

Virtual Teaching During a Pandemic

Lessons Learned

By Steve Underwood, Veronica Ewing, Jaime Vazquez, and Shasta Oswald



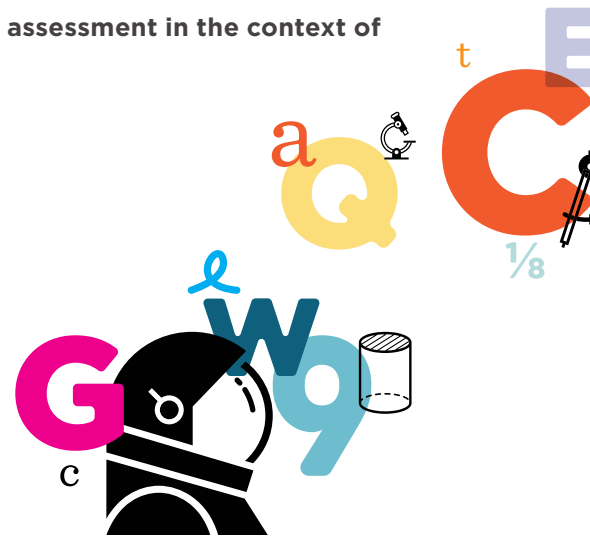
The COVID-19 pandemic has created an unprecedented level of chaos for teachers and their students, requiring them to adopt new approaches to instruction and assessment and adapt to the uncertainty of changing parameters. Some districts have moved to all-virtual learning models, some are in-person with social distancing, and others are taking a hybrid approach. The NWEA® professional learning team’s interactions with teachers have revealed the complex challenges that teachers face in their classrooms. Two things have become clear: virtual instruction requires a *very* different approach than in-person instruction, and everyone benefits when educators document and share the lessons they’ve learned about how they’re navigating through this shared crisis.

It’s no secret: shifting to virtual learning has been extremely difficult for both teachers and students. Before 2020, most teachers had not experienced teaching in a virtual setting, and the majority of teacher preparation programs are based on the premise of face-to-face learning. Despite these challenges, however, many teachers are succeeding in managing their new environments, so we wanted to examine what’s working well for them and to share those insights with other educators.

We developed this *lessons learned brief* to communicate some of those insights, based on responses to educator surveys and NWEA staff focus groups we conducted. While the brief is not comprehensive, and is based on a relatively small teacher sample, we believe that the feedback is representative of how teachers are feeling and responding in the current moment.

In our review, we found four key lessons:

- 1 Many educators are rising to the challenges of virtual learning by focusing on finding new, creative solutions to best support student learning.**
- 2 Many educators are finding a silver lining in virtual learning: they can use digital tools and virtual learning environments to have a positive impact on teaching and learning in unexpected ways.**
- 3 Most educators are informally advancing their digital literacy skills by using district-provided resources or examples from their professional learning.**
- 4 Educators are reconsidering how they approach and implement assessment in the context of virtual learning.**



New, creative solutions

Many educators are rising to the challenges of virtual learning by focusing on finding new, creative solutions to best support student learning.



Creating connection from afar

We asked teachers, “What is the best tip you have been given to support your virtual teaching practices with students?” While we expected that some responses would focus on the application of specific digital tools, instead, the tips shared all spoke to the notion of *resilience*. The focus, in the minds of the respondents, was not on a tool or protocol, but instead on the idea that educators are still finding ways to teach and connect with students across wildly uncertain circumstances.

Many teachers told us that the best advice they received was to keep trying new things while giving themselves the grace and space to fall short—and then to try again. While many are struggling with the current structure of virtual and hybrid school settings, those who feel most prepared for this school year demonstrate an attitude of resilience in the midst of challenging new circumstances.

The responses we received told a pretty clear story: many teachers are working to find creative solutions to the limitations of virtual learning because they’re passionate about teaching and supporting their students. Teachers shared that it’s a constant focus to determine how to connect with their students, both on a personal level and in terms of the learning content. They have a heightened awareness of what kids are missing out on through virtual learning, and they’re determined to overcome the challenges of not being in the same room. When asked what they miss most about teaching in person, the majority said that they miss seeing their kids and the emotional energy that comes with those interactions. They also miss the direct connection of seeing what their students are learning and being able to respond by adjusting their instruction in the moment.

