Pedagogy

Enhancing Teacher Communication with Technology

Teachers communicate with and about our students constantly. We face some challenges in making that communication effective and efficient. We need to communicate differentiated instructions and tasks to groups and individuals and ensure every student understands those instructions and remains focused. We have to assess not only our students' knowledge but also their understanding and their learning strengths and needs. We need to record and share evidence of the process and the products of student learning in terms of knowledge, understanding, and skills across the curriculum. All of this can be hard to do in a busy learning environment, especially when we need to find ways of doing it meaningfully, consistently, and sustainably. As our schools and classrooms become more diverse and the pressures on teachers and students continue to grow, traditional approaches of teacher communication will become less and less effective.

Technology has the power to enhance and streamline how we communicate with students, parents, and colleagues and to mitigate some of the difficulties involved. As a starting point, consider an area of your day/week where communication is challenging: perhaps there is a subject or a lesson you teach where you have several groups who need to do different tasks or work with different instructions at the same time, or where you need to give individual feedback to numerous students. Some examples of curriculum areas that create challenges with communication are:

- Communicating with readers: How can you have conversations with individual readers and track their progress in a manageable way? How can readers share their questions, impressions, and learning with you?

- Differentiated math groups: How can you communicate instructions to three or four differentiated groups without losing valuable teaching and learning time? How can students who need reminders about their task revisit the instructions without disturbing you during the lesson or while you work with individuals?

- Homework: How can you provide individual feedback on homework tasks in a way that helps your students but doesn't take you hours to achieve?

- Showing student progress: How can you record and communicate student progress in your subject or across the curriculum for every student as regularly as is necessary to show real learning? How can this be done authentically for subjects like music, physical education, reading, oral presentation, or science? How can you best show progress over time?

Illustrating Integration

Mr. Miller is a first-grade teacher who uses learning centers as a way for students to practice, consolidate, and extend their learning independently while he works with individual students or small groups. At the start of the lesson he gathers the whole class together and explains the instructions for each learning center in turn, then he begins the lesson. While he is working with his small group, Mr. Miller is often interrupted by students who cannot remember the instructions for their learning center or who need differentiation or extension. Mr. Miller has access to a set of tablets that he can book for lessons, so to address his problem he decides to use the tablets to improve communication to his students regarding the center tasks. He begins by recording the directions for the center task in a short video demonstrating what the students should do, and then places the tablet and headphones at the center of the table. Now his students can watch and rewatch the instructions video as many times as they need to understand and complete the task. At first the students find this really exciting, and Mr. Miller realizes he needs to spend time with the class clarifying expectations for students' use and sharing of the tablets. After a few sessions, Mr. Miller is able to run learning centers and work with a small group without center-related interruptions. Once the system is in place, Mr. Miller can record multiple tasks for each center complete with meaningful extension for those students who need it.

One of the big challenges of being a teacher is that you are outnumbered! As teachers we are usually the only adult in a room of twenty to thirty students who are at different stages of their learning journey in various subjects, requiring various degrees and types of support. In any situation where you need to communicate with numerous students at the same time, or where they need to communicate information to you, technology can be a powerful ally in making that task easier, faster, and—importantly—more effective, benefiting your students *and* you.

As Mr. Miller enhanced communication with his students during learning centers through the use of a small number of tablets, you too can use technology to share instructions with students in any age group, in any subject, more effectively, even if you have nothing in your classroom but a single PC. This strategy is particularly effective with activities that involve a physical component where watching and rewatching a teacher demonstration would be useful for the students.

The videos you create can benefit your students outside the classroom too. Providing home access by uploading videos to YouTube and sharing a class blog/website or digital learning journal helps support students and parents

with homework activities and at-home practice. This can be a step along the way to an approach called *flipped learning*. In the traditional educational model, students receive instruction during the school day and then practice and consolidate what has been learned in school at home. In the flipped learning model, teachers use technology to provide students with instruction input through videos and digital tasks to do at home, then use class time to review, extend, and deepen that learning and address misconceptions. While you can simply use the camera software built into every phone, tablet, and modern PC or laptop, there are also a range of apps and programs designed to facilitate flipped learning. Online portals and software allow teachers to upload their own presentation and videos or link to existing ones on platforms like YouTube, then enhance these videos by cropping, annotating, and adding points where students have to stop and answer questions or complete examples to ensure active participation.

There are many ways in which technology can be used to streamline or enhance teaching. A first step for identifying when it might be a useful tool for you would be to consider the needs and opportunities unique to your class. What challenges do you face in communicating information or instructions with your students? How might different or enhanced methods of communication change the way you differentiate tasks? How might you communicate in an ideal world? Could technology help you to achieve that ideal-world communication scenario?

Enhancing Teacher Communication of Instructions and Information

CHALLENGES	SOLUTIONS
➜ Teachers need a way to provide students with the ability to repeatedly access instructions or demonstrations as needed.	➜ Prerecorded videos loaded on a computer or tablet allow students to revisit or receive individualized instructions.
➜ Teachers need to find a way to enable independent learning time without being interrupted during teaching.	➜ Digital whiteboard and screen-casting presentations provide students support and extended learning away from the classroom.
➜ It is difficult to individualize and differentiate instructions for a wide range of learning levels and needs.	➜ Digital classroom platforms enable instant, differentiated sharing and access to tasks or flipped learning.

Enhancing Teacher Communication of Instructions and Information

DIGITAL APPROACHES	DIGITAL TOOLS

➜ Digital whiteboards or presentations:
 	
  » Create lessons for students to access independently, which they can revisit as many times as needed.
 	
  » Add audio recordings and annotations to enhance or explain images.
 	
➜ Video and image enhancement:
 	
  » Add annotations, labels, stop points, and questions to videos for flipped learning and supported homework.
 	
➜ Video and audio recording:
 	
  » Record video in real-time and slow motion.
 	
  » Create audio recordings, for example, as comments for students who struggle to read or language learners.
 	
➜ Digital classroom platforms:
 	
  » Assign tasks digitally to the whole class, groups, or individual students.
 	
  » Give feedback on work efficiently.
 	
  » Access and assign student work instantly from anywhere with Internet access.
	➜ Digital whiteboards or multimedia presentations:
	  » DoodleCast Pro
	  » Explain Everything
	  » ScreenChomp
	  » Seesaw
	  » voice recorder
	
	➜ Video and image creation and enhancement:
	  » EdPuzzle
	  » Coach's Eye
	  » PlayPosit
	  » Seesaw
	  » Skitch
	  » webcam
	
	➜ Digital classrooms:
	  » Edmodo
	  » Google Classroom
	  » Microsoft Teams
	  » Moodle
	  » Schoology
	  » Seesaw
	  » Showbie