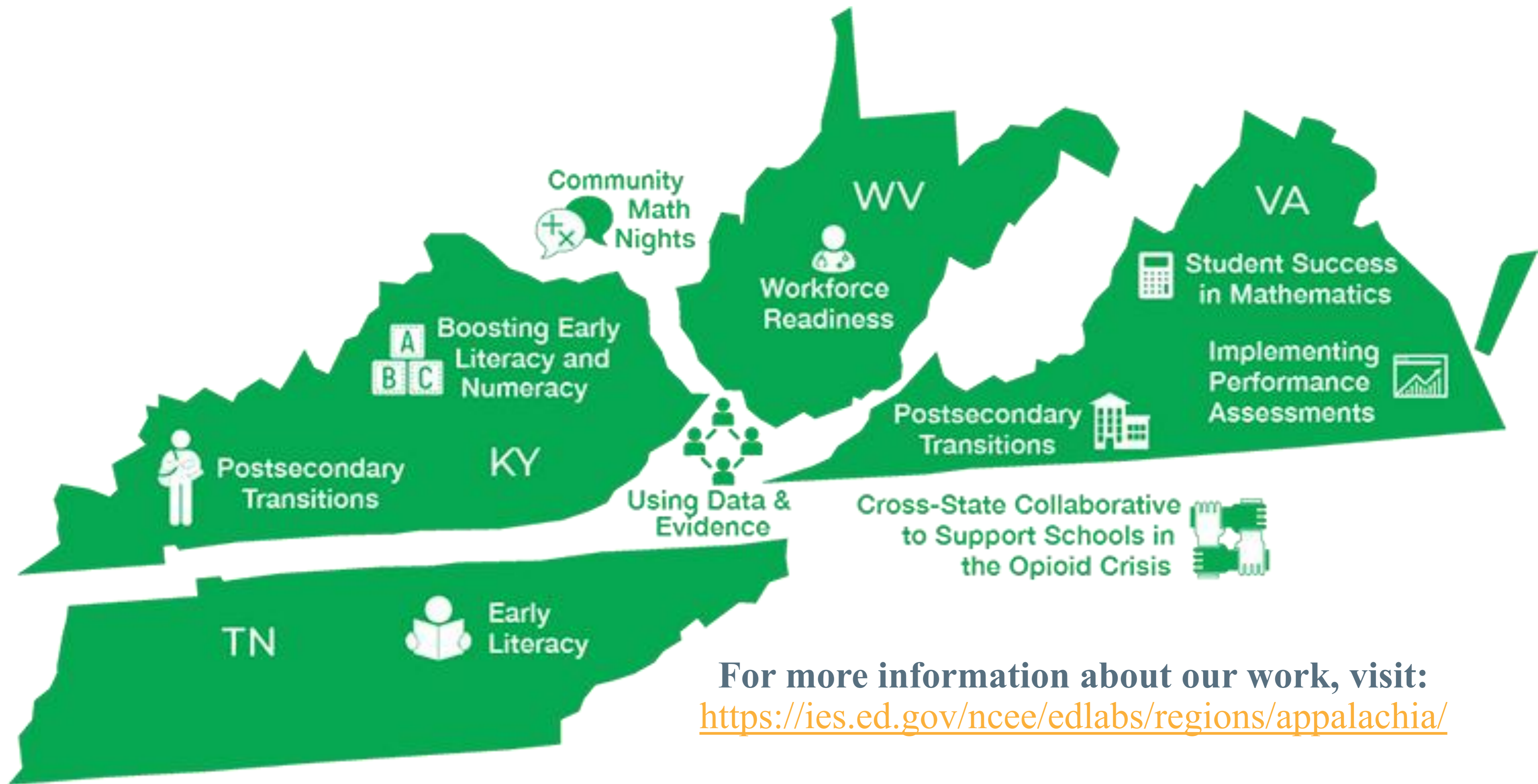
³Gajler, R. S., Danica, G. J., Davis-Kean, J. E., Duckworth, K., Claessens, A., Engel, M., ... & Chen, M. (2012). Early predictors of high school mathematics achievement. *Psychological Science*, 23(7), 671-677.

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. (2013). The Hidden STEM Economy. Brookings Institution, Washington, DC.

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

This document was prepared under Contract No. ED-IES-17-C-0004 by Regional Educational Laboratory Appalachia, administered by SRI International. The content does not necessarily reflect the views or policies of IES or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.