The motivation to create strong connections with students despite the difficulties has changed how many educators engage in instructional planning. As district and school administration requirements become less stringent, teachers are taking the opportunity to play a stronger role in determining what to teach and assess. Some teachers told us they're experiencing a less top-down approach to curriculum, instruction, and assessment.

A shift in focus

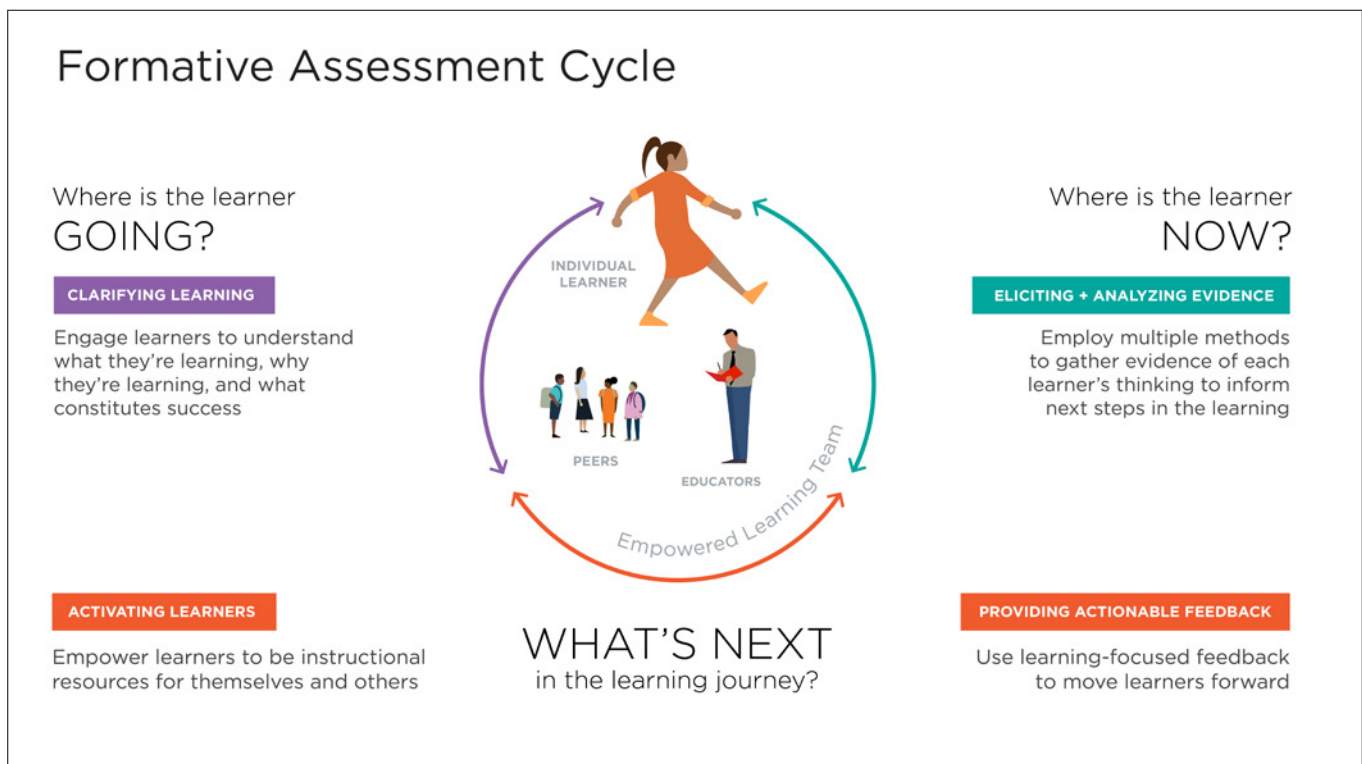
The majority of teachers responded that, before the 2020–2021 school year, their schools and districts made decisions about what to teach and assess based on a required set of curriculum materials. Discussions in their professional learning communities and other data about individual student needs, interests, and strengths influenced their decisions to a lesser extent.

By contrast, in the context of virtual learning, many schools and districts have taken a looser approach to decision-making that empowers teachers while still aligning with local leadership priorities. (Some

districts maintain tight requirements, but often they involve smaller, more focused expectations.) As a result, teachers have increased the degree to which they rely on their professional learning communities, information about individual student needs for differentiation, and their professional judgment to determine what to teach and assess.

