



BEST PRACTICES IN VIRTUAL ASSESSMENTS

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TABLE OF CONTENTS

INTRODUCTION	3
KEY FINDINGS.....	3
SECTION I: BEST PRACTICES IN VIRTUAL ASSESSMENT	5
Aligning Assessment with Virtual Learning Best Practices	5
SECTION II: FORMATIVE AND SUMMATIVE ASSESSMENT IN A VIRTUAL ENVIRONMENT	9
Virtual Formative Assessment	9
Virtual Summative Assessment	13
SECTION III: INTEGRITY OF VIRTUAL ASSESSMENTS.....	15
Administering Virtual Assessments	16

INTRODUCTION

As schools across the country continue virtual learning into the 2020-2021 school year, district leaders need to support instructional staff in administering assessments in a virtual format while maintaining the integrity of assessments. To support teachers and leaders in using assessment to support online instruction, Hanover Research has reviewed the secondary literature on assessment in a virtual environment, with a particular focus on assessment needs for districts transitioning to online learning as a result of the COVID-19 pandemic. This report includes the following sections:

- **Section I** reviews general best practices for virtual assessments including considerations for the design and implementation of assessments in a virtual learning environment.
- **Section II** reviews best practices for assessing learning in a virtual environment using formative and summative assessments and how these assessments inform instructional decisions.
- **Section III** reviews best practices for ensuring integrity in virtual assessments, including assessment proctoring and assessment design strategies to minimize academic dishonesty.

KEY FINDINGS



Teachers can use digital learning tools to transition to virtual assessments. Digital learning tools, such as embedded quizzes in learning modules and tracked comments within digitally written student work, can replace in-person formative assessments without sacrificing the quality of feedback. These standards demonstrate the complementary nature between formative learning best practices and best practices for digital environments.



Virtual assessments may pose challenges related to accommodation and accessibility. When designing assessments or adapting assessments for virtual environments, districts need to consider students with disabilities, as well as students with limited or unstable internet access. Teachers should ensure that assessments are aligned with students individualized education plans (IEPs) and 504 plans and that assessments can be taken asynchronously or via paper-version, if necessary.



The transition to virtual learning shifts the balance of assessment needs toward formative assessments relative to summative assessments. Districts, teachers, parents, and students need consistent data from formative assessments to understand students' academic standing and progress in a virtual environment. These continuous data are particularly important during the 2020-2021 school year, as the range of impacts from the COVID-19 pandemic substantially increases the need for instructional differentiation within classrooms.



Formative assessment can support student engagement in a virtual learning environment. Because student autonomy increases substantially in a virtual learning environment, formative assessment is essential both for students to understand their learning progress and for teachers to monitor student learning and identify students who may need additional support. Formative assessments that require students to reflect on their learning process can enhance student ownership of learning and support teachers in maintaining engagement during virtual learning.



Summative assessments at the beginning of the 2020-2021 school year may exacerbate educational inequities. Districts need summative assessment data to appropriately target supports and ensure equity in students' access to learning. At the same time, schools need to minimize stress for students and teachers and avoid using summative assessment data for potentially harmful purposes such as grade retention or course tracking. As such, research

suggests that districts should evaluate grading policies to ensure that results do not reflect teacher challenges of remote work or student challenges of virtual learning.



Alternate assessments types such as authentic, active, and experiential assessments can increase student engagement and minimize cheating. In addition to formative assessment, these strategies increase student engagement and avoid potential cheating because students cannot easily complete these assessments with the use of unauthorized sources. As such, they are highly utilized in a virtual learning environment to promote positive collaboration and assess student learning.



Effective in-person proctoring maximizes the integrity of virtual assessment data. Districts can ask teachers or other staff to proctor assessments via videoconferencing tools or parents and caregivers to proctor assessments at home. In both cases, districts should communicate with stakeholders in advance of assessments and develop and implement protocols for training, test administration, and communication during the assessment process.

SECTION I: BEST PRACTICES IN VIRTUAL ASSESSMENT

In this section, Hanover Research discusses considerations for the design and implementation of assessments in a virtual learning environment. The research presented here will support educators in effectively transitioning existing assessments to virtual platforms, as well as designing new assessments in alignment with virtual learning best practices.

ALIGNING ASSESSMENT WITH VIRTUAL LEARNING BEST PRACTICES

When transitioning to virtual learning, teachers should review their existing classroom assessments for compatibility with remote learning and alignment with grading or summative assessment policies.¹ **Error! Reference source not found.** presents standards for assessment in virtual learning environments included in the [National Standards for Quality Online Courses](https://www.nsqol.org/the-standards/quality-online-courses/) developed by Quality Matters and the Virtual Learning Leadership Alliance to guide the development of courses and assessments in virtual learning environments. Notably, several of these standards emphasize the importance of incorporating formative assessments to provide students with information on their progress toward learning objectives and encourage student ownership of learning.²

Figure 1.1: Standards for Assessment in Virtual Learning Environments

STANDARD	EXPLANATION	EXAMPLES
Learner assessments are linked to stated course, unit, or lesson-level objectives or competencies.	<ul style="list-style-type: none">A clear link between the assessment and the stated goals of the online course is established.	<ul style="list-style-type: none">For an objective or competency where learners are told they need to learn how to identify metaphors in poems, an assessment would present a poem with metaphors and require learners to identify the metaphors therein. The assessment would NOT require the learner to define the term "metaphor," to write their own metaphor, or to explain the meaning of a metaphor for that objective or competency; although these are helpful tasks, they are not linked to the stated objective or competency.
Valid course assessments measure learner progress toward mastery of content.	<ul style="list-style-type: none">Frequent formative assessments measure progress towards mastery of content (as measured by summative assessments). Learners at all learning levels are given the opportunity to demonstrate progress in acquiring major content ideas.	<ul style="list-style-type: none">The online course includes a visible path of formative and summative assessments measuring learner progress toward mastery of content within the course objectives.Learners are tasked to demonstrate understandings of the immediate major effects of the Great Depression on American politics in the 1930s and 1940s. Multiple formative assessments, such as learning checks, reflections, or short quizzes, are included in the course to measure progress toward mastery as well as a summative assessment to measure mastery. Formative assessments incorporate self-assessments as well as instructor-led assessments.

