Online and Hybrid and In-Person, Oh My!
Strategies for Supporting Students and Teachers Amidst Reopening Schools

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Synthesis

Facilitator: Jennifer Carinci
Panelists: Michael Yeung, Dario Soto, Melanie Ramey, and Brian Foley

Teaching During A Pandemic Is Hard
The expert panel began with a quick "status report" from each of the panelists about what their schools were doing, as a new school year starts in the middle of the COVID-19 pandemic. Their schools reflect the situation of very many across the country, opening on-line, or cautiously moving towards in-person classes, but with one foot in the "virtual classroom" as the epidemic continues to inject uncertainty everywhere.

The uncertainty itself makes it hard to plan — but teachers have had months to experiment, cope, and learn, as have their districts. The panelists and participants described some of the multiple strategies that have been developed to help students and teachers to connect and keep learning moving forward. But they also addressed two widespread problems that require particular attention: access and equity. The form of these problems vary with the locale — for example, rural students may not have access to broadband Internet, or any effective Internet at all; in both rural and urban schools, many students' access to on-line classes and resources is limited by income. In either case, poor access means inequity, which may compound standing inequities based on race or poverty which otherwise might be mitigated by attendance at brick-and-mortar schools.

But Some Know How To Do It Well.
"Doing it well" is more than gaining technical expertise — though certainly that has been important. It's even more important, though, to be clear about your priorities, and what can be done effectively under the circumstances of your school. As Dario Soto said, "Keep it reasonable," while one of the Resources (by Amber Chandler) advocated that we need to "reimagine success." Soto said that this means we need to change our mind-set about what we're doing: it's not about grades, it's about watching (and taking data) to see what progress is being made in learning, and using that information to improve instruction, address problems, and make teachers, students, and their families, feel connected. The topic of "learning loss," which received little attention in the presentation or the subsequent discussion, is addressed in a resource on this site: Allensworth and Schwartz's "School practices to address student learning loss." Panelists and participants focused much more on keeping students engaged and connected, so that learning can continue, by whatever means are available under the circumstances.

Work with what you can know well, and what the students already know.
Several panelists agreed that teachers, students, and parents have shown tremendous flexibility and willingness to learn new technologies.

Panelist Michael Yeung teaches robotics, so he and his students are already familiar with a lot of technology already. While he makes use of such tools as Google Classroom to help students keep track of their schedule and assignments, he has spent a lot of his time and ingenuity finding ways that students can do robotics related work, hands on, with materials to hand at home. He's helped them explore how to
use such at-home materials (aluminum foil, batteries, old toys...) to develop something new out of something old. Helping them find projects to take on that feel related to them can stimulate imaginations, which drives learning. As an example, he told how students at his high school responded to the COVID-cancelation of their traditional graduation ceremony by creating an interactive, virtual form of the playing field used for graduations, so that they and their classmates could "meet" and celebrate their milestone even while maintaining social distance.

Panelist Melanie Ramey's rural district in Kentucky began developing expertise with remote learning long before COVID-19. She described how she creates a dashboard for her students (using Google Classroom), where students can track their schedules and routines, get links to assignments and resources, and communicate with the teacher. She reminded us that, pre-COVID, most students' back-to-school jitters arose from anxiety about entering a new classroom and having to negotiate new routines. So "My best advice for others during distance learning is to find the routines and procedures that best fit your students and the content, and stick with it." The larger fact is that students are struggling not only with the uncertainty of new teachers and the unfamiliar experience of distance learning, but also with uncertainty in the world around them. We can help them cope with certainty of routines and procedures for distance learning and hopefully ease some of their anxiety. We need more than ever to educate and relate to the "whole student" — the social and emotional elements are of central concern.

### Helping students connect

Facilitator Jennifer Carinci, both in her blog and in her panel participation, talked about addressing the emotional toll of the pandemic: People have lost homes, jobs, or had to move. In working with students, we are also working with families. In her district, there are "off-hours" times for parents to call and talk with teachers after work. Whether in virtual or in-person classes, "circle work" is an important part of every morning, so that students can talk about how they are, share questions and worries they have, and hear from their peers as well. This sets the scene for learning. But there is also a circle time at the end of the day, to process the day, and transition back home. There are also a range of other accommodations during remote learning times, recognizing that home schedules and constraints may conflict sometimes with school schedules. In addition, "remote" tutors are available, and there is a remote SPED teacher, as well as social workers and psychologists. The teachers also make use of emotional check-ins, using Google Forms. The data, which go into a spreadsheet, is another way that teachers can track what individual students say about their mood from day to day.