The combination of resilience, motivation to connect with their students, and shifting the locus of control for some teaching and assessment decisions has resulted in many educators experimenting with and iterating new ways to improve their practices. They have identified and incorporated solutions that work for them, continued to try new strategies to overcome barriers, and shared what works with their peers. While most educators report that they're still figuring it out, many have made great strides forward through creativity and persistence, benefiting from the freedom to experiment within both a more limited set of expectations and an ecosystem of digital tools that their schools or districts provided to support that experimentation.

The shift to virtual learning caused teachers to frame their efforts more closely with the formative assessment cycle.



Silver lining in digital tools

Many educators are finding a silver lining in virtual learning: they can use digital tools and virtual learning environments to have a positive impact on teaching and learning in unexpected ways.



Empowering teachers

While most teachers are still learning how to fully harness digital tools for student learning, many have found using them to be surprisingly effective at meeting students' needs. Seventy-four percent of the teachers in our survey reported spending more or significantly more time than average learning new tools, technologies, and strategies for virtual teaching, which seems to be paying off. When teachers are able to dedicate time to trying new tools and strategies in the virtual learning environment, they view the experience in a new, more positive light. They're shifting how they think about digital tools and virtual learning and using what they learn to empower and enable students.

In many ways, teaching in a virtual environment requires a significantly different approach than face-to-face instruction. Ninety percent of the teachers surveyed indicated that they've had to adjust their teaching practices compared to their normal approach, and some have even reported that they've had to completely change their mindset about what successful instruction looks like. We asked, "What is something that has been positive or surprises you in a good way about virtual teaching?" One teacher responded,

VIRTUAL TEACHING AND DIGITAL TOOLS

88% of respondents reported teaching in either a hybrid or fully virtual environment for fall 2020

59% made significant adjustments to their teaching practices for virtual

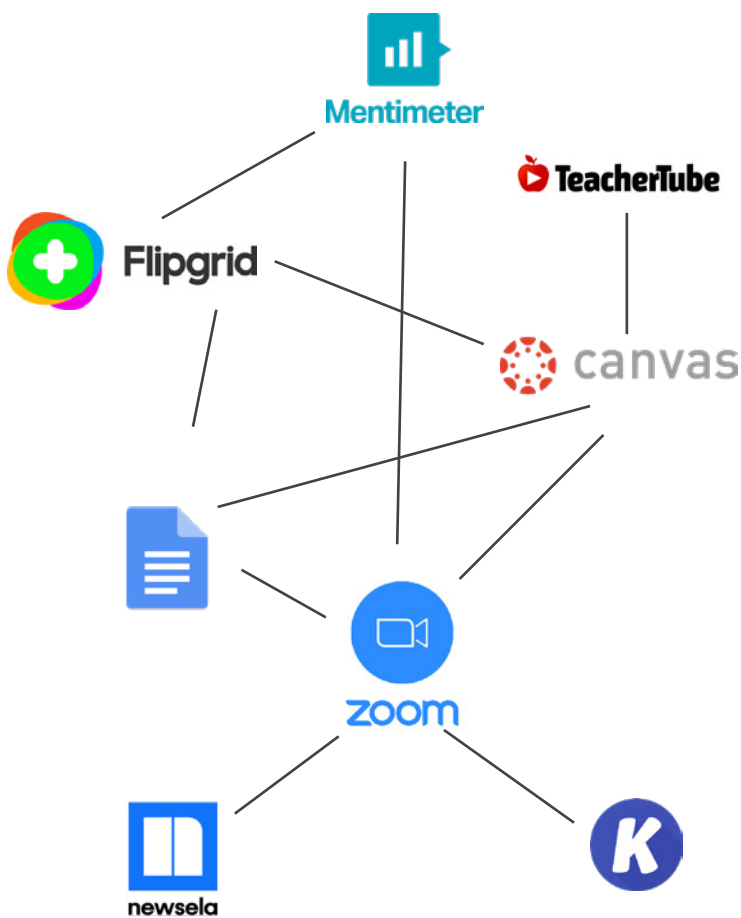
97% reported that their mindset toward digital tools changed

61% plan to use digital tools more frequently when face-to-face learning becomes possible again

"My lesson planning has improved." The data reflect that teachers are contending with constraints like having less instructional time by pivoting to more intentional approaches to teaching and learning. They are keenly aware that virtual learning demands more upfront planning and attention paid to students' needs, both academic and social-emotional, so that instruction can be adjusted in real time.

