

Chapter 5

Pedagogical Challenges During COVID: Opportunities for Transformative Shifts

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ABSTRACT

Educators could not have predicted the degree of disruption that COVID-19 could cause until schools closed and forced teachers to move to online teaching. This chapter describes the use of a research-based model, Innovating Instruction, to support teachers in their transition to remote learning. Grounded in a concern for greater equity and social justice for all students, the model prepares teachers to design inquiry-based, culturally relevant projects. The development of the model is based on a critique that technology has largely failed to impact pedagogical change because of a limited sense of the scope of the change needed. Instructional Innovation brings together key aspects of a systems change effort, thus contributing to an emerging educational theory for the catalytic use of technology to promote pedagogical practices that are culturally responsive, rigorous, and engaging.

INTRODUCTION

The COVID-19 virus touched off a pandemic more pervasive and deadly than any plague in modern history. It filled the hospitals and mortuaries, separated families, and ushered in a new era of mask-wearing and social distancing. A major consequence of this global disaster has been its long-lasting disruptive impact on schools.

The shift to online teaching has been an enormous challenge for teachers and administrators alike. While implementing remote learning, teachers have had to establish relationships with students they see only in little boxes on screens. Teachers have had to scramble to transfer their instructional material to

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online settings while anxiously measuring student progress against pacing calendars which, even when adjusted to account for the pandemic, reflect student progress that falls short of what might otherwise be expected (Kamenetz, 2020).

The disruption was even more severe for teachers and students in underserved urban areas. School district officials scoured the schools to provide tens of thousands of devices for students and pressed internet providers to secure broadband access for students who had none (Zimmerman & Gould, 2020). While principals struggled to support their teachers and locate students, teachers struggled to find new ways of reaching students and keeping them engaged.

Teachers often had little to go on to guide them to make the transition to online learning, except perhaps a collection of vague remote-learning “techniques.” These superficial online learning strategies, often introduced without a pedagogical rationale or design support, left teachers with little choice but to begin putting existing materials online, unable to take advantage of the creative potential of the tools because, by and large, they were essentially unprepared to use the tools or design online learning environments (Adams, 2020).

Given the seriousness of the situation, the urgency for linking theory and practice has never been greater. Educators at every level are looking for theory-based guidance for deepening online teacher practice during COVID. The *Innovating Instruction* model uses a configuration of theoretical frameworks to prepare teachers to use inquiry-based design practices and technology tools for engaging students in knowledge-building practices.

The model was designed and implemented over a period of several years by a research and development center at Teachers College, Columbia University, the Center for Technology and School Change, through design-based research and later, mixed methods research. The model features close collaboration between the Center and the administrators at the school to develop shared meaning around the need for inquiry learning, framed by a project-based approach and the thoughtful use of technology. The Center facilitators initiate collaboration with teachers. They introduce teachers to the pedagogical reasoning and the foundational skills needed to design inquiry-based projects. And they work with them through the co-design process to ensure that the projects meet the particular cultural and academic interests and needs of their students, in the context of their school and community. Work with the teachers and administrators continues through the implementation of the projects in the classroom, including a reflection on the overall process.

This chapter describes the foundational rationale behind the *Innovating Instruction* approach, which is designed to be a more concrete and comprehensive model for supporting teachers in learning to use technology tools to make the pedagogical shifts associated with twenty-first century learning. The educational field now knows more about the pedagogical practices that embody advancements in the learning sciences (Darling-Hammond et al., 2020; Bransford et al., 2000; National Academies of Sciences, Engineering, and Medicine, 2018). Building on the growing understanding of how children learn, in the context of the forced dependence on technology during the pandemic, this chapter also describes the opportunity to meet the needs of teachers by aligning their technology challenges with new teaching and learning practices.

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