

# Chapter 10

## Teaching Strategies During a Pandemic: Learnings and Reflections

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### ABSTRACT

*Due to the COVID-19 pandemic, teachers were faced with the insurmountable task of changing teaching methods to virtual online pedagogy, practically overnight, that continued to provide students with quality instruction using best practices. Action research was employed to help seek the answers to the question: During a pandemic with school online and students socially distanced in person simultaneously, how could teachers still provide cooperative learning experiences that give students opportunities to collaborate in class while continuing to use best practices like the 4Cs (communication, collaboration, critical thinking, and creativity)? Through completely online and synchronous (online and face-to-face) instruction, Jamboard, Padlet, Mentimeter, Flipgrid, and Bitmoji Classroom were implemented to support student learning through the 4Cs of 21<sup>st</sup> century learning. In this chapter, the rationale, implementation, successes, and challenges will be revealed from self-examined action research.*

### INTRODUCTION

The COVID-19 pandemic has forced educators worldwide to change the layout of their courses and classrooms to online learning. The pedagogy of virtual learning environments is a new landscape for many educators, and there is more to creating these environments than just placing information in an

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online format for students. The goals and mission for a virtual learning experience include providing culturally relevant instruction with comprehensible input for *ALL* students, facilitating a space for communication and collaboration among peers, and creating opportunities for inquiry based learning and critical Donethinking (González-González & Jiménez-Zarco, 2015; Saadé, et al., 2012). While teachers are prepared in their teacher preparation on how to provide students with a quality education that includes all of the aforementioned goals in a physical classroom setting, meeting the challenge to place all curriculum online and recreate an experience similar to that of a traditional classroom for students is a daunting task.

The aim of this chapter is to provide actual learning activities through which teacher candidates can develop the skills identified through the 4C's of twenty-first century skills: communication, critical thinking, collaboration, and creativity based on best practices and pedagogical reasoning that can be used across grade levels PK-12 and at the university level (Thoughtful Learning, 2016). The 4C's support student learning in all content areas and the technology resources addressed in this paper are tools educators can use to implement critical thinking, creative thinking, communicating, and collaborating (Thoughtful Learning, 2016). Action research has become an important part of educational research in which researchers attempt to address issues in the classroom (Glassman et al., 2013).

## **BACKGROUND**

Implementing the 4C's of twenty-first century skills in a virtual learning environment calls for careful examination of exactly how to engage students in the actions. Action research methodology (Mills, 2020; Stringer & Aragón, 2020) provides a strategy for a continuous refining and revising of the instructional materials and strategies specifically designed to develop these skills among students. Particular technologies are called upon in this process - Jamboard, Mentimeter, Flipgrid, Padlet, and Google Classroom. Each of these resources are considered in detail along with several examples that can be used in a synchronous or asynchronous virtual learning environment. However, as background to this work, a description of the 4C's as well as the action research methodology is provided.

### **4C'S of Twenty-first Century Skills**

Goodwin and Sommervold (2012) call critical thinking, creativity, and communication, the 3C's, to have "universal applicability" in the teaching and learning process. There is no doubt that the concepts of critical thinking, creativity, and communication have woven threads in each and every aspect of the learning process (Thoughtful Learning, 2016). Creativity is not just for an artist or a painter; it is much more than that. Creativity refers to thinking "outside the box" - to think of novel ideas and be able to come up with solutions to problems (Goodwin & Sommervold, 2012). Henriksen et al. (2015) describe creativity as an individual's thoughts, behaviors, and products that can be considered novel, effective and whole.

Another interwoven skill is that of critical thinking. Critical thinking has been identified as one of the most important skills needed for an individual to be successful in life (van der Zanden et al., 2020). To be effective problem solvers, one must be able to analyze and think deeply to make sense of the situation. According to Fischer and Scriven (1997), "critical thinking is skilled and active interpretations and evaluation of observations and communications, information, and argumentation" (p. 21).

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