For more information about our work, visit:
<https://ies.ed.gov/ncee/edlabs/regions/appalachia/>

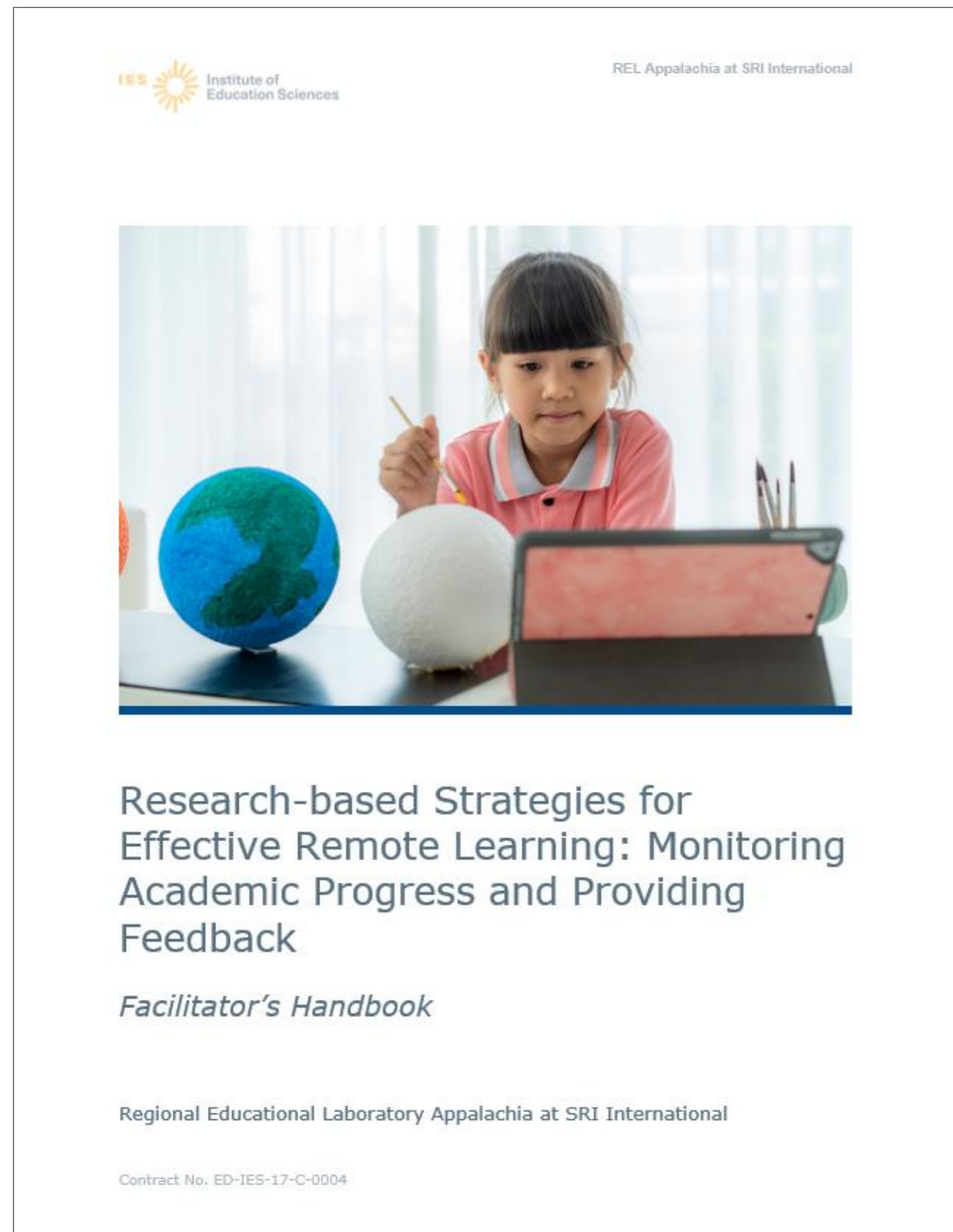
Train-the-Trainer Structure

Train-the-trainer structure

- The monitoring and feedback workshop is divided into three sections:
 - Overview of formative assessment.
 - Effective strategies for monitoring student progress in a remote setting.
 - Effective strategies for providing feedback in a remote setting.
- The three sections can be presented all together or separately.
- We have provided you with:
 - A slide deck you can use in your trainings, and
 - Handouts.