Empowering students

Our respondents also told us that they've been positively surprised at the way some students are interacting and even thriving in virtual environments. Multiple teachers observed, for example, that typically shy students were participating more frequently through the use of chat boxes in Zoom meetings or other digital tools, such as Kahoot! Many digital tools create greater opportunities for students to contribute their voice and take risks. Some teachers reflected on how "students are incredibly eager to learn and [are] very responsive," that "some students thrive in this environment," and that they've been able to nudge "students to push harder and challenge themselves even more" than expected.



An example of how educators might use a set of tools in tandem to create their virtual teaching ecosystem.

Improved processes

Teachers are also noticing ways that digital tools make some formative assessment practices more efficient and effective. For example, checking for student understanding—whether through student response techniques, quick surveys, polling student thinking, or in-class quizzes—can often be efficiently implemented using technology. Survey participants pointed out that technology enabled them to gather information on what students know, and they've been able to respond more quickly to students than when they use more time-intensive forms of assessment, such as a paper-and-pencil assignment that would require hand-grading after school or on the weekend. On a similar note, one respondent commented that, because students' handwriting can typically be difficult to read, "the positive [thing] about virtual is that all their papers are online and I am able to read them more quickly." Using a word-processing tool not only makes student writing more accessible for the teacher; it likely also results in less bias in the review process due to decreased frustration in deciphering student handwriting.

An ecosystem of tools

Survey respondents who reported feeling more prepared for and successful with virtual learning also reported having a diverse ecosystem of tools at their disposal for use in the virtual environment.

Table 1 provides examples of how teachers are using digital tools for lesson organization and logistics, engagement, formative assessment, student and parent communication, and planning for and addressing diverse student learning needs. While this list is neither exhaustive nor comprehensive in terms of tools and purposes, it shows that the available options are powerful. One teacher summed up the impact of the use of these tools: "Virtual teaching has worked well! My class is all virtual. . . . I feel more prepared and provide students with feedback."

Table 1. Teacher Uses and Examples of Digital Tools

TEACHER USES FOR DIGITAL TOOLS	EXAMPLES
Organization and logistics	
Post materials, resources, and assignments	Google™ Classroom, Canvas, Schoology*
Record lessons in advance for students to watch or to review again at home	Zoom, TeacherTube*
Integrate instruction, formative assessment, media, and student responses	Nearpod*, Pear Deck™
Incorporate various curriculum, resources, and other tools into one place	Newsela*, Edpuzzle*, and Quizlet* embedded in Canvas; LearnZillion*, BBC, Google Slides™, YouTube* embedded in Nearpod
Engagement (includes peer interaction, peer group, class, individual, etc.)	
Use discussion, video, or screencasting apps for students to participate and respond to other another	Flipgrid*, TeacherTube, Screencastify
Use writing and drawing apps for student response options	Nearpod, Seesaw*
Build relational connections with students	Cameras on in Zoom
Use emojis in the chat box or hand signals during video conferencing	Zoom, Google Meet™
Checking for understanding/formative assessment	
Use various apps to support formative assessment	Google Forms, Kahoot!, Mentimeter*
Use digital annotation tools to communicate between students and peers and students and the teacher	Kami*, Zoom annotation and whiteboard tools
Use writing and drawing apps for student response options	Nearpod, Seesaw
Use on-the-spot verbal interaction to assess student understanding in lieu of traditional written methods	Zoom, Google Meet

TEACHER USES FOR DIGITAL TOOLS**EXAMPLES****Communication with students and parents**

Post materials, resources, and assignments

Google Classroom, Canvas, Schoology

Use video conferencing for teaching lessons and to conduct parent-teacher conferences

Zoom, Google Meet

Use video conferencing for synchronous learning

Zoom, Google Meet

Use a learning management system for asynchronous activities

Canvas, Blackboard*, Schoology, Seesaw

Use digital annotation tools to communicate between students and peers and students and the teacher

Kami, Edpuzzle

Use collaborative documents for interaction between students and their peers or students and the teacher

Google Docs, Microsoft Teams

Addressing diverse learning needs

Vary the delivery of teaching by the type of content students are learning—some are better suited for synchronous learning; others are better suited for asynchronous learning

Record lessons in advance for students to watch or to review again at home

Zoom, TeacherTube

Teachers are finding success through their use of digital tools: 97% of teachers reported that their mindset about using digital tools for instruction has changed. Furthermore, all of the teachers surveyed expect to continue using these digital tools at least some of the time when they return to more typical modes of instruction after the pandemic subsides, and 61% anticipate continuing to use these tools most or all of the time.

