Instructional Strategies for Virtual Learning:
A Companion Tool to the NIET Teaching Standards Rubric
What effective teaching looks and sounds like in a virtual setting
June 2020

Tool Description:
As teachers move to virtual learning, many are asking how strong teaching practices translate to the online environment. NIET has developed a tool to describe what key instructional indicators should look like and sound like when planning and delivering virtual learning. The tool describes instructional and planning practices for both asynchronous and synchronous learning, as well as additional considerations for synchronous learning.

This tool is designed to be used alongside the NIET K-12 Teaching Standards Rubric, but it could support any teacher or leader to deepen their understanding of high-quality virtual learning instruction. The tool references exemplary practice for every indicator of the NIET rubric, with descriptors included, and the tool includes specific examples and strategies for how those indicators could be adapted in a virtual setting. NIET will continue to add and modify this document as we learn more effective virtual learning strategies.

How to Use this Tool:
The virtual learning companion tool is meant to supplement what educators already know about strong instruction, regardless of delivery method. This tool assists in defining specific strategies and ideas – with key virtual learning terms highlighted in orange – but it is not meant to be comprehensive of all possible virtual learning adaptations. This resource could be helpful for educators to anchor their practice, for coaches and instructional leaders to provide feedback, and to support a more comprehensive evaluation system. We would encourage teachers and leaders to discuss how this tool can enhance their existing approaches to coaching, observation, evaluation, and feedback and set clear expectations on how it should be used.

The "virtual learning strategies" column includes ideas for adapting teaching strategies in both synchronous and asynchronous environments. For purposes of this tool, we define asynchronous and synchronous learning as follows:

- *Asynchronous Learning:* Asynchronous learning describes learning that does not occur in the same place or at the same time with the teacher (e.g., a recorded lesson). The instructor prepares lesson materials in advance for students to access the lesson content. Students can access and complete the assignments/learning within a flexible time frame. Methods of asynchronous virtual learning include self-guided lesson modules, streaming video content, virtual text, and posted lesson notes. Asynchronous learning can also include student interactions across discussion boards or social media platforms.

- *Synchronous Learning*: Synchronous learning happens in real time. This means that the teacher and students interact in a specific virtual place, through a specific medium, at the same time. Methods of synchronous learning include video conferencing, teleconferencing, live chatting, and live-streaming instruction.

NIET K-12 Teaching Standards Rubric: Companion Tool for Virtual Learning
Domain: Instruction

Indicator	Performance Descriptors at the Exemplary Level	Virtual Learning Strategies	Additional Synchronous Considerations
Standards & Objectives	- All learning objectives and state content standards are explicitly communicated. - Sub-objectives are aligned and logically sequenced to the lesson's major objective. - Learning objectives are: (a) consistently connected to what students have previously learned, (b) linked to what they know from life experiences, and (c) integrated with other disciplines. - Expectations for student performance are clear, demanding, and high. - State standards are displayed and referenced throughout the lesson. - There is evidence that most students demonstrate mastery of the objective.	- Communicate lesson objective(s) and alignment to the standard(s) via a slide, document, or video. List and share success criteria associated with objective(s) in an initial document. - Reference objective(s) and success criteria throughout the lesson (i.e., in all presentation documents, such as PowerPoints, videos, assignments, and rubrics). - Use success criteria to assess student work and provide feedback. Ask students to use success criteria for self-assessment before submitting student work. - Use formative and summative checks to determine mastery of objectives (e.g., quiz, written responses, discussion board posts, etc.).	Communicate how students will know when they learn objective(s) by explaining the expectations and success criteria throughout the lesson (i.e., in all presentation documents, such as PowerPoints, videos, assignments, rubrics, and in chats and discussions), and ask students for feedback on understanding.
Motivating Students	- Content is organized so that it is personally meaningful and relevant to students. - The teacher consistently develops learning experiences where inquiry, curiosity, and exploration are valued. - The teacher regularly reinforces and rewards effort.	- Create clearly labeled documents and/or folders that signal or mark the order and flow of the lesson. - Activate personal connections by modeling your own connection to learning in a narrative think-aloud and asking the student to do the same. - Insert meaningful and relevant key questions and wonderings at various places in the flow of the lesson. - Generate interest in the upcoming lesson topic (e.g., survey students prior to the lesson about what they already know about the subject, give a pre-assessment, send link to a video to spark questions). - Include opportunities for student choice. - Include opportunities for students to share work publicly. - Reinforce students for participation by adding to the chat or discussion board (i.e., good job/nice comment; great thought provoking question – let's discuss in our synchronous time this week). - Include questions that require students to make connections between the content and current socio-political ideas (within the community and globally), such as through discussion boards and chat.	- Incorporate high interest and/or culturally relevant activities and tasks with the lessons. - Provide relevant hooks when beginning a new concept (e.g., video clip(s) to spark student interest and curiosity, having students respond to a question with a poll related to the lesson's objective, having students make a personal connection to the content) and throughout the lesson. - Include student voice and examples of work provided by students in responding to questions, reflections, texts, or problems.