Facilitator's Handbook



- How to use the facilitator's handbook
- Welcome and introductions
- Overview of formative assessment
- Monitoring student progress
- Providing feedback
- 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 Formative Assessment

Breakout group activity: Fortunately, unfortunately



Fortunately...

What is something that is going well in your efforts to monitor students and provide feedback during remote learning?



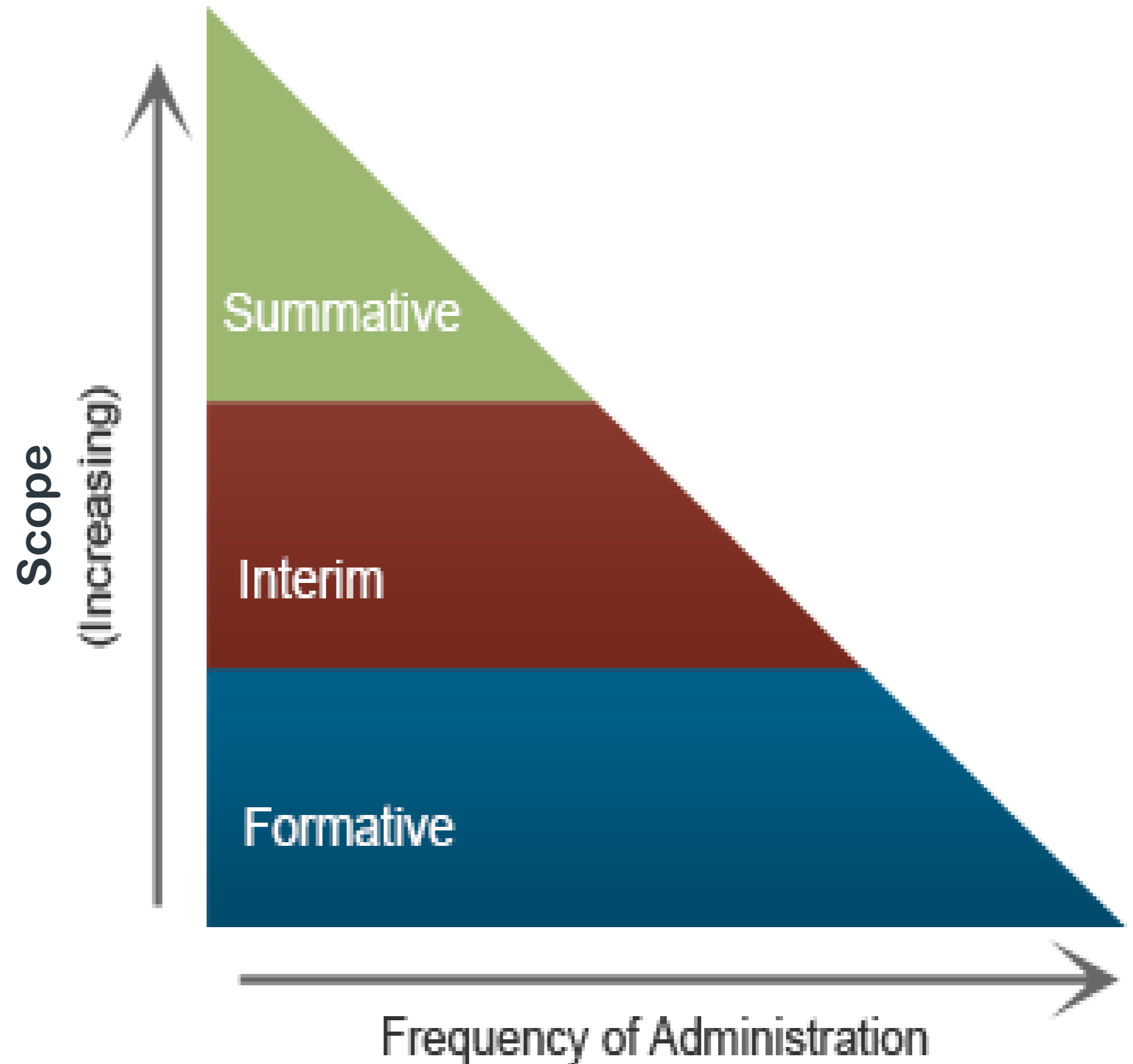
Unfortunately...

What is something that is not going well?

