# Instructional Design Principles for Remote Teaching and Learning

RATIONALE

In alignment with NCDPI and the NC State Board of Education's mission and vision, the *Instructional Design Principles for Remote Teaching and Learning* are designed to provide guidance for student learning across North Carolina when state, national, or international crises impede students from learning in their regular school setting. In NC K-12 public schools, remote learning is defined as learning that takes place outside of the traditional school setting using various media and formats, such as but not limited to: video conference, telephone conference, print material, online material, or learning management systems. These instructional design principles are overarching and intended to apply to a range of learning environments and contexts with the acknowledgement that students and teachers have different levels of access to devices and the internet.

These seven principles assume that the level of instruction in a remote setting will not directly align to teaching in a traditional, physical space. Parents, guardians, siblings, neighbors and other family members are all playing an unexpectedly more active role in their child's educational experience. Students may be experiencing less structure, social interaction, and timely support than what they normally experience in classrooms. The seven principles were designed to maximize the potential for learning to continue on a manageable scale for all stakeholders. Additionally, these principles highlight the importance of flexibility for educators and students and support for the social and emotional well-being of all in their temporary, but new academic settings.
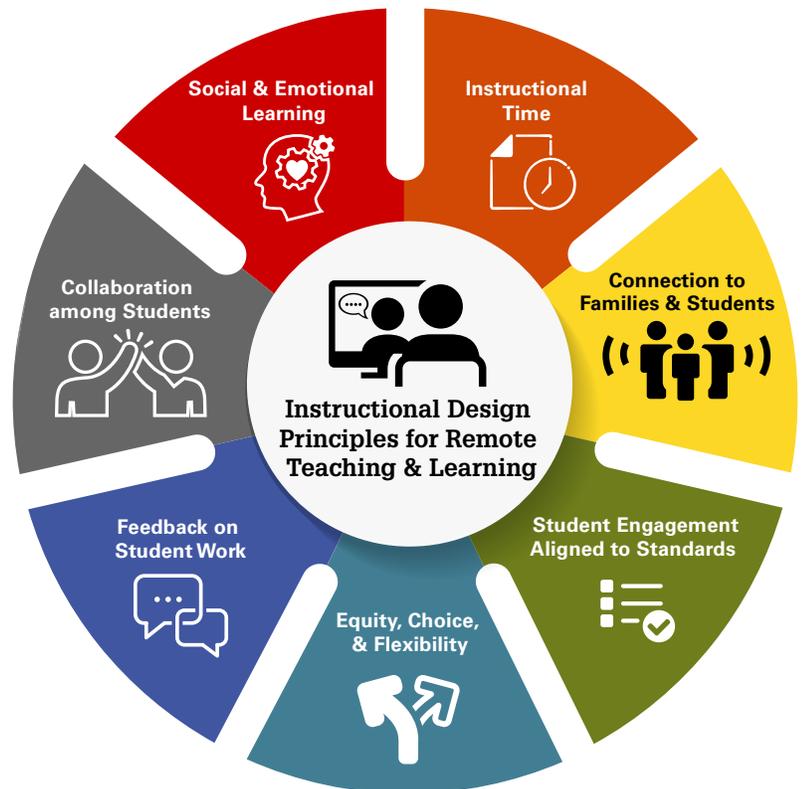
Instructional Time Expectations

The amount of time students are expected to learn and complete academic work in a remote setting should differ from instruction delivered in a physical classroom. You should not assume students will be spending the traditional hours or the same amount of time on learning as when they are in the classroom. Regardless of how instruction is delivered (e.g., synchronously or asynchronously), students are going to be required to be more self-directed in their learning. According to decades of medical research, young children have the capacity to stay focused for 5 to 10 minutes, while older students can stay on task for 10 to 15 minutes. After about 12 minutes, their minds begin to wander and they are no longer able to focus on learning.