¹ O'Keefe, L. et al. "Delivering High-Quality Instruction Online in Response to COVID-19: Faculty Playbook." Online Learning Consortium, Inc, May 18, 2020. p. 33.

https://eric.ed.gov/?q=collaboration+online+learning&ft=on&ff1=dtYSince_2016&id=ED605351

² "National Standards for Quality Online Courses." Quality Matters and the Virtual Learning Leadership Alliance, 2019. <https://www.nsqol.org/the-standards/quality-online-courses/>

STANDARD	EXPLANATION	EXAMPLES
Assessment practices provide routine and varied opportunities for self-monitoring and reflection of learning.	<ul style="list-style-type: none"> Assessment strategies provide learners with opportunities to reflect on their progress towards meeting course requirements and mastering learning objectives or competencies. 	<ul style="list-style-type: none"> Writing assignments that allow for the submission of a draft for instructor comments and suggestions for improvement. The course includes formative assessments, which provide clear feedback for each answer choice. Learners engage with interactive games and simulations that have feedback built in. Self-scoring practice quizzes. Peer reviews. Example papers or essays provided for learner viewing.
Assessment materials provide the learner with the flexibility to demonstrate mastery in a variety of ways.	<ul style="list-style-type: none"> Multiple methods of assessment strategies are included, based on the specified learning objective or competencies and learner need. Each assessment does not have to have multiple methods, but over the entire course there are multiple methods of assessments used. In addition, alternative assessments should be open to all learners when appropriate. Alternative assessment strategies may be more appropriate for some subjects and competency types (e.g., knowledge) than others (e.g., CTE skills). In some cases, an authentic assessment strategy may be the only reliable way to measure skill mastery. 	<ul style="list-style-type: none"> A U.S. History course provides learners with choice and flexibility in demonstrating their application of content knowledge, including oral reports, videos, computer presentations, group posters, musical projects, etc. These may be chosen at the time of assessment or as a second-choice option for revisions, as provided by the instructor. Learners have an opportunity to correct errors and receive feedback on their level of proficiency. Learners may demonstrate mastery of any content using varying assessment strategies.
Rubrics that clearly define expectations for varied levels of proficiency are created and shared with learners.	<ul style="list-style-type: none"> Specific and descriptive criteria are provided for the evaluation of learners' work and assist the instructor in determining the level of achievement of learning objectives and competencies. Rubrics allow learners and instructors to understand expectations for varied levels of proficiency. Rubrics might be created by instructors as well as course designers, but course designers should create space for rubrics and add templates in accordance with the norms of the school. Rubrics clearly define expectations by being linked to learning objectives and current state and/or other accepted content standards. 	<ul style="list-style-type: none"> Learners must demonstrate their knowledge of the immediate political outcomes of WWII. The provided rubric allows for a variety of performance-based products, videos, papers, speeches, etc. Further, the provided rubric offers a rich description of key competencies for each type of performance-based product.

Source: Quality Matters and the Virtual Learning Leadership Alliance³

³ Chart contents taken verbatim from: Ibid.

Teachers should consider individual student needs and capabilities and the impact of assessment format on assessment data when designing and interpreting virtual assessments.⁴ In particular, virtual assessments must include appropriate accommodations for students with individualized education plans (IEPs) and 504 plans.⁵ Figure 1.2 offers guidelines for adapting benchmarking and progress monitoring assessments to virtual administration.

Figure 1.2: Guidelines for Adapting Assessments to Virtual Administration

Use online benchmarking and progress monitoring assessments with students who can work independently. For students where these would not be appropriate, using video or phone conferencing as part of a face-to-face assessment interaction helps ensure they understand the task and stay focused and motivated.

When interpreting results from timed observational assessments, consider that remote administration may slow response time.

Compare results to previous, classroom-based administrations as another check on students' ability to demonstrate proficiency with the type of assessment assigned—a decline in scores may indicate issues with the mode of administration (e.g., online versus paper and pencil) rather than a decline in their ability.

For students without internet connection or those who cannot work independently online, provide students with printed versions and ask families to text photos of their work or provide options for dropping off completing work.

Source: Houghton-Mifflin Harcourt⁶

Schools need to consider how to accommodate students who face barriers to accessing assessments delivered online, such as limited internet access.⁷ Depending on students' level of technology access, teachers may need to administer asynchronous assessments rather than synchronous assessments that require real-time interaction between the student and teacher.⁸ Although the focus of this research is on how to effectively administer virtual assessments, there are instances in which schools may need to mail paper assessments and activities to students or contact students by phone to provide feedback and support. Districts such as Miami-Dade County Public Schools and state education agencies in Tennessee, Kansas, and Michigan have developed telephone hotlines to provide feedback and support for formative assessment.⁹ These strategies help students overcome potential barriers to learning and ensure that progress is still being measured in a virtual learning environment.

In addition to transitioning assessments to virtual platforms, teachers may need to revise their assessment practices to ensure students engage productively with virtual assessments. Many students approach virtual learning with a compliance orientation and focus on completing assignments rather than using feedback to support learning. In addition, students who face challenges in understanding academic content may find it difficult to understand learning goals.¹⁰ In a virtual environment, it is also often challenging for educators to provide students with individualized feedback.¹¹ This can be addressed by combining digital tools to support

⁴ "The Connected Learning Era: Mitigating the COVID-19 Learning Loss." Houghton-Mifflin Harcourt. p. 17.

http://images.learn.hmco.com/Web/HoughtonMifflinHarcourt/%7B901d0e62-831b-42a5-a735-849154ec90d6%7D_HMH_The_Connected_Learning_Era.pdf?utm_medium=email&utm_source=&utm_campaign=&utm_content=COR-CE-WF1192204-COVID_Confirmation-Learning%20Era%20Research%20Paper-EMAIL

⁵ "Teacher Guide to Online Learning," Op. cit.