If there is time, ask follow up questions and offer suggestions for how to address challenges.

Types of assessments

- Summative (for example, annual state assessments, end of unit assessments).
- Interim (for example, mid-year benchmark assessments).
- Formative (for example, questioning, exit tickets).



(Klute et al., 2017; Perie et al., 2009)

Four formative assessment practices

Clarify learning

- Identifying learning targets.
- Supporting students to understand success criteria.

Elicit evidence of learning

- Gathering information about where students are in their learning.
- Monitoring student progress.

Provide feedback

- Supporting students to move forward with their learning.
- Promoting reflection and identification of future outcomes.

Activate learners

- Supporting students to set their own learning goals and monitor their own progress.
- Empowering students to be resources for each other.

(Hattie, 2009; Moss & Brookhart, 2009; Northwest Evaluation Association, 2016)

Activity: Word cloud



List up to 3 ways you collected formative assessments data from your students in your in-person classroom in the past.

Check-in

Can you think of ways you could use word clouds for assessment purposes other than a pretest?

Please put your ideas in the chat.



Effective Strategies for Monitoring Student Progress in a Remote Setting

“Monitoring student progress” definition

- Monitoring student progress includes all the ways that teachers assess student progress. Examples include:
 - Exit tickets,
 - Quizzes,
 - Observing students as they work,
 - Asking students questions, and
 - Looking at student work.
- It can be informal (for example, scanning the room to see who is on task who is not) or formal (for example, examining assessment scores).
- The resulting information can be used for a variety of purposes, including informing instructional decisions and providing feedback to students.









(Safer & Fleischman, 2005)

Digital tools for monitoring student progress and how to use them

- Using chat and poll features in your conference platform.
- Data from instructional technologies.
- Other digital tools.



Using chat and polls to monitor student learning and behaviors

Assessing levels of understanding	Assessing attitudes and behaviors
<p> Recall</p> <p>Conceptual understanding </p> <p> Application</p> <p>Critical thinking </p>	<p>Student perspective </p> <p> Confidence level</p> <p>Monitoring </p> 

(Dabbagh et al., 2019)

Using data from instructional technologies

Instructional technologies* often provide information such as:

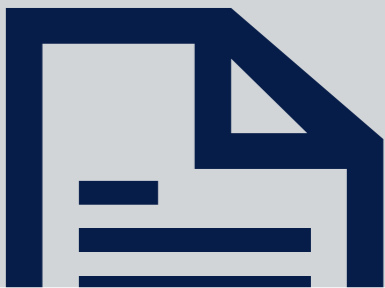
- Time spent on activities.
- Information about questions answered correctly or incorrectly.
- Whether students got an item right on the first try, or if they took multiple attempts.
- Which incorrect answers students give most frequently.
- Frequency with which students access course content.

**Available data varies depending on the technology being used.*

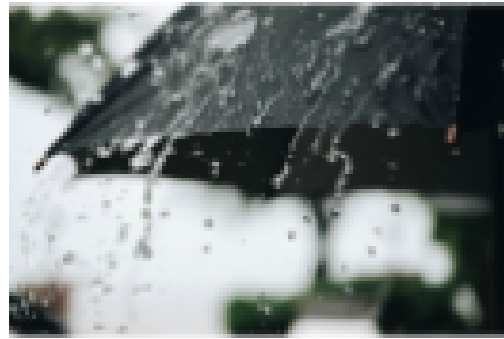
(Molenaar & Knoop van-Campen, 2018; Schifter et al., 2014; Xhakaj et al. 2017)



Using other digital tools for monitoring student progress

Why use other technology?	Examples
Incorporate engaging activities that still allow you to monitor students in real-time.	Kahoot is a game-based software that engages students while providing teachers with necessary data.
Integrate with Google Classroom and other learning management systems to facilitate data sharing across existing programs.	Nearpod allows teachers to integrate interactive lessons and activities with Google Slides.
Provide students with additional opportunities to share their learnings.	<p>Padlet provides an online “wall” where students can share their learning in creative ways/</p> <p>Wakelet allows students to build their own portfolios to showcase their work.</p> 
Save time on data collection and grading through automatic assessment and polling features.	Poll Everywhere and Answer Garden allow teachers to create polls for students and display the results.

Example technology for monitoring student progress: Nearpod



Compare the rainfall in Seattle, WA, Austin, TX, and Johnson City, TN. If you liked the rain, which city would you want to live in and why?