To hold the students' attention in a remote setting, it is recommended to either **pause after 5 or 10 minutes** to give students time to reflect on what they learned; assess their level of understanding; or simply give students a quick break. Also, teachers can **switch the modality of instruction**, e.g., move from lecture to reading materials to discussion. Breaking instruction into small manageable segments or *chunks* has been shown to increase learning and

engagement. If instruction is being delivered with limited or no technology, educators can provide students with a schedule that is chunked with breaks and quick formative assessments embedded throughout.

The total time students spend in a remote learning environment per day depends on the age of the student. Various models have been put forth by states and districts across the nation: Kansas and Lexington Public Schools (MA). ■

Understanding students' attention span is essential for setting instructional time expectations for teachers, students and families.

Connection and Communication with Families and Students

Schools are often the hub of our communities and play a significant role in their students' and families' lives, including and beyond academics. In transitioning to remote learning, providing regular and predictable opportunities for families and students to connect with their teachers and schools is key. These connections should be short and simple and provide support for individuals and the community overall. It is helpful to put a consistent means in place, so that students and families can depend on, and look forward to outreach and connection on a regular basis. Some replicable examples from NC schools include:

- Share morning or weekly school-wide videos from the principal or staff members or students on a rotating basis. This could be a new version of the school news program, a Monday Kick-off, or Friday Wrap-up.

- Host Morning Meeting, Read Alouds, or Advisory Periods streamed and/or by video to provide consistency and familiarity in the remote setting.

- Publish a weekly Family Guide that helps students and families know what went well (highlight student and teacher examples, videos, or pictures) and what to expect the following week. The Family Guide provides current information in one place for access for families and students.

- Host office hours with teachers, specialists, social workers, counselors, EC teachers, or nurses. This can be especially important for those services that support students across classes and grade levels.

- Host virtual spirit weeks and post pictures. One school had students share pictures of studying with their pets. Another had school spirit and favorite team days.

- Check-in with individual students and families by phone, video, or postcard. Knowing that an adult in their school cares about them and is checking on them is critical in this time that can feel very isolating. ■

Identifying a few consistent and predictable ways that you will connect with families and students, and to ensure that you know if a student or family is not engaging, will make a significant difference in supporting students and their families.

Student Engagement in Learning Opportunities Aligned to Standards

Designing learning opportunities that engage students is critical to support students' academic and social and emotional growth. These experiences must align to standards and should build upon the district's current instructional framework(s), learning science, and other research based strategies used in face-to-face settings. It is important that educators continue to design meaningful learning experiences aligned to the essential *concepts* and *skills* that students need to be successful in their respective grade levels and subject areas. However, educators will have to adapt these learning experiences to a remote setting with and/or without access to devices and the internet.

Educators should provide a recommended schedule with flexible options and assume that students will have minimal supervision or guidance. Educators should utilize many different instructional strategies to sustain student engagement and motivation in a remote setting. Since the level of independent learning increases in a remote setting, it is more vital to provide a variety of engaging activities to maintain student enthusiasm and motivation to learn. This is the perfect time for teachers to collaborate with instructional support specialists (e.g., instructional coaches, media coordinators, math coaches) to design standard-aligned learning opportunities that utilize the full depth and breadth of the district's effective teaching practices. ■

Ensuring many different opportunities for students to reach their goals will help ensure their success.

Equity, Choice, and Flexibility

As educators design learning opportunities for students in a remote learning environment, it is important to provide students with choice and flexibility. When possible, provide students with options in how they learn content and/or demonstrate what they have learned. This could be as simple as providing students with a choice of reading a text or listening to an audio file of the text. Additionally, students can demonstrate what they have learned by writing a short paragraph or sending the teacher a 30-second video explaining their understanding of a concept. Even further, more advanced options could include providing students with choice boards or project-based learning. All of these options are dependent on how students were accustomed to learning prior to this transition and the educators familiarity and training on various instructional strategies.