⁶ Chart contents taken verbatim from: "The Connected Learning Era: Mitigating the COVID-19 Learning Loss," Op. cit., p. 17.

⁷ Liberman, Levin, and Luna-Bazldua, Op. cit.

⁸ Marion et al., Op. cit., p. 16.

⁹ Liberman, Levin, and Luna-Bazldua, Op. cit.

¹⁰ Brookhart, S. "Five Formative Assessment Strategies to Improve Distance Learning Outcomes for Students with Disabilities." National Center on Educational Outcomes, May 2020. p. 2.

https://eric.ed.gov/?q=formative&ft=on&ff1=dytSince_2016&pg=2&id=ED605750

¹¹ Robertson, S.N., S.M. Humphrey, and J.P. Steele. "Using Technology Tools for Formative Assessments." *Journal of Educators Online*, 16:2, July 2019. p. 2. https://eric.ed.gov/?q=formative&ft=on&ff1=dytSince_2016&pg=3&id=EJ1223780

the administration of formative assessments. Research suggests that this approach leads to additional feedback and that students are more engaged and ultimately more prepared for summative assessments.¹²

¹² Ibid.

SECTION II: FORMATIVE AND SUMMATIVE ASSESSMENT IN A VIRTUAL ENVIRONMENT

In this section, Hanover Research discusses best practices for assessing learning in a virtual environment using formative and summative assessments and using these assessments to inform instructional decisions. Although assessment has always been an essential component of teaching and learning, the instructional disruptions associated with the COVID-19 pandemic have increased the need for assessments that measure students' knowledge and skills entering the 2020-2021 school year and continue to monitor student learning throughout virtual instruction. The Northwest Evaluation Association (NWEA) predicts that the range of needs within classrooms is increasing substantially due to the differing impacts of COVID-19 on individual students.¹³ As such, teachers can use data from these assessments to inform differentiated instruction in response to the increasing range of student learning needs in classrooms.

Despite the growing need to assess progress, districts need to balance the administration of assessments with the potential burden of assessments on students and teachers. Instructional leaders should review all planned assessments to ensure that assessment results inform instructional decisions, and they should eliminate assessments that do not provide concrete data to support student learning.¹⁴ FutureEd, a research institute at Georgetown University, recommends that schools "prioritize assessments closest to classroom learning" at the beginning of the school year. Districts may need to deprioritize summative assessments that are less useful in informing immediate changes to classroom instruction.¹⁵ After assessing initial classroom needs, schools can move forward with social-emotional and school climate surveys and interim assessments in September and October.¹⁶ Additionally, districts should also streamline assessment instruments to focus on essential learning standards. If districts are using a standardized curriculum with embedded assessments, district leaders should identify the assessments that focus on key learning standards. If districts are not using a standardized curriculum, teams of teachers should collaboratively develop assessments that align with essential learning standards.¹⁷

VIRTUAL FORMATIVE ASSESSMENT

Research suggests that the transition to virtual learning and other disruptions associated with the COVID-19 pandemic necessitate a shift toward greater reliance on formative assessment. An effective assessment system typically includes a balance of formative, interim, and summative assessments.¹⁸ However, the need for formative assessment increases in a virtual learning environment as teachers, students, and parents seek to understand how remote instruction affects students' learning progress.¹⁹ The United Nations Office for the Coordination of Humanitarian Affairs (OCHA) recommends that schools emphasize formative assessments over summative assessments and modify expectations for student performance on summative

¹³ "Researchers Estimate Students Coming Back after COVID-19 Closures May Have Greater Variances in Academic Skills." Northwest Evaluation Association, May 27, 2020. <https://www.nwea.org/2020/05/researchers-estimate-students-coming-back-after-covid-19-closures-may-have-greater-variances-in-academic-skills/>

¹⁴ Olson, L. "How Schools Should Test Students During Covid-19." FutureEd, July 2020. p. 2. <https://www.future-ed.org/blueprint-for-testing-how-schools-should-assess-students-during-the-covid-crisis/>

¹⁵ Ibid., p. 9.

¹⁶ Ibid., pp. 4–5.

¹⁷ Olson, Op. cit., p. 6.

¹⁸ Rothman, R. "Measuring Deeper Learning: New Directions in Formative Assessment. Students at the Center: Deeper Learning Research Series." Jobs for the Future, July 2018. p. 6. https://eric.ed.gov/?q=formative&ft=on&ff1=dytSince_2016&pg=2&id=ED587373

¹⁹ Liberman, J., V. Levin, and D. Luna-Bazldua. "Are Students Still Learning during COVID-19? Formative Assessment Can Provide the Answer." World Bank. <https://blogs.worldbank.org/education/are-students-still-learning-during-covid-19-formative-assessment-can-provide-answer>

assessments during distance learning due to the COVID-19 pandemic.²⁰ Formative assessment may include formal or informal assessment instruments, as shown in Figure 2.1.