Student

Answer

PARTICIPATION **67%**

Eva

It seems to rain a normal amount here in Johnson City. I have never been to Seattle or A...



Sarah

Seattle gets more rain than the other two places. I would want to live in Austin, TX beca...



John

NO ANSWER

Check-in

- [Join.nearpod.com](https://join.nearpod.com)
- [ADD FINAL CODE]



Effective Strategies for Providing Feedback in a Remote Setting

Activity: What are the characteristics of effective feedback?



Activity: What are the characteristics of effective feedback?



- Focuses on the task rather than the student.
- Provides information to enhance learning, rather than just information about accuracy of responses.
- Is clear and specific.
- Is not too complex.
- Offered in manageable amounts.
- Linked to learning goals.
- Delivered when there is still time to use it.
- Tailored to meet students' varying needs.

(Shute, 2007)

Two effective, time-saving feedback strategies

- Targeted Response
- Micro-conference



(Johnson, 2020)

Time-saving ideas for providing feedback in a remote setting (part 1)

- Targeted Response: Focus your feedback solely on one or two targeted learning goals and make the most of software already in use.

My summer vacation was pretty weird, this year. Because of COVID I couldn't go to camp like I usually do and instead I was stuck at home most of the time. It was good because, I got to sleep late and because, I could stay up late too. But I missed my summer friends.

Time-saving ideas for providing feedback in a remote setting (part 2)

- Micro-conference: A 1 or 2 minute, focused, carefully structured conversation.
- Conferring one-on-one with students can be valuable for four reasons:
 1. There is an opportunity for individualized instruction and feedback.
 2. Misconceptions can be cleared up.
 3. Relationships are built.
 4. Students feel heard by a caring adult.



(Johnson, 2020)

Research on audio and video feedback

Students have positive perceptions of audio and video feedback.

Students were motivated by audio and video feedback.

Students perceived audio and video feedback to be more personal than written feedback.

Teachers need not put a lot of effort into editing audio or video files.

Audio feedback may be as effective as written feedback.

(Anson, 2015; Bialowas & Steimel, 2019; Henry et al., 2020; Morris & Chickwa, 2016; Parkes & Fletcher, 2016)