It is especially important for educators to design instruction with choice and flexibility when considering student populations that typically have additional support while in school, e.g., English Learners, Exceptional Children, Academically/Intellectually Gifted, and students who receive free or reduced lunch. Instruction should include enough flexibility and choice to reduce instances of students feeling overwhelmed, disinterested, and/or frustrated. It is critical to keep in mind that the academic and familial worlds have just been blended together. Educators should be particularly considerate of and make adjustments for students who are experiencing new or existing family dynamics that limit their ability to access school work during prescribed hours. Some additional things to consider include additional support and time needed for students in a single-parent household, families with multiple members and limited or no devices, students with parents who are suddenly unemployed, students in areas with no/little access to broadband, households experiencing food insecurities, or students who have to supervise younger siblings. ■

Providing choice and flexibility can help ensure that all students have equitable access to learning in a remote setting.

Collaboration among Students

Students need social interaction, and collaborating with one another is an effective strategy for learning that also supports the whole child. While many educators build collaboration into their face-to-face instructional strategies, this is also possible with remote learning, whether using computers or other non-digital means. Working in small groups is possible through online platforms, video calls, working on shared documents, or students calling each other. Teachers can host online sessions for students to share how they are doing and to discuss or share ideas on what they are learning. Students can be assigned reading partners to call and share a summary of what they read or to ask each other a series of questions. They can work together virtually to build a shared presentation and post it to share with the class for feedback and comments. Teachers can host meetings with seminar type discussions. ■

> *Ensuring students are collaborating with each other multiple times each week through thoughtful, yet simple lessons is a key element for staying connected.*

Feedback on Student Work

Students will be more isolated than normal and will need guidance and feedback from teachers. Feedback has the potential to have a powerful impact on student learning and motivation, and educators will need the means to assess (even if not through graded tests) how students are progressing in their learning. Educators should ensure that they have different opportunities to interact with and review student work so that they can provide feedback and consider what the student needs next. Teachers are not expected to provide feedback on all assigned work, but rather on *select* student work. Teachers should aim to provide feedback, formally or informally on at least a weekly basis on targeted assignments that demonstrate their understanding of core standards. To continue the academic progress of students in a remote environment, feedback to students should be timely and specific. This feedback may be through a presentation to the class in an online platform or a one on one discussion between the teacher and student. A teacher could provide comments and guidance directly on a writing assignment using a shared document. ■

> *Developing new methods for providing feedback to students about their understanding of content can positively impact student motivation and learning.*

Social and Emotional Learning (Cross-cutting, Embedded, or both)

Addressing social and emotional learning (SEL) effectively is proven to support the whole child and increase achievement; and this is never more important than during a crisis. As schools, districts, and teachers work to provide continuity of learning for their students, SEL should be at the forefront of structures and learning opportunities. School- and class-wide approaches that bring students together and help them see they are not alone and have support from their school community are essential. Intentionally connecting with students and families on a regular basis will be a whole school effort with teachers, teacher assistants, school counselors, social workers, administrators, and others working together. Schools can share videos and announcements in ways that

make students feel a sense of consistency. For those families without access to broadband and/or devices, the school staff can create a telephone schedule to check on these families.

Learning opportunities can also support SEL. Supporting students in self awareness, self management, social awareness, relationship skills, and responsible decision making all come into play in new ways in the transition to remote learning. Weaving in SEL themes to assignments can provide students with opportunities to reflect and share. Providing space and time for students to share how the current situation is impacting them may also be helpful. ■

> *Ensuring that students have opportunities to continue to see their place in our school community is imperative. Addressing SEL is not optional, it is critical to supporting our students and their learning.*

APPLYING THE INSTRUCTIONAL DESIGN PRINCIPLES

As schools and teachers design learning opportunities, these Instructional Design Principles are intended to serve as guideposts for developing lessons and connecting communities. It is important to remember that instruction during remote learning will look different than it does in the face-to-face classroom. The current cause of remote learning and the fact that students and families cannot come together in a physical space make the sense of community and belonging only more important. As the weeks progress, educators and students need to be open and flexible as we figure out remote learning together. The Instructional Design Principles illustrate the importance of focusing on the whole child and connecting with students and families to ensure that schools continue to play their essential and central role in the community.