Figure 2.1 Examples of Formative Assessment

FORMAL	INFORMAL
<ul style="list-style-type: none"> ▪ Vendor provided diagnostic assessments (iReady, ACT Aspire, NWEA-MAP, etc.) (see COVID-19 Response: Diagnostic Assessment for further examples and information) ▪ Assessments given within instructional/support programs (DLM, Read Right, My Foundations lab, MyACT, etc.) ▪ Textbook/teacher-created unit test ▪ Textbook/teacher created chapter or section test ▪ Grades, results, scores from previous school year ▪ Any teacher-created test/online test (standards-based) 	<ul style="list-style-type: none"> ▪ Quizzes, oral Q/A, flashcards ▪ Student self-evaluation ▪ Pair and Share with classmate ▪ Brainstorming or Brain Dump ▪ KWL Chart ▪ Sticky note response to question on board ▪ Mastery checklist of concepts/standards from previous grade ▪ Presentations or debates

Source: North Dakota Department of Public Instruction²¹

Formative assessment allows teachers to rapidly collect data on student learning and then adjust instruction based on assessment data.²² Because student autonomy increases substantially in a virtual learning environment, formative assessment is essential both for students to understand their learning progress and for teachers to monitor student learning and identify students who may need additional support.²³ Formative assessments that require students to reflect on their learning processes encourage students to take ownership of learning, helping teachers maintain student engagement in a virtual learning environment.²⁴ Teachers use formative assessment to encourage students to reflect on learning by providing students with feedback based on formative assessment data. Michigan's Virtual Learning Research Institute (MVLRI) recommends that teachers provide feedback by incorporating brief quizzes into instructional modules and using discussion boards and comments on written work to assess students after instruction.²⁵

Teachers can administer informal formative assessments throughout remote instruction. The American Psychological Association (APA) recommends that teachers administer between two and three informal assessments with between five and ten questions within each lesson to check for understanding during instruction.²⁶ Figure 2.2 illustrates the roles of formative assessment in supporting virtual instruction, with examples of how to deliver these assessments in both synchronous and asynchronous instructional formats.

²⁰ "Guidance: Assessing and Monitoring Learning During the COVID-19 Crisis." United Nations Office for the Coordination of Humanitarian Affairs, April 2020. pp. 3–4.

²¹ Chart contents taken verbatim from: "COVID-19 Assessment Guidance." North Dakota Department of Public Instruction. <https://www.nd.gov/dpi/familiescommunity/nddpi-updates-and-guidance-covid-19/covid-19-assessment-guidance>

²² "3 Reasons Savvy District Leaders Prioritize Formative Assessment." Northwest Evaluation Association, February 2016. p. 2. https://eric.ed.gov/?q=formative&ft=on&ff1=dytSince_2016&pg=5&id=ED567812

²³ "Remote Learning and the Formative Assessment Process." Smarter Balanced Assessment Consortium, July 9, 2020. <http://www.smarterbalanced.org/remote-learning-and-the-formative-assessment-process/>

²⁴ Nordengren, C. "3 Reasons to Use Formative Assessment in Your Virtual Instruction—and Tips on How to Go about It." Northwest Evaluation Association, May 7, 2020. <https://www.nwea.org/blog/2020/formative-assessment-in-virtual-instruction/>

²⁵ "Teacher Guide to Online Learning." Michigan Virtual Learning Research Institute, Fall 2017. <https://michiganvirtual.org/wp-content/uploads/2017/08/Teachers-Guide.pdf>

²⁶ "10 Tips for Assessing and Monitoring Students' Academic Progress During COVID-19." American Psychological Association, July 2020. pp. 1–2. <https://www.apa.org/topics/covid-19/parenting-caregiving/academic-progress-covid-19.pdf>

Figure 2.2: Roles of Formative Assessment in Supporting Virtual Instruction

ROLE	SYNCHRONOUS EXAMPLE	ASYNCHRONOUS EXAMPLE
Clarify: Determine what students will learn and how they will know they have learned it	Students restate the learning goal and success criteria in their own words verbally, in comments, or during a think-pair-share in a web-conference breakout room	Students restate the learning goal and success criteria on a chat board or in an online/offline journal
Elicit: Generate evidence of student learning, such as asking questions	In-the-moment questions with students responding verbally, using polling tools, or in a chat room	Posted discussion questions, online quizzes, tasks, or prompts for students to complete; work is recorded and submitted to the teacher digitally
Interpret: Review evidence to determine students' progress towards the learning goal	In-the moment evaluation of student statements and work	Offline review of group or individual student work by evaluating, scoring, or otherwise making sense of where students are relative to the learning goal
Act: Take instructional next steps to move students from where they are to where they need to be, such as re-teaching using a different mode	Real-time teacher feedback or peer feedback that prompts adjustments or real-time modeling to re-teach a concept or skill or progress to a new concept or skill	Offline feedback (comments, videos, email) or follow up tools to support re-teaching a concept or skill or progressing to a new concept or skill; assignment of additional tasks or work to support student progress

Source: Smarter Balanced Assessment Consortium²⁷

RESOURCES AND GUIDELINES FOR VIRTUAL FORMATIVE ASSESSMENTS

A variety of digital learning tools combined with clear guidelines enable teachers to administer formative assessments in virtual learning environments. For example, online lab simulations may include embedded

Additional Resource

The NWEA has compiled a list of 75 free or low-cost [digital tools](#) to support formative assessment.

formative assessments such as pre-laboratory activities that encourage students to reflect on their work and learning error interventions.²⁸ Michigan's Virtual Learning Research Institute (MVLRI) recommends assessing virtual learning through a combination of comments

on written student work and quizzes embedded in virtual learning modules. Teachers can also set up virtual discussion boards on which students can post reflections on learning and receive feedback from both teachers and peers.²⁹ Figure 2.3 (on the next page) shows types of virtual formative assessments recommended by the Smarter Balanced Assessment Consortium (SBAC).

Figure 2.3: SBAC-Recommended Virtual Formative Assessments

ASSESSMENT TYPE	INSTRUCTIONAL FORMAT	NOTES FOR USE
Entrance Ticket	Synchronous	Use a polling tool within a web-based classroom to gather real-time data regarding what students know before the beginning of a "lesson."
Thumbs Up/Thumbs Down	Synchronous	When using an online platform, there are many tools that can be used to get non-verbal feedback in real time. This strategy can be used throughout online lessons to clarify learning, check for understanding, and know if students need more support or if they are ready to move on.