Tools for audio and video feedback

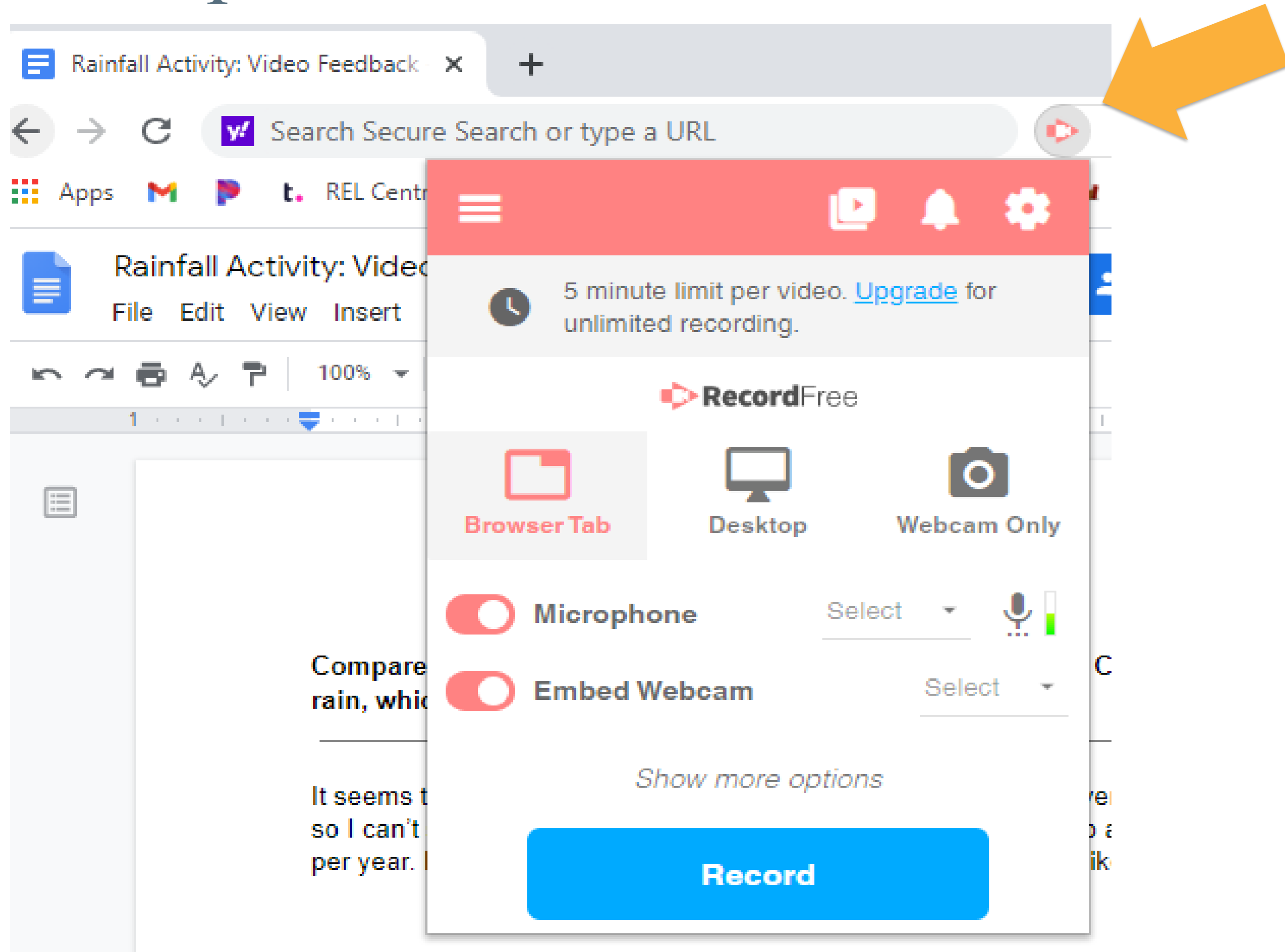


Your computer may already include recording tools and screen capturing capability. Other platform examples include:

- Screencastify
- Hippo Video
- Tinytake
- ScreenRec
- Screencast-O-Matic



Example of video feedback: Screencastify



[Link to Example](#)

Research on benefits of peer feedback

Empowers students to serve as resources for each other.

Increases students' understanding of subject matter.

Exposes students to different approaches to an assignment.

Supports students to engage in self-reflection.

Improves students' motivation to improve their own work.

Supports students to develop critical thinking skills.

Supports students to improve their communication skills.

(Hwang et al., 2018; McCarthy, 2017)

Considerations when implementing peer feedback

Support students to give good quality feedback

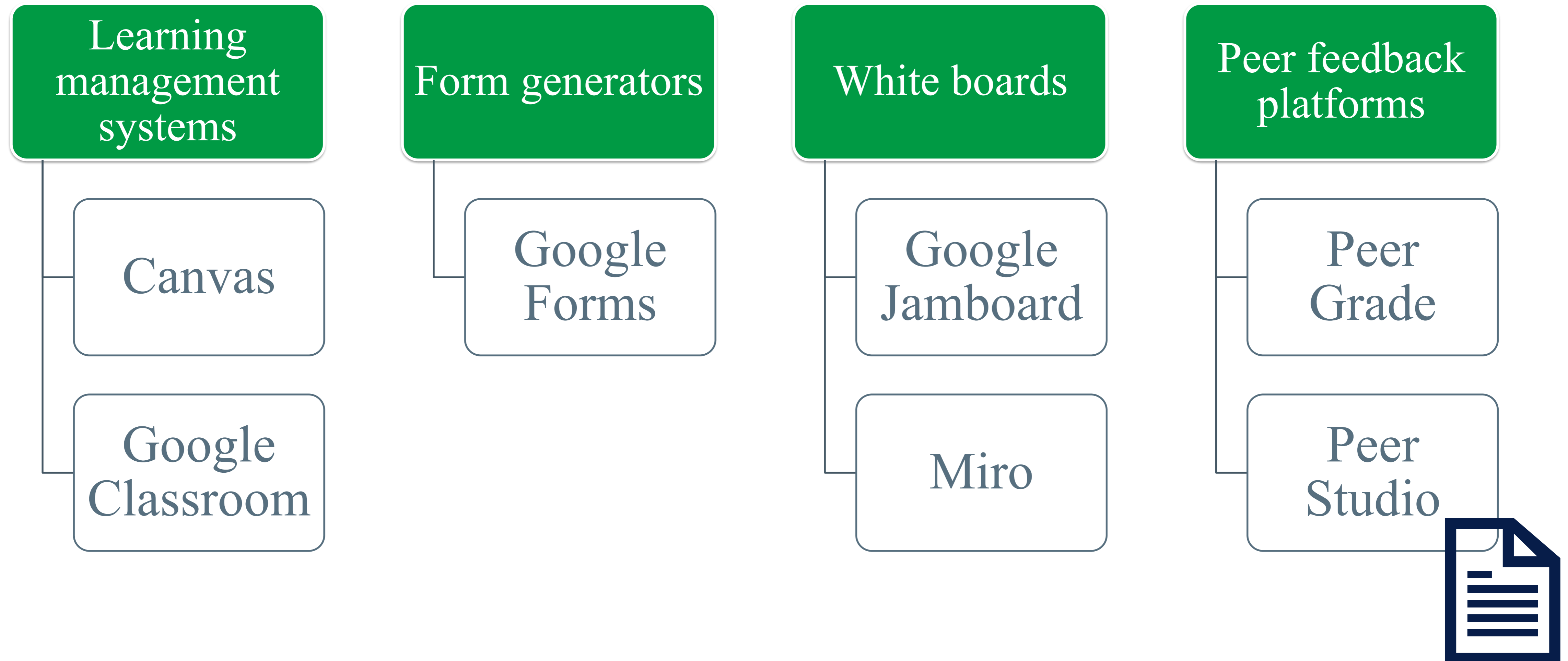
Research suggests that students can provide more detailed or accurate feedback when teachers provide scaffolds such as rubrics or feedback forms.