Advancing digital literacy skills

Most educators are informally advancing their digital literacy skills by using district-provided resources or examples from their professional learning.



Limited time for personal exploration

Teachers reported that they do not spend much time seeking out new digital tools; rather, they mostly use the tools that their districts provide (which is to be expected, considering the time constraints most teachers face).

The burdens of virtual learning have left teachers with little time to explore new tools on their own. They shared that virtual learning has made their already-full schedules even more complicated, and they now spend more time planning how to deliver and assess student learning virtually than they spent on equivalent tasks in their physical classrooms. One teacher described how their district's hybrid in-person and virtual teaching model felt like twice the amount of work compared with a normal year.

Teachers who *are* exploring digital tools outside of what their districts provide have trended mostly toward using Google Suite tools. Surprisingly, few

mentioned the use of specific EdTech apps unless their district had already implemented the apps widely. Many teachers were already familiar with Google Classroom and other Google Suite tools before the pandemic, and that has made some tasks easier, like creating and sharing collaborative documents or creating quizzes with Google Forms. It's likely taking teachers less time to learn how to adapt these tools to virtual settings when they were already using them in the classroom.

Even though teachers are primarily taking advantage of district-provided digital tools, they're spending a significant amount of time learning how to make those tools work effectively. This effort to optimize familiar tools means that teachers are less likely to explore new ones, given that they feel as if they're already at capacity with their time investment in the process.

Eager for outside expertise

Teachers have found additional inspiration in the delivery of professional learning sessions they've attended. Many professional learning providers, including NWEA, have developed highly effective practices for engaging adult learners in virtual settings, and teachers are translating specific ideas and approaches used in professional development settings to their own teaching.

The new modes of instruction have made teachers more aware of the powerful techniques used by professional learning providers because they're now applicable to teachers' own contexts. As a result, many teachers have remarked that they plan to adapt virtual professional learning strategies, such as the use of chat, annotation, whiteboards, stamps, and breakout rooms, to their own classroom. On multiple occasions, workshop participants have asked NWEA professional learning consultants to stop mid-session and share more about their virtual delivery strategies, due to a new awareness that the delivery is just as impactful as the content being taught.

Teachers are easing the tremendous burden of virtual teaching by learning from what they have experienced and seen working around them. If they observe a technique that seems to get results that they haven't tried yet, they're often eager to learn how to use that technique and judge its effectiveness for their students.

A CLOSER LOOK AT PRIOR KNOWLEDGE

- Before 2020, **89%** of respondents said they had little to no prior experience with virtual teaching.
- Only **18%** indicated that they were extremely comfortable with trying out new digital tools.

LIMITED BANDWIDTH FOR PERSONAL EXPLORATION OF NEW TOOLS

- A total of **72%** of teachers said they spent more time than average dedicated to learning digital tools, technologies, and strategies for virtual teaching.
- Only **6%** of respondents indicated that they used tools outside of those provided by their district.
- Similarly, an average of **8%** of teachers reported that they did not leverage district-provided tools for their virtual classrooms.

Reconsidering assessment and clarifying goals

Educators are reconsidering how they approach and implement assessment in the context of virtual learning.



Virtual assessment is difficult

Many educators are having a difficult time assessing their students' learning in virtual environments. As a result, many are reconsidering their overall approach to assessment. At the beginning of the pandemic, most school leaders encouraged teachers to focus on what mattered most—taking care of students' physical, social, and emotional well-being. Teachers' primary concerns did not revolve around assessment in general, and sometimes learning itself was not the focus for teachers due to the impact of the crisis on both them and their students. At all levels, educators and stakeholders seemed to agree to place less priority on assessments: many state- and federal-level accountability expectations were waived, and statewide end-of-year assessments were canceled

in an effort to give greater latitude to everyone at the local level to respond to the circumstances.

As teachers and administrators entered the 2020–2021 school year and began to prepare for the possibility of a long haul with virtual or hybrid learning, they began to realize that they needed to reprioritize gathering assessment information because they weren't sure how their students were doing. Recognizing that the interrupted learning caused by school closures in the spring likely created wide variance in student outcomes, they increasingly began to seek actionable data to help them respond to their students and to differentiate instruction. One teacher shared, "I need an assessment that shows all my kids' different needs."