²⁷ Chart contents taken verbatim from: "Remote Learning and the Formative Assessment Process," Op. cit.

²⁸ Chu, M.-W. and J.P. Leighton. "Enhancing Digital Simulated Laboratory Assessments: A Test of Pre-Laboratory Activities with the Learning Error and Formative Feedback Model." *Journal of Science Education & Technology*, 28:3, June 2019. p. 256.

²⁹ "Teacher Guide to Online Learning," Op. cit.

ASSESSMENT TYPE	INSTRUCTIONAL FORMAT	NOTES FOR USE
Stars and Stairs	Asynchronous	Descriptive feedback is essential for student academic growth. This strategy can be used by both students and teachers and is generally used at the end of a lesson when interpreting evidence of learning. A word processing tool can be used to create a Stars and Stairs form and upload it to a virtual teaching platform. It can then be used by the teacher students to identify areas of strength and areas for growth and to set goals for next steps.
Exit Ticket	Synchronous and Asynchronous	For synchronous learning, use a polling tool to gather real-time data regarding what students know after a "lesson." For asynchronous learning, have students submit their responses electronically, review, and provide them with electronic feedback.
Notice/Wonder	Synchronous and Asynchronous	For synchronous learning, post a problem or figure so that all students can see it by sharing your screen. Have students state, via chats or open discussion, what they notice and wonder about the problem/figure. For asynchronous learning, create a discussion board asking students to write what they notice and wonder about the problem/figure in the post by a certain date. Teachers can also require/suggest students to respond to each other's posts.

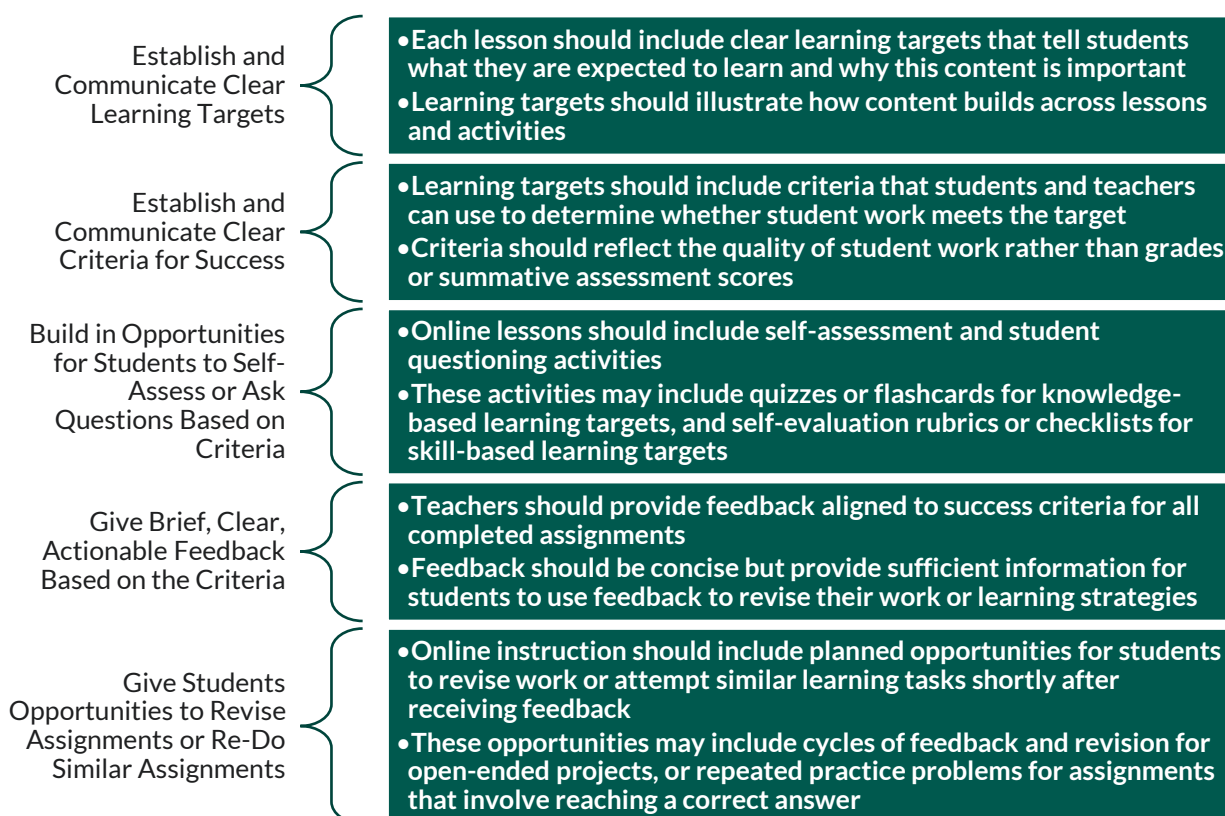
Source: Smarter Balanced Assessment Consortium³⁰

The National Center on Educational Outcomes at the University of Minnesota also offers strategies to support formative assessment in virtual learning environments. These recommendations listed in Figure 2.4 (on the next page) were initially developed to support students with disabilities but may apply to all students.³¹

³⁰ Chart contents taken verbatim from: "Remote Learning and the Formative Assessment Process," Op. cit.

³¹ Brookhart, Op. cit., pp. 1–2.

Figure 2.4: Recommendations for Formative Assessment in Virtual Learning Environments



Source: National Center on Educational Outcomes³²

By following the guidance from the National Center on Educational Outcomes at the University of Minnesota and other similar organizations, as well as utilizing a variety of digital resources, educators can be well-equipped to offer virtual formative assessments to measure their students' progress.