Consider whether to make peer feedback anonymous

Research suggests that students give feedback of similar quality when they were anonymous or identified. However, students may prefer to give anonymous feedback.

(Double et al., 2020; Kobayashi, 2020; McCarthy, 2017)

Tools for peer feedback



Google Forms for peer feedback

[Link to Google Form](#)

View the feedback in summary report or download to Google Sheets:

Email address	Which city would your peer want to live in if they liked the rain?	What data did your peer use to describe the rainfall in Seattle?	What data did your peer use to describe the rainfall in Austin?	What data did your peer use to describe the rainfall in Johnson City?	What is your assigned peer number?
####	Did not say	Average days per year of rain, Average amount of rain per year	Did not say	"A normal amount"	10

Wrap-up and Next Steps

Recap

- Formative assessment
- Monitoring student progress
- Providing feedback



Breakout group activity: What struck you?

What struck you during today's workshop that could be useful in your efforts to better monitor student progress and provide feedback in a remote setting, or to help the teachers you work with to do so?



Check-in



What was a common theme from the “What struck you” discussion you had in your breakout session?

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

For our growth...

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



Thank you!



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



RELAppalachia@sri.com



[@REL_Appalachia](https://twitter.com/REL_Appalachia)



References

- Anson, I. G. (2015). Assessment feedback using screencapture technology in political science. *Journal of Political Science Education, 11*(4) 375–390.
- Bialowas, A. & Steimel, S. (2019). Less is more: Use of video to address the problem of teacher immediacy and presence in online courses. *International Journal of Teaching and Learning in Higher Education, 31*(2), 354–364.
- Dabbagh, N., Bass, R., Bishop, M., Costelloe, S., Cummings, K., Freeman, B., Frye, M., Picciano, A. G., Porowski, A., Sparrow, J., & Wilson, S. J. (2019). *Using technology to support postsecondary student learning: A practice guide for college and university administrators, advisors, and faculty. What Works Clearinghouse* (WWC 20090001). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance (NCEE).
- Double, K. S., McGrane, J. A. & Hopfenbeck, T. N. (2020). The impact of peer assessment on academic performance: A meta-analysis of control group studies. *Educational Psychology Review, 32*, 481–509.
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge.
- Henry, E., Hinshaw, R., Al-Bataineh, A. & Bataineh, M. (2020). Exploring teacher and student perceptions on the use of digital conferencing tools when providing feedback in writing workshop. *The Turkish Online Journal of Educational Technology, 19*(3), 41–50.
- Hwang, G., Tu, N., & Wang, X. (2018). Creating interactive e-books through learning by design: The impacts of guided peer-feedback on students' learning achievements and project outcomes in science courses. *Educational Technology & Society, 21*(1), 25–36.
- Johnson, M. (2020, May 10). *Flash feedback: How to provide more meaningful feedback in less time*. Cult of Pedagogy.
<https://www.cultofpedagogy.com/flash-feedback/>

