Introduction

Stacie L. Mason

As an educator, I have never wanted to waste my students' time, but I am more mindful of students' time than I was before COVID. Now that students have experienced alternatives to classroom instruction, if I don't use class time well, they might be inclined to think, "We could have done this online. I could have stayed home in bed. This wasn't worth the trip."

Some students will be generous—they are so glad to be back in the classroom among their peers that they will tolerate a little boredom.

For other students, the school day has always felt long. Traditional schooling was never working for them—not pre-COVID, not during COVID, and not post-COVID. Some of these students went home in March 2020 and have not returned to brick-and-mortar school.

For all students, educators, and parents who took on the role of educators, COVID has provided new challenges, opportunities, and experiences—new approaches to teaching and learning. Now is a good time to reflect on what is and isn't working in our schools, and to apply what we have learned to designing better schools that meet the needs of all students.

To meet the needs of all students, our schools need to be more student-centered.

Traditional classrooms tend to be teacher-centered. The teacher plans

the schedule and teaches the lessons. Students are expected to learn what the teacher teaches.

In student-centered classrooms, students have considerable autonomy and responsibility for their own learning. Students may learn independently or collaboratively, but the students help determine what they will learn and how. The teacher's role tends to be that of instructional designer, guide, and more-knowledgeable-other.

You may be thinking, "Well, that won't work. If I put my child in charge of their learning, they would play video games all day, every day." It's true that when given the choice, some people choose not to learn much. At its best, autonomy entails creative production: building things, writing books, programming robots, and composing symphonies; at its worst, autonomy entails endless hours of passive (and sometimes harmful) media consumption. The idealist might imagine children adventuring in the woods, magnifying glasses in hand, studying the flora and fauna—but we live in the real world.

The versions of student-centered learning described in this book do not give students absolute autonomy. Each of these approaches allows for "freedom within limits," to borrow a phrase from Montessori. Students and teachers share responsibility for learning. Educators have an important role designing learning experiences, providing structure, support, and timely instruction. But the students have a say too.

When I started my graduate program in instructional psychology and technology, I was looking for best practices: I wanted to know what works in education and why. Pretty quickly I learned that there's not a definitive list of practices that work equally well for all students in all settings at all times.

That said, we have extensive data demonstrating that certain practices tend to work for most students. For example, we know that teaching young students decoding skills helps them learn to read

(Foorman et al., 2016). Effective writing instruction often includes modelling, practice, and reflection (Graham et al., 2016). And using number lines can help students learn math (Fuchs et al., 2021).

While some practices tend to be more effective than others, realized outcomes often vary according to student characterics. Research suggests that students who are behind gain more from teacher-led instruction than they do from student-led instruction, while students who are starting out ahead may learn more from student-led instruction than from teacher-led instruction (Hulan, 2010; Kirschner et al., 2006). In student-centered education, the teacher must "follow the child" (another Montessori phrase), or adjust instruction to meet individual students' needs.

Just as there is not a concise list of best practices that always work, there is not just one approach to student-centered instruction. Any teacher in almost any school can adopt student-centered practices. In this book we discuss several approaches that we consider student-centered. What all of these approaches have in common is that they allow and require students to engage in and take some responsibility for their learning.

Each of these approaches is also an evidence-based practice (i.e., teaching approaches for which we have evidence showing that the practice is effective). In this book, we have summarized evidence regarding what outcomes have been correlated with each educational approach. Some outcomes are academic, other outcomes are affective; i.e., having to do with attitudes, values, or motivation. For most or all of these approaches, more research may be needed to fully demonstrate outcomes.

Our purpose in writing this book was to provide concise overviews of student-centered approaches to instruction, describe how each approach is student-centered, and summarize observed student outcomes. Our hope is that educators who read the text will be

persuaded to adopt effective student-centered approaches to instruction and learning, students will become more engaged as a result, and researchers will continue to expand our understanding of effective practice.

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