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Presenting Instructional Content	- Presentation of the content always includes: - visuals that establish the purpose of the lesson, preview the organization of the lesson, and include internal summaries of the lesson. - examples, illustrations, analogies, and labels for new concepts and ideas. - modeling by the teacher to demonstrate his or her performance expectations. - concise communication. - logical sequencing and segmenting. - all essential information. - no irrelevant, confusing, or nonessential information.	- Storyboard the lesson plan during planning, and post and present materials in the order students will need them to be successful. - Create clearly labeled documents and/or folders that signal the order and flow of the lesson. - Utilize recorded videos or slides to discuss and/or display the lesson agenda at the beginning of and throughout the lesson. - Intentionally utilize pictures and visuals via shared documents or embedded in slides to deepen student understanding (e.g., actively model how to label a picture of the solar system or circulatory system in a diagram of the human body). - Record narration of the analysis of an exemplar with reference to success criteria.	- Reference the agenda throughout the lesson. - Model a think-aloud of new learning and engage students in the process. - Utilize the success criteria as a visual and reference throughout the lesson. - Utilize frequent checks for understanding by stopping and asking questions and having students put learning in their own words.
Lesson Structure and Pacing	- The lesson starts promptly. - The lesson's structure is coherent, with a beginning, middle, end, and time for reflection. - Pacing is brisk and provides many opportunities for individual students who progress at different learning rates. - Routines for distributing materials are seamless. - No instructional time is lost during transitions.	- Create clearly labeled documents and/or folders that organize the order and flow of the lesson and/or unit (like a road map for students). - Clearly label lessons to move from purpose to direct instruction, to practice then application, and how/when to submit work. - All materials necessary for understanding and completing the lesson are provided/embedded within the descriptions. - Provide clearly written or verbalized directions for what is expected for every activity and assignment. - Provide office hours to support students and assist with differentiation. - Include scaffolds (e.g., read-alouds, thinking maps, links to resources). - Explicitly ask students to pause and reflect to process new learning throughout the lesson.	- Practice timing and tools for all synchronous functions. - Use breakout room options to work with various groups of students on differentiated needs. - Engage students in chats and feedback with attention to pacing to ensure the purpose is met. - Plan for pacing so that students can interact and have ample time for student-to-student interaction. - Meet with small groups of students or one-on-one outside of the whole group setting to support learning.