References

- Anson, I. G. (2015). Assessment feedback using screencapture technology in political science. *Journal of Political Science Education, 11*(4) 375–390.
- Bialowas, A. & Steimel, S. (2019). Less is more: Use of video to address the problem of teacher immediacy and presence in online courses. *International Journal of Teaching and Learning in Higher Education, 31*(2), 354–364.
- Dabbagh, N., Bass, R., Bishop, M., Costelloe, S., Cummings, K., Freeman, B., Frye, M., Picciano, A. G., Porowski, A., Sparrow, J., & Wilson, S. J. (2019). *Using technology to support postsecondary student learning: A practice guide for college and university administrators, advisors, and faculty. What Works Clearinghouse* (WWC 20090001). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance (NCEE).
- Double, K. S., McGrane, J. A. & Hopfenbeck, T. N. (2020). The impact of peer assessment on academic performance: A meta-analysis of control group studies. *Educational Psychology Review, 32*, 481–509.
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge.
- Henry, E., Hinshaw, R., Al-Bataineh, A. & Bataineh, M. (2020). Exploring teacher and student perceptions on the use of digital conferencing tools when providing feedback in writing workshop. *The Turkish Online Journal of Educational Technology, 19*(3), 41–50.
- Hwang, G., Tu, N., & Wang, X. (2018). Creating interactive e-books through learning by design: The impacts of guided peer-feedback on students' learning achievements and project outcomes in science courses. *Educational Technology & Society, 21*(1), 25–36.
- Johnson, M. (2020, May 10). *Flash feedback: How to provide more meaningful feedback in less time*. Cult of Pedagogy.
<https://www.cultofpedagogy.com/flash-feedback/>

References

- Klute, M., Apthorp, H., Harlacher, J., & Reale, M. (2017). *Formative assessment and elementary school student academic achievement: A review of the evidence* (REL 2017–259). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Central.
- Kobayashi, M. (2020). Does anonymity matter? Examining quality of online peer assessment and students' attitudes. *Australasian Journal of Educational Technology*, 36(1), 98–110.
- McCarthy, J. (2017). Enhancing feedback in higher education: Students' attitudes towards online and in-class formative assessment feedback models. *Active Learning in Higher Education*, 18(2), 127–141.
- Molenaar, I. & Knoop van-Campen, C. (2018). How teachers make dashboard information actionable. *IEEE Transactions on Learning Technologies*, 12, 347–355.
- Morris, C. & Chickwa, G. (2016). Audio versus written feedback: Exploring learners' preference and the impact of feedback format on students' academic performance. *Active Learning in Higher Education*, 17(2), 125–137.
- Moss, C. M., & Brookhart, S. M. (2009). *Advancing formative assessment in every classroom: A guide for instructional leaders*. Association for Supervision and Curriculum Development.
- Northwest Evaluation Association (2016). *4 formative assessment practices that make a difference in classrooms*. Author.
- Parkes, M. & Fletcher, P. R. (2016). A longitudinal, quantitative study of student attitudes towards audio feedback for assessment. *Assessment & Evaluation in Higher Education*, 42(7), 1046–1053.

References

- Perie, M., Marion, S., & Gong, B. (2009). Moving toward a comprehensive assessment system: A framework for considering interim assessments. *Educational Measurement: Issues and Practice*, 28(3), 5–13.
- Safer, N. & Fleischman, S. (2005). How student progress monitoring improves instruction. *Educational Leadership*, 62, 81–83.
- Schifter, C. C., Natarajan, U., Ketelhut, D. J., & Kirchgessner, A. (2014). Data-driven decision making: Facilitating teacher use of student data to inform classroom instruction. *Contemporary Issues in Technology and Teacher Education*, 14(4), 419–432.
- Shute, V. J. (2007). *Focus on formative feedback*. Educational Testing Service.
- Khakaj, F., Alevan, V. & McLaren, B. M. (2017). Effects of a teacher dashboard for an intelligent tutoring system on teacher knowledge, lesson planning, lessons and student learning. In Lavoué É., Drachsler H., Verbert K., Broisin J., Pérez-Sanagustín M. (eds) *Data driven approaches in digital education (EC-TEL 2017)*. *Lecture Notes in Computer Science*, vol 10474. Springer.