Another side of this topic is student engagement: helping them be present to the curriculum work that's going on. Panelist Brian Foley, whose teaching takes place in the university, pointed out that since teaching and learning online doesn't give people the same level of connection, it is important to be more intentional in how you engage students. He emphasized that "you need to be persistent in finding ways to get students to engage, and resist giving in to the silence. Students need to be talking in order to learn." Students' "talking" can take various forms — conversation during an online session, or by recording a response in some medium(e.g. Flipgrid.com), or by chatting with their group outside of class. If you are struggling to get them to talk (as many are) keep trying new ways and let them know that you are not giving up.

Dario Soto added that "Students don't connect if they don't feel valued and liked." Engagement can be increased by the use of video cams where possible. Other activities like "lunch bunches" and virtual recess help to build community, as do other ways of getting them to talk with each other (and the teacher) so as to build the sense of their "presence" within the virtual classroom for example, having them present to the class about their families, their interests or hobbies outside of school. "Keep it simple" — focus on connection and community, accessibility and equity.
Good teaching is good teaching and new tools and resources are always the name of the game.

After the expert panel had made their presentations, the participants divided into break-out groups, to allow about 20 minutes' conversation about their own experiences. The "report-backs" from the breakout sessions reinforced the main threads discussed during the panel, in the related discussion, and in the blogs. Virtual learning is here to stay, and we need to bear in mind that we have to be intentional about helping students make connections -- after all, even astronauts on the International Space Station needed to make connections. Connection builds buy-in. It also helps build the patience needed in this disconcerting time, as it helps people remember that we're all in this together. Indeed, as one participant said, "We're all first-year teachers now." We have to slow the pace down, and be inventive in problem-solving about distance. This might mean solving the accessibility problem by making more use of cell phones, the computer that most students use the most. On the other hand, remember that "snail mail" is still working — you can mail materials to students, and also use post cards and letters to help students feel "seen" and in touch. Keep it simple, focus on connection and community, accessibility and equity. Work on making student activities as hands-on, interactive, and flexible as possible. "Good teaching is good teaching."

Recommendations for teacher leaders

In this time of experimentation, your own learning and example can be a valuable resource for your colleagues — and as was pointed out above, another important resource is the realization that "we are all in this together" and "all first-year teachers." So supporting and maintaining collegial exchange within schools and faculties, and across boundaries, can make an important, constructive contribution, both in the exchange of ideas, techniques and resources, and in mutual support for the social and emotional health among your colleagues.

Recommendations for administrators and policy makers

Teachers need good infrastructure support, as they experiment and innovate seeking ways to respond to the shifting conditions in schools and communities. Bear in mind that from the teacher point of view, student engagement and connection (with teacher and peers) is fundamental. Students need help staying present, and so the work they do needs to feel relevant to them, and stimulate their imagination. Where it helps them learn as they address issues or subjects of importance to their community, there is added value. Local conditions, and teachers' "read" of their students may suggest the need for new kinds of resources (e.g. office hours for parents, "remote" tutors or counselors, transition from digital communication to the US Postal Service if that's what it takes). Standards, mandates, and learning progressions may need to be reinterpreted, paraphrased in new terms, to reflect the slowing down of time.

In addition, teachers need virtual professional development opportunities to explore new online tools, apps, and platforms that will enable them to engage their students, support group discussion, and improve student engagement. These PD opportunities can increase their impact — and perhaps speed the propagation of useful innovations — when they are linked with teacher learning communities or similar arrangements for teacher collaboration.

Recommendations for researchers

Much research on STEM learning and teaching presumes the standard, age-segregated classroom, with lots of face-to-face collaboration, sets of apparatus or other learning resources, and other conditions that just may not be met under COVID conditions, at least for the foreseeable future. The possibilities for research in this new regime are so broad that one can only suggest a few ideas triggered by the webinar and discussion, For example, the very broad transition to virtual environments suggests a rich opportunity to examine the affordances and learning impacts of different media. One might also
examine the ways that discourse processes may change in the virtual classroom, when pragmatic conditions (shared spaces and reference points, shared artifacts, and so on) are transformed or unavailable. Another area of investigation might come from the interaction of social/community conditions with student engagement and availability for learning, when the boundaries between home and school are erased. Yet a different arena is that of curriculum and materials design for these distributed learning communities, as well as the choices to be made to accommodate hybrid classrooms, where students will sometimes be co-present (and with access to school resources), and sometimes not. How might the two environments complement each other to support learning?

The STEM Teacher Leadership Network is pleased to partner with ARISE on this Theme of the Month!

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