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Activities and Materials	- Activities and materials: - support the lesson objectives. - are challenging. - sustain students' attention. - elicit a variety of thinking. - provide time for reflection. - are relevant to students' lives. - provide opportunities for student-to-student interaction. - induce student curiosity and suspense. - provide students with choices. - incorporate multimedia and technology. - incorporate resources beyond the school curriculum texts (e.g., teacher-made materials, manipulatives, resources from museums, cultural centers, etc). - In addition, sometimes activities are game-like, involve simulations, require creating products, and demand self-direction and self-monitoring.	- Plan for a variety of activities that include student options and menus that are all aligned to objectives and available to all students. - Include intentional opportunities where students prepare products to share/post for an audience, such as through an online submission tool and/or video. - Have students share work with another student for feedback prior to submitting it. - Prepare rigorous student work/assignments with models that show expectations. - Build longer-term projects that require student investment at every stage. - Use checklists and rubrics as success criteria to help students monitor progress against expectations. - Turn on closed captioning for videos to support student understanding and language development.	- Include activities with more student-to-student interaction (e.g., breakout rooms, chats, discussion boards, surveys, online presentations). - Include teacher-led direct instruction and modeling through simulations and demonstrations. - Incorporate various interactive programs.
Questioning	- Questions are varied and high-quality, providing a balanced mix of question types: - knowledge and comprehension, - application and analysis, and - creation and evaluation. - Questions are consistently purposeful and coherent. - A high frequency of questions is asked. - Questions are consistently sequenced with attention to the instructional goals. - Questions regularly require active responses (e.g., whole-class signaling, choral responses, written and shared responses, or group and individual answers). - Wait time (3-5 seconds) is consistently provided. - The teacher calls on volunteers and non-volunteers, and a balance of students based on ability and sex. - Students generate questions that lead to further inquiry and self-directed learning.	- Plan and record a variety of key question types on slides at opportune times to prompt reflection. - End the lesson with a reflective question(s) aligned to the objective for students to respond to in a collaborative document tool or platform. - Plan for opportunities for students to generate their own questions using a collaborative document tool or platform.	- Provide opportunities for students to respond to the teacher and to other student questions in the main room (whole class) in the chat. Students can raise their hands and respond out loud or via the polling tool. - Plan for visual prompting of questions to continue small group discussions in breakout rooms. - Prompt students to write on the whiteboard simultaneously to check for understanding.

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Academic Feedback	• Oral and written feedback is consistently academically focused, frequent, and high-quality. • Feedback is frequently given during guided practice and homework review. • The teacher circulates to prompt student thinking, assess each student's progress, and provide individual feedback. • Feedback from students is regularly used to monitor and adjust instruction. • The teacher engages students in giving specific and high-quality feedback to one another.	• Provide office hours for students to log in at designated times to receive timely feedback on assignments. • Provide written feedback in a timely manner virtually through email or discussion platforms aligned to the lesson's objectives and success criteria. • Engage in written discussions and check for understanding between students by making comments on each other's written responses in a collaborative document tool or platform. • Have students share work with another student for feedback prior to submitting	• Model for students how to interact with one another and the teacher, and provide each other with specific feedback aligned to the lesson's objective in breakout rooms and in the chat. • Allow students to complete tasks at different levels and time frames with some students remaining in the breakout rooms while others return to the main room to engage in a feedback discussion facilitated by the teacher (no lag time to lose engagement).
Grouping Students	• The instructional grouping arrangements (either whole-class, small groups, pairs, individual; hetero- or homogenous ability) consistently maximize student understanding and learning efficiency. • All students in groups know their roles, responsibilities, and group work expectations. • All students participating in groups are held accountable for group work and individual work. • Instructional group composition is varied (e.g., race, gender, ability, and age) to best accomplish the goals of the lesson. • Instructional groups facilitate opportunities for students to set goals, reflect on goals, and evaluate their learning.	• Provide clear directions and responsibilities for group work. • Consider if the lesson lends itself to grouping students, group composition should be considered to ensure strong virtual collaboration. • Utilize self-assessment and peer assessment tools with group work.	• Plan breakout group strategies and composition to ensure strong management and pacing. • Model breakout group expectations and assessment with each group. • Set clarity around what is expected, when it is expected, and how groups will proceed in the main room.
Teacher Content Knowledge	• The teacher displays extensive content knowledge of all the subjects she or he teaches. • The teacher regularly implements a variety of subject-specific instructional strategies to enhance student content knowledge. • The teacher regularly highlights key concepts and ideas and uses them as bases to connect other powerful ideas. • Limited content is taught in sufficient depth to allow for the development of understanding.	• Segment and sequence traditional, in-person lessons into smaller segments to reach the depth of expectations per the standard. • Spend several lessons on one topic (e.g., text, historic document, task) with each lesson subsequently focusing on a deeper and more extensive understanding of the topic and varied student work products.	• Model the use of subject-specific strategies for students. • Monitor the level of understanding through frequent checks for understanding of the content by calling on students and having them explain information for other students. • Engage students in a chat or discussion board to communicate the connections students are making with the key concepts to other ideas based on questions posed.