Interim solutions are not enough

Many educators turned to interim assessments, such as MAP® Growth™ from NWEA, to fill this need, and some states have even funded emergency purchases of such assessments. Interim assessments that can be administered remotely are providing teachers with invaluable insight as they navigate the challenges of virtual learning.

Nevertheless, while interim assessments provide broad information about the degree to which students are on track, they're not designed to guide day-to-day adjustments to instruction.

Our responding teachers shared two key insights about assessing learning more frequently in virtual settings:

1. Formative assessment practices are deeply important and ought to be prioritized over summative assessments.
2. Clarity of learning goals is more important than ever before.

The value of formative assessment

Formative assessment practices have risen to the forefront because they're the most effective way to evaluate student learning and social-emotional well-being at any moment so that the teacher can immediately adjust instruction as needed. Many teachers commented that they need to be able to determine what their students know within the context of a virtual setting, and they're having difficulty doing that. They have a strong desire for formative assessment data, but there is not yet a widespread understanding of the best ways to formatively assess students in virtual settings, so many teachers are experimenting with various techniques.

We still have much to learn on this front, but one key piece of advice we uncovered is for teachers to start by considering their face-to-face formative assessment methods and then brainstorming ways to create an alternative version in the virtual setting. For example, one individual adapted a "Four Corners" activity, in which students go to four corners of the room to demonstrate their thoughts, by creating an image in a Zoom

meeting with four quadrants, displaying it to the class, and then having students use the Zoom annotation arrow (showing their name) to stamp which corner they would choose. Because other formative assessment strategies are built on specific purposes, the goal would be to identify the purpose of the classroom formative assessment strategy and think of a way to accomplish that same purpose using available digital tools.

Defining learning goals

As the need for formative assessment has come into greater focus, so has the importance of teachers being extremely deliberate with setting and communicating learning goals for any given lesson or unit. In the early weeks and months of the pandemic, educators were doing the best they could to cope. From an instructional point of view, that often included sending packets home for students to work on. Some parents, students, and teachers reported that the packets felt like busy work—that is, the academic purpose and value of the assignments was unclear to them.

The new constraints of virtual learning have caused teachers and administrators to reexamine what has traditionally worked in brick-and-mortar settings when they discover that what worked before doesn't necessarily work now. This reexamination is paving the path for trying new things and improving assessment methods.

Given that time with students has been reduced in many virtual learning settings, teachers are wrestling with how to be most efficient with instructional time. Many are streamlining their practice by separating assignments that are academically relevant but unnecessary from those that are essential. Determining clear, measurable learning goals helps with this streamlining, allowing teachers to evaluate whether a given assignment is integral to learning. Once a student has demonstrated they have met or exceeded a learning goal, the teacher and the student can move on to whatever is next.

A virtual mindset shift

This approach is substantially different from the traditional mindset teachers have needed for in-person classrooms in which every student has the same amount of time in the seat as every other student each day. Some students finish early and are given extra seat work while other students take more time. In a face-to-face classroom, teachers have traditionally had to manage these learning differences and their impact on daily schedules by assigning additional tasks to keep students occupied (e.g., sponge activities). By contrast, virtual learning schedules create an opposite trend, which requires teachers to trim down what they plan and only focus on what's essential.

The new constraints of virtual learning have caused teachers and administrators to reexamine what has traditionally worked in brick-and-mortar settings when they discover that what worked before doesn't necessarily work now. This reexamination is paving the path for trying new things and improving assessment methods in ways that may indeed result in more diverse modes of instruction and possibly lead to better student learning.

Conclusion

In these challenging times, many educators are going above and beyond to meet the needs of their students. While they were not trained to be virtual instructors, teachers are working hard to learn how to use the digital tools available to them in order to maximize their teaching and learning processes. Most educators do not have the time to research digital tools on their own, but many report that they're leveraging and optimizing district-provided tools—and they want to know how to improve even more. This shift in modality of instruction has caused many educators to realize that a different approach to assessment, accompanied by a more focused approach to setting learning goals, is essential for both their own and their students' success. In an otherwise strange and difficult year, all of these factors, combined with some extra leeway and grace from district administrators, are leading teachers to experiment and innovate in ways that support flexible learning and support student growth.

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