VIRTUAL SUMMATIVE ASSESSMENT

Districts and states need to collect summative assessment data for the 2020-2021 school year to measure the impact of the transition to virtual learning on student outcomes and identify additional supports necessary for students to make adequate progress. Summative assessments can help schools determine progress during virtual learning and if students have lost any academic skills. Schools can use these data to inform changes to curriculum and instruction that address gaps in learning.³³ The Council of Chief State School Officers (CCSSO) recommends that districts avoid administering summative assessments planned for the Spring of 2020 in the Fall of 2020, and avoid any large-scale assessment during the first week of the 2020-2021 school year. Instead, the CCSSO recommends that schools and districts administer brief large-scale interim assessments that draw on existing assessment instruments.³⁴ The CCSSO has developed more detailed [guidance](#) for state assessments to be administered in the Spring of 2021.³⁵

³² Chart contents adapted from: Ibid., pp. 3–7.

³³ “10 Tips for Assessing and Monitoring Students' Academic Progress During COVID-19,” Op. cit., p. 2.

³⁴ Marion, S. et al. “Restart & Recovery: Assessment Considerations for Fall 2020.” Council of Chief State School Officers, 2020. p. 17. <https://ccsso.org/sites/default/files/2020-07/Assessment%20Considerations%20for%20Fall%202020.pdf>

³⁵ “Restart & Recovery: Assessments in Spring 2021.” Council of Chief State School Officers, 2020. <https://online.flowpaper.com/753a0706/AssessmentsSpring2021/>

AVOIDING NEGATIVE CONSEQUENCES OF SUMMATIVE ASSESSMENTS

Schools and districts should ensure that summative assessments do not exacerbate the social and emotional challenges caused by the COVID-19 pandemic or unfairly penalize students for learning loss due to disrupted instruction. The transition to virtual learning and other challenges associated with the COVID-19 pandemic are likely to exacerbate existing inequities in access to educational resources across student groups.³⁶ However, while summative assessments are important to help districts target student support, the OCHA recommends that schools reduce the stakes of summative assessment results for students.³⁷ Likewise, FutureEd recommends that states and districts administer virtual summative assessments at the end of the 2020-2021 school year, but refrain from using assessment results to hold schools or teachers accountable for learning outcomes.³⁸ Schools should avoid retaining students in a grade or tracking students into lower-level courses based on summative assessment results.³⁹

Advocates of grading reform recommend that schools implement changes to grading policies to ensure that grades do not increase student stress or unfairly reflect challenges accessing instruction due to teachers' challenges working in a virtual environment or inequitable access to resources.⁴⁰ For example, the Center for Assessment recommends that schools consider a shift to pass/fail grading to support intrinsic motivation for learning.⁴¹ However, research does not conclusively identify the most effective grading practices for the transition to virtual learning due to the COVID-19 pandemic. Individual districts vary substantially in their approaches to grading based on factors such as college entrance requirements and student access to virtual learning.⁴² In addition to considering the social and emotional impacts of student policy, districts are examining the impact of grading policies on equity for students facing challenges accessing learning.⁴³ District leaders should consider the local context and consult stakeholders, including teachers and parents, before finalizing a decision on grading for the 2020-2021 school year.

³⁶ Spurrier, A. et al. "Assessment and Accountability in the Wake of COVID-19. Making Next Year Count: Summer 2020 Accountability Series." Bellwether Education Partners, 2020. p. 1. https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-COVID19_Final.pdf

³⁷ "Guidance: Assessing and Monitoring Learning During the COVID-19 Crisis," Op. cit., pp. 3-4.

³⁸ Olson, Op. cit., p. 5.

³⁹ Lake and Olson, Op. cit., p. 4.

⁴⁰ Feldman, J. "To Grade or Not to Grade?" *Educational Leadership*, Summer 2020. <http://www.ascd.org/publications/educational-leadership/summer20/vol77/num10/To-Grade-or-Not-to-Grade%C2%A2.aspx>

⁴¹ Marion, S. and M.A. Snider. "Remote Learning During COVID-19 Prompts Reflection." Center for Assessment, April 23, 2020. <https://www.nciea.org/blog/school-disruption/remote-learning-provides-opportunity-rethink-assessment-and-learning>

⁴² Sawchuk, S. "Grading Students During the Coronavirus Crisis: What's the Right Call?" *Education Week*, April 29, 2020. <https://www.edweek.org/ew/articles/2020/04/01/grading-students-during-the-coronavirus-crisis-whats.html>

⁴³ Zalaznick, M. "How Equity Is Overhauling Grading in Online Learning." *District Administration*, April 21, 2020. <https://districtadministration.com/grading-school-grades-equity-online-learning-classes-coronavirus/>

SECTION III: INTEGRITY OF VIRTUAL ASSESSMENTS

In this section, Hanover Research discusses how to ensure the integrity of virtual assessments through assessment design and effective proctoring.

DESIGNING VIRTUAL ASSESSMENTS

Teachers can use the assessment design process to minimize cheating. Many learning management systems (LMSs) allow teachers to randomize question order or response options when designing multiple-choice assessments. Teachers can also assign students randomized multiple choice questions from a large question pool so that each student responds to a different question aligned to the learning objectives.⁴⁴ For formative assessments, making assessments explicitly open book or allowing retakes can minimize student stress and avoid the motivation to cheat.⁴⁵ The flexibility of formative assessments explains the shift toward increasing support of this assessment type and a shift in the assessment balance. However, there are alternate assessment strategies that further discourage cheating and support student learning.

ALTERNATIVE ASSESSMENT STRATEGIES

Teachers can also use alternative assessment strategies that make cheating more difficult. In general, alternative assessments that require authentic demonstrations of learning are less susceptible to cheating than traditional short-answer or multiple-choice assessment items.⁴⁶ For example, a guide to virtual learning during COVID-19 for higher education prepared by the Virtual learning Consortium (OLC) recommends that instructors consider the four alternative assessment strategies outlined in Figure 3.1.