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Teacher Knowledge of Students	- The teacher's practices display an understanding of each student's anticipated learning difficulties. - The teacher's practices regularly incorporate student interests and cultural heritage. - The teacher regularly provides differentiated instructional methods and content to ensure children have the opportunity to master what is being taught.	- Record a video of thinking aloud through the skills and content that students may struggle with the most. - Plan how to use virtual tools such as virtual manipulatives, videos, and websites providing texts with multiple reading levels to adjust content to meet the needs of all learners. - Turn on closed captioning for videos to support student understanding and language development.	- Incorporate planned activities that engage all types of learners at a pace that meets their style and requirement for pacing (e.g., set a virtual timer and post the time for students to see the countdown; encourage students that need to collaborate to break off into "chat rooms" with a task to solve and discuss their thinking, then come back to the whole group). - Provide a problem on the presentation screen and ask students, "What would you do to solve this problem?" Then, allow them to partner or small group "chat" in the virtual program to discuss thinking and solutions. - Allow opportunities for students to share their thinking with the whole group and critique each others' solutions and thinking and provide feedback.
Thinking	- The teacher thoroughly teaches two or more types of thinking: - analytical thinking where students analyze, compare and contrast, and evaluate and explain information. - practical thinking where students use, apply, and implement what they learn in real-life scenarios. - creative thinking where students create, design, imagine, and suppose. - research-based thinking where students explore and review a variety of ideas, models, and solutions to problems. - The teacher provides opportunities where students: - generate a variety of ideas and alternatives. - analyze problems from multiple perspectives and viewpoints. - monitor their thinking to ensure that they understand what they are learning, are attending to critical information, and are aware of the learning strategies that they are using and why.	- Use think-aloud models frequently in videos/audio alongside lesson activities. - Use whiteboard or screensharing opportunities to make thinking transparent in recorded sessions. - Segment learning into units for students to discuss throughout to monitor their thinking and check for understanding - Use and label anchor documents to help students access and reach higher levels of thinking. - Provide instruction and modeling on how students should actively take notes to help activate thinking and record questions throughout lesson videos, links, and texts. - Utilize whiteboard, chat, or discussion board functions to have students comment on other students' thinking.	- Model and discuss metacognitive strategies, such as: - planning for a task. - gathering and organizing materials. - arranging a study space and schedule. - monitoring mistakes. - evaluating success criteria for tasks. - evaluating the success of any learning strategy and adjusting. - Use whiteboard or screensharing opportunities to make thinking transparent and have students actively generate ideas and add information to discussion.

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Problem-Solving	● The teacher implements activities that teach and reinforce three or more of the following problem-solving types: 　○ abstraction. 　○ categorization. 　○ drawing conclusions/justifying solutions. 　○ predicting outcomes. 　○ observing and experimenting. 　○ improving solutions. 　○ identifying relevant/irrelevant information. 　○ generating ideas. 　○ creating and designing.	● Plan for student work products that are intentional to help students move through stages of idea generation, creation, analysis, and drawing conclusions/justifying solutions. ● Develop a pathway and clear sequence to problem-solving through modeling, activity and materials selection, anchor documents, videos, and other scaffolds. ● Determine how students will interact with the materials to prompt different types of problem-solving (e.g., carefully constructed questions).	● Provide numerous times for students to engage in group activities to deepen their thinking and problem-solving skills. ● Provide virtual tools that will support students with categorizing, drawing conclusions, generating ideas, observing and experimenting, etc. Often the tool itself can prompt a deeper level of problem-solving (e.g., virtual thinking maps, polling)

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Domain: Planning

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Instructional Plans	• Instructional plans include:
	  o measurable and explicit goals aligned to state content standards.
	  o activities, materials, and assessments that:
	    ▪ are aligned to state standards.
	    ▪ are sequenced from basic to complex.
	  o build on prior student knowledge, are relevant to students' lives, and integrate other disciplines.
	  o provide appropriate time for student work, student reflection, and lesson and unit closure.
	• evidence that plan is appropriate for the age, knowledge, and interests of all learners; and
	• evidence that the plan provides regular opportunities to accommodate individual student needs.
		• Develop weekly plans aligned to state standards.
		• Plan for how the students will demonstrate mastery of the objective for each segment of the learning. The objective and expectations for mastery can be placed on a slide at the beginning of each segment to avoid students guessing what they are expected to do.
		• Create an easy access folder to include an exemplar for students to reference as an anchor document throughout the asynchronous lesson.
		• Lesson presentation is planned and practiced before the lesson unfolds and/or recorded.
		  o Check that the virtual platform is working, resources can be easily found, links are live.
		• Pre-plan and post materials and reference tools and resources in a common and accessible location.
		• Activities and materials are leveled to accommodate student needs (e.g., leveled text for specific groups, provide content in alternative formats).
		• Activities and materials are embedded for students to reflect on the learning (e.g., reflective question on a discussion board, exit tickets, message to the teacher, questionnaire for self-evaluation).
			• Accommodate individual needs (e.g, office hours, 1:1 calls or chats, re-teaching, plan for enrichment activities).
			• Activities and materials include student reflection (e.g., everyone posts in live chat box).
			• Provide extended time for specific student groups in breakout rooms to allow students to work at needed pacing.

Student Work	• Assignments require students to:
	  o organize, interpret, analyze, synthesize, and evaluate information rather than reproduce it;
	  o draw conclusions, make generalizations, and produce arguments that are supported through extended writing; and
	  o connect what they are learning to experiences, observations, feelings, or situations significant in their daily lives, both inside and outside of school.
		• Align the student work with the outcome of each lesson aligned to the objective.
		• Create a flow chart for students to monitor their progress toward meeting the objective.
		• Provide and communicate opportunities for student thinking and work sharing (e.g., posting work in the learning management system).
		• Plan for how students will articulate their learning and thinking in a virtual experience (e.g., questions, illustrations, audio/video recordings).
		• Students and teacher evaluate assignments against established and communicated success criteria. This can be recorded to provide a strong example students can reference throughout as a model.
			• Pre-work for the lesson is communicated and assigned for students to be ready for new learning.
			• Students submit their thinking and learning orally and live in the discussion thread.

Assessment	• Assessment plans:
	   o are aligned with state content standards;
	   o have clear measurement criteria;
	   o measure student performance in more than three ways (e.g., in the form of a project, experiment, presentation, essay, short answer, or multiple-choice test);
	   o require extended written tasks;
	   o are portfolio-based with clear illustrations of student progress toward state content standards; and
	   o include descriptions of how assessment results will be used to inform future instruction.
		• Criteria for success is determined and communicated by teacher for students (e.g., via a live model, exemplars utilized in the lesson itself and posted in the common folder for ready access by students).
		• Virtual assessments could be conducted in the form of a project (e.g., audio/video, taking a picture of product, experiment, graphs, charts, presentation, essay, short answer, or multiple-choice) and include criteria for success.
		• Progression of learning for individual students is supported through assessments and informs teacher of future instruction (e.g., via screencast recordings to provide specific feedback on portfolios to inform future instruction).
			• In class, the student presents assessments in the form of a project (e.g., audio/video, taking a picture of product, experiment, graphs, charts, presentation, essay, short answer, or multiple-choice)
			• Use of virtual tools like a whiteboard for students to show their thinking and solutions in real time.
			• Create learner surveys, polls, check-in calls, and live interactive sessions to monitor students understanding of the course objectives.
			• Provide regular virtual office hours for students to receive feedback and support synchronously.