Figure 3.1: Alternative Assessment Strategies for Virtual Learning

Authentic Assessment	• Focusing on skills that can be applied outside of the classroom
Active Assessment	• Involving students in the learning and assessment process
Formative Assessment	• Measuring progress throughout the learning process
Experiential Assessment	• Engaging students in work either offline or online but outside of the learning management system

Source: Virtual learning Consortium⁴⁷

In addition to formative assessment, discussed in Section II of this report, the assessment strategies recommended by the OLC include strategies such as authentic assessment and experiential assessment that apply classroom learning to real-world contexts.⁴⁸ These strategies provide opportunities to increase student engagement in the assessment process. For example, authentic assessment provides opportunities for collaboration among students.⁴⁹ Strategies such as formative assessment and authentic assessment hold the

⁴⁴ O'Keefe et al., Op. cit., p. 34.

⁴⁵ Ibid.

⁴⁶ Nasr, Op. cit., p. 170.

⁴⁷ Chart contents taken verbatim from: O'Keefe et al., Op. cit., p. 34.

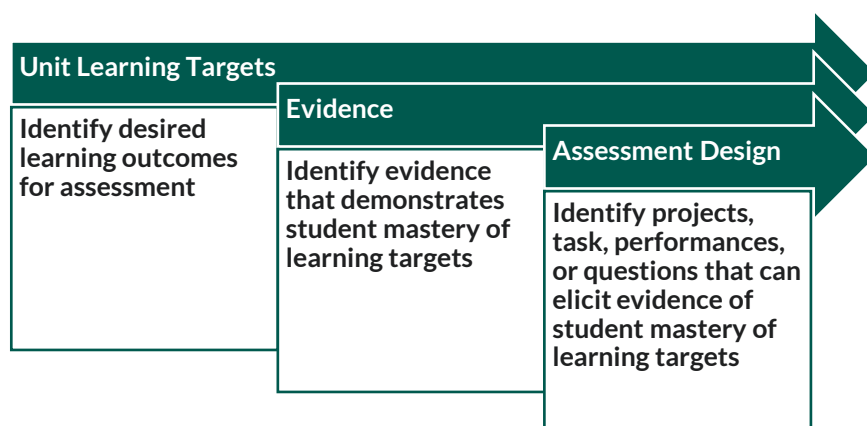
⁴⁸ Ibid.

⁴⁹ "The CTT Guide for Online and Flexible Hybrid Teaching: Assessing Student Learning." Center for Transformative Teaching, University of Nebraska-Lincoln. <https://teaching.unl.edu/assessing-student-learning/>

potential to support the assessment of deeper learning skills that are difficult to assess with traditional multiple-choice assessment instruments.⁵⁰

The Council of Chief State School Officers (CCSSO) recommends that schools consider increasing their use of performance-based assessment items that cannot easily be answered using unauthorized resources.⁵¹ The Center for Assessment defines performance assessment as any assessment that requires students to produce an artifact such as a report or performance that can be scored against performance criteria to measure students' mastery of learning outcomes.⁵² Teachers can design performance assessment using the process outlined in Figure 3.2. The Center for Assessment has developed a [review tool](#) that teachers can use to evaluate the quality of performance assessments and a [professional development module](#) to support teachers in designing and implementing performance assessments.⁵³ In addition, the Stanford Center for Assessment, Learning, and Equity (SCALE) has developed a [resource bank](#) of free performance assessment items that teachers and schools can incorporate into assessments.⁵⁴

Figure 3.2: Process for Designing Performance Assessments



Source: Center for Assessment⁵⁵

ADMINISTERING VIRTUAL ASSESSMENTS

Because a virtual assessment environment lacks the standardized assessment conditions of traditional in-person assessment, assessment developers must adapt assessments to ensure that assessment data are sufficiently valid and relevant to inform instruction.⁵⁶ Administering classroom assessments in a virtual format poses substantial challenges related to ensuring the integrity of assessment data.⁵⁷ Virtual learning platforms create additional opportunities for student cheating, either by sharing responses among students in a class or by using the internet to look up correct answers.⁵⁸ In this section, Hanover Research discusses strategies teachers can use to ensure integrity in virtual assessments, beginning with a review of best

⁵⁰ Rothman, Op. cit., p. 12.

⁵¹ Marion et al., Op. cit., p. 16.

⁵² "Classroom Assessment Learning Module: Summative Classroom Assessment." Center for Assessment. p. 18. https://docs.google.com/document/d/1Hnknw6g5fKF-T2xA4Vsk_Odpl4Tcd4-mIKFPfQlcTMA/edit?usp=sharing&usp=embed_facebook

⁵³ "Classroom Assessment Learning Module," Op. cit.

⁵⁴ "Performance Assessment Resource Bank." Stanford Center for Assessment, Learning, and Equity. <http://performanceassessmentresourcebank.org/learn-more>

⁵⁵ Chart contents adapted from: "Classroom Assessment Learning Module," Op. cit., p. 21.

⁵⁶ "The Connected Learning Era: Mitigating the COVID-19 Learning Loss," Op. cit., p. 18.

⁵⁷ "Statement from NWEA Regarding Remote Testing as an Option during Spring 2020 School Closures." Northwest Evaluation Association, May 19, 2020. <https://www.nwea.org/2020/05/statement-from-nwea-regarding-remote-testing-as-an-option-during-school-closures/>

⁵⁸ Nasr, N. "Teachers as Students: Adapting to Online Methods of Instruction and Assessment in the Age of COVID-19." *Electronic Journal for Research in Science & Mathematics Education*, 24:2, 2020. p. 170.

practices for proctoring virtual assessments before discussing assessment design strategies to minimize the risk of cheating.