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Domain: Environment

Indicator	Performance Descriptors at the Exemplary Level	Virtual Learning Strategies	Additional Synchronous Considerations
Expectations	• Teacher sets high and demanding academic expectations for every student. • Teacher encourages students to learn from mistakes. • Teacher creates learning opportunities where all students can experience success. • Students take initiative and follow through with their own work. • Teacher optimizes instructional time, teaches more material, and demands better performance from every student.	• Establish and communicate norms for virtual learning environment and post for each learning module. • Create a model with expectations for success, labeling the thinking aligned to the criteria (and saved for students to reference after the lesson). • Student work can be found for most students posted in the learning management system with clear expectations on uploading and timelines for completed work. • Provide time management suggestions for how to maximize pacing in the virtual lesson to monitor own progress and success. • Perseverance is modeled and encouraged when attempting difficult tasks through feedback provided in written, oral, and screencast recordings.	• Model appropriate time management by referring back to the lesson agenda throughout the lesson. • Ask students to work with a preplanned partner to correct mistakes through feedback and questioning in small group meeting rooms. • Provide opportune time checks throughout the lesson to assist students with pacing of assignment completion.
Managing Student Behavior	• Students are consistently well-behaved and on task. • Teacher and students establish clear rules for learning and behavior. • The teacher uses several techniques, such as social approval, contingent activities, and consequences, to maintain appropriate student behavior. • The teacher overlooks inconsequential behavior. • The teacher deals with students who have caused disruptions rather than the entire class. • The teacher attends to disruptions quickly and firmly.	• Survey the students on their comfort level with different online tools and develop lessons around those they are most successful with when beginning virtual instruction. • Post reminders throughout the asynchronous learning materials for established rules and expectations. • Monitor completion of assignments to ensure behavior is not impeding learning outcomes (e.g., follow-up email to student and/or parent when assignments are not turned in).	• Utilize online tools to engage whole group, small group, and individual students. • Use private chat features when necessary to remind specific students of the expectations for behavior. • Begin lesson with clear expectations for lesson and behavior on opening slide. • Consistently model expected online behavior for students. • Utilize a breakout room to re-engage students who are off task to understand why they are not participating in the lesson. • If students are struggling with established rules, adjust student permissions to redirect behavior (e.g., adjust chatting or audio/video privileges in the platform settings).

Environment	• The classroom:
	  o welcomes all members and guests.
	  o is organized and understandable to all students.
	  o supplies, equipment, and resources are easily and readily accessible.
	  o displays student work that frequently changes.
		• Develop a system to provide a welcome email and phone call to both students and parent within 48 hours of enrollment with detailed school procedures.
		• Provide a virtual orientation to ensure all students and parents know and understand virtual tools and procedures.
			• Practice utilization of the virtual tools so they are seamless for teacher and students.
			• Establish and communicate system to transition from whole group to break out/small group work and back to whole group.
			• Ensure that each student knows how to use all systems and tools.

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	• is arranged to promote individual and group learning.	• Develop a course homepage and welcome video with contact information, live lesson calendar, and course syllabus. • Take initiative in identifying, exploring, and applying new technologies and online tools with students.	• Monitor the work of all groups. • Allow students to share new online tools with their teacher and, when appropriate, with other students.
Respectful Culture	• Teacher-student interactions demonstrate caring and respect for one another. • Students exhibit caring and respect for one another. • Teacher seeks out and is receptive to the interests and opinions of all students. • Positive relationships and interdependence characterize the classroom.	• Explain the role of digital citizenship by modeling, guiding and encouraging legal, ethical, and safe behavior related to technology use. • Follow the standards in place to uphold academic integrity and follow through on all protocols (e.g, turnitin.com checks for plagiarism). • Remain in compliance with all FERPA requirements in online education. • Use a secure student information system as a tool for communication of student data. • Utilize the learning management system in an engaging and respectful manner by making lessons interactive when applicable. • Set expectations for forums and provide sentence starters for how to respond in discussions.	• Ask students to model digital citizenship and respect through questions and feedback provided to one another in chats, meeting rooms, and forums. • Provide quick checks on social-emotional status with students (e.g., each student shares state of mind/well-being during 1:1 interaction). • Ask for meetings with family members to cultivate positive relationships. • Establish clear expectations for breakout room discussions (e.g., debates, consensus activities, controversial topics, friendly competitions).