PROCTORING ASSESSMENTS

Effective proctoring is essential to ensuring that assessment data accurately reflect students' learning progress. The virtual assessment environment makes it more difficult for teachers to monitor students to prevent cheating and creates additional opportunities for students to use prohibited resources.⁵⁹ Teachers and proctors can reduce the impact of cheating by:⁶⁰

- Checking in with students repeatedly to monitor progress on long-term assignments;
- Testing assessment items to ensure that they cannot be easily answered through the internet;
- Making assignments public for other students;
- Requiring students to sign an academic honesty pledge;
- Reviewing assignments to ensure that students' voice is consistent;
- Using authentic strategies to make assignments more meaningful and personal for students;
- Ensuring an appropriate level of difficulty, so students do not become discouraged or bored; and
- Using digital assessment tools to vary test items and response options for individual students.

Most districts administering virtual assessments rely on parents to proctor assessments or ask staff to proctor assessments using a videoconference platform.⁶¹ Although some organizations have developed third-party proctoring tools, these tools present substantial challenges related to student privacy, excessive stress, and misidentifying innocuous activities as cheating.⁶² Additionally, such tools are not always feasible for the district to adopt and implement, due to limited resources or pre-existing platforms.

Assessment proctors should monitor students during the assessment to prevent cheating and provide students with support related to technical issues or test administration. Proctors should also ensure that students do not have any monitors or displays open except for the monitors and displays used to complete the assessment, including any monitors or displays used for testing accommodations.⁶³ Figure 3.3 (on the next page) presents guidelines for remote assessment proctoring applicable to both parent-proctored and teacher-proctored assessments.

⁵⁹ Martin, J.E. "Grading and Assessing Online Student Work: Core Concepts and Key Strategies You Can Use Today." Blackbaud, 2015. p. 18. https://hello.blackbaud.com/rs/053-MXJ-131/images/11043_JonathanMartin_eBook.pdf

⁶⁰ Bulleted text adapted from: Ibid., pp. 18–19.

⁶¹ "How Schools Use Zoom to Proctor Assessments." Curriculum Associates, August 2020. <https://www.curriculumassociates.com/-/media/mainsite/files/i-ready/iready-proctoring-assessment-remotely-zoom-2020.pdf>

⁶² Crosslin, M. et al. "Measuring Student Learning in Online Courses: Assessment Strategies That Work." Center for Research on Teaching and Learning Excellence, University of Texas at Arlington, April 13, 2020. p. 7. <https://utacrtle.org/docs/measuring-student-learning.pdf>

⁶³ "How Schools Use Zoom to Proctor Assessments," Op. cit., p. 2.

Figure 3.3: Guidelines for Remote Assessment Proctoring

Before Testing

- Communicate with teachers and proctors at least two weeks before beginning the assessment and with families at least one week before the assessment
- Develop a checklist for administrators, teachers, and proctors
- Identify communication protocols for testing
- Ensure that all stakeholders have received training on the technology platform used for assessment
- Explain the testing process to students and family members through a videoconferencing program
- Provide individualized motivational support to students who may need additional support

During Testing

- Monitor test taking in real time
- Offer encouragement and provide stretch breaks at specific times during testing
- Respond as soon as possible to students who appear to be rushing or distracted
- Consider resetting or rescheduling the assessment for students who face substantial difficulties completing online assessments

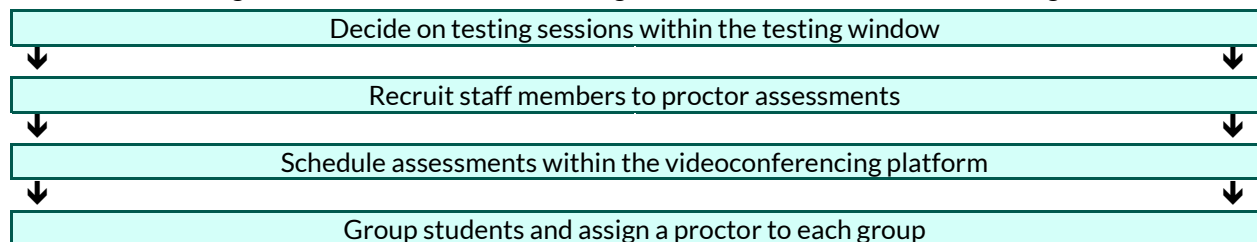
After Testing

- Recognize teachers, students, and families for their work in completing the assessment
- Share assessment data with students and families

Source: Curriculum Associates⁶⁴

Districts should provide students and proctors with the necessary technology and training, obtain permission from families before using videoconferencing, and ensure that appropriate privacy and cybersecurity protections are in place.⁶⁵ Proctors' goals are to establish assessment integrity while minimizing the potential for invasion of privacy or undue student stress.⁶⁶ Figure 3.4 shows a recommended planning process for remote assessment proctoring.

Figure 3.4: Recommended Planning Process for Remote Staff Proctoring



Source: Curriculum Associates⁶⁷

If districts rely on families to proctor assessments, district staff need to provide parents and caregivers with the information they need to support their children during the assessment and ensure that they do not provide inappropriate help during the assessment. The developers of the i-Ready assessment system have created a [guide](#) for families, which includes an administration checklist and troubleshooting guide. Districts should provide similar guidance to support parents and caregivers proctoring local assessments.⁶⁸

⁶⁴ Chart contents adapted from: "Proctoring Assessments Remotely." Curriculum Associates, August 2020. pp. 1–3. https://i-readycentral.com/download/?res=32340&view_pdf=1

⁶⁵ "How Schools Use Zoom to Proctor Assessments," Op. cit., p. 3.

⁶⁶ O'Keefe et al., Op. cit., p. 34.

⁶⁷ Chart contents adapted from: "How Schools Use Zoom to Proctor Assessments," Op. cit., p. 3.

⁶⁸ "Family Support for At-Home Assessments." Curriculum Associates. <https://www.curriculumassociates.com/teaching-learning-2020/home-assessment-family-support>

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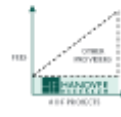
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