Virtual Learning Strategy Definitions with Examples:

Anchor documents: Key documents that provide a reference point for critical information needed to complete a task (e.g., math formulas, periodic chart, definitions, etc.).

Breakout group and main room: To facilitate small group discussions in an online learning management system, the teacher can create breakout groups that are separate from the main room and assign students to them. Breakout groups have their own private audio, video, screen sharing, and chat, plus other functions depending on the virtual meeting tool used. The teacher can direct the collaboration in each breakout room by joining periodically. The teacher can then have groups rejoin the main room.

Chat: Online chat may refer to any kind of communication over the internet that offers a real-time transmission of text messages from sender to receiver. Chat messages are generally short to enable other participants to respond quickly.

Collaborative document tool or platform: Real-time tool that allows team members to view, edit, and work simultaneously on a document without emailing attachments to each other (e.g., Google Docs).

Discussion board: An online discussion board provides the ability for asynchronous discussions to occur over a period of time. Students are able to gather their thoughts and ideas before posting and sharing their reflective responses, which leads to more in-depth learning.

Interactive programs: Game-like software or tools that use peer interaction to help students become more engaged and retain more material (e.g., Kahoot).

Learning management system (LMS): Software application for the administration, documentation, tracking, reporting, and delivery of educational courses (e.g., Schoology, Blackboard).

Office hours: Set times communicated by the teacher when she will be available to work with students. Students can email or call during this time or set up a time to talk during the posted office hours.

Online submission tools: Platforms, like Flipgrid or Screencastify, that allow students and teachers to upload and share videos or other projects with each other.

Polling: Tool that allows a teacher to survey students or ask a question, either synchronously or asynchronously, to gather feedback or check understanding (e.g., Zoom, Blackboard).

Screenshare: Similar to online submission tools, these are platforms that allow you to share the contents of your screen with another user via video or platform (e.g., Screencastify, TeamViewer)

Storyboard: A sequence of visuals, typically with some directions and dialogue, or flow chart representing the order of events planned for a virtual presentation or video.

Success criteria: Success criteria are statements that describe what success looks like when the learning goal is reached. They are specific, concrete, and measurable. Success criteria engage students in the challenge of learning.

Think-aloud: With this strategy, teachers verbalize aloud while reading a selection orally or explaining a task or problem. This includes describing what they're doing to unpack the task and to show how they monitor their own comprehension.

Virtual Thinking Map: These tools, typically within an online platform, allow the user to use graphics and shapes and/or manipulate a document to help facilitate problem-solving and illustrate thinking.

Whiteboard: Depending on the specific program, an online whiteboard usually allows you to upload files, such as PowerPoint presentations, audio files, photos, and documents, to share with other collaborators. An online whiteboard might also allow you to chat with colleagues, either via text or a video feed. Most tools allow for written explanations, solving problems, etc. to accompany any uploaded items (e.g., write steps in a problem and solve with narration to accompany a PowerPoint).

Widely Used Virtual Learning Tools and Platforms (free versions with asterisk):

- Google Classroom (online classroom)*
- G Suite for Education
- Seesaw (communication, electronic portfolios)*
- Microsoft Teams (communication/collaboration management)*
- Edmodo (communication/collaboration management)*
- Classdojo (communication/collaboration management)*
- Yoteach (discussion app)*
- Voxer (voice, text, photo, video messenger)*
- Insert Learning (allows for placement of instructional content on any webpage, e.g., scaffold text)*
- Screencastify (screen recorder)*
- Screencast-o-matic (screen recorder)
- Genially (creates interactive content)*
- Deck.toys (virtual learning lesson creator)*
- Flipgrid (video discussion platform)*
- TeamViewer (screensharing)
- Zoom (video collaboration)
- Blackboard (online classroom)
- Schoology (online classroom)
- Padlet (online bulletin board)
- Kahoot (games and quizzes)
- Quizizz (quizzes)*