

Foreword

It may seem curious that Ted McCain, having written a fine new book to stretch educators' notions about instruction, would turn to an architect to draft the foreword. Because we had worked together on technology-related programs for a number of school districts, Ted asked that I review his final draft. Although the problem-solving, project-based instruction he proposes may seem challenging to K–12 educators, I was, as an architect, instantly comfortable with the concepts because that is how architectural education has worked since the 19th century. But Ted has gone far beyond adapting an old idea to a new context, and there is much to learn here for any educator.

Early in the book, Ted draws a distinction between “school skills” and “real-world skills,” worrying that, in the past, his teaching may have been producing “highly educated useless people.” It may be helpful in this regard to reflect on why architectural schools have used project-based instruction for so long to bridge this gap. Architecture is less a discipline than an amalgamation of disciplines, and its products are “projects.” Creating major buildings in urban environments entails creative, artistic skills, but the process also involves in equal measure engineering and construction skills, political and social skills, business and legal skills, and communication skills (including writing, speaking, and creating graphics). Most architectural problems involve using all these elements together to address clients' functional, aesthetic, budgetary, and schedule issues, which never have simple or singular solutions.

Architecture schools use projects modeled on those from the real world as vehicles for integrating all the skills required. The architecture teacher often involves “clients” from outside the school to help students understand the requirements of the project. Students, each with his or her own work station, study in

studios under the guidance of professors who define the problem to be solved but who do not themselves know the potential solutions. Students take conventional core subjects and special courses in history, engineering, business, and graphics, but all are integrated through the studio work. At the end of each project, students present and defend their solution to a “jury” of teachers, clients, and practitioners. As students progress through the years, they maintain portfolios as a record of their work that they carry with them after graduation to demonstrate their capabilities to prospective employers. These graduates are “highly educated, useful people” with skills applicable in the real world.

As you read this book, you will understand why, as an architect, I was immediately attracted to Ted’s concepts and was pleased to find that the project-based instruction I had experienced as a student and teacher has been enriched and given life in new areas of education. He maps out changes that teachers must make to use problem-solving, project-based instruction effectively. This revised teaching method will go against the grain of those teachers who want to tell students what they should know and do, and who then test them to see if they retained the information in the short term. Ted’s strategy is more effective for long-term content retention and life-skill learning, though; he outlines through the 4 Ds (Define, Design, Do, and Debrief) a methodology for problem solving that is applicable to virtually any field. In the process, he substantially alters the roles of both teachers and students, proposing that teachers focus more on structuring problems that will allow students to discover knowledge for themselves.

By the end of the book, I couldn’t decide if I would prefer to be a teacher or a student in Ted’s school. And perhaps that is the point—that both the student and the teacher should be engaged in solving problems, that neither should know what solutions might emerge, and that both should be learning and growing in the process. That sounds like a great school. Ted undoubtedly intended his book for K–12 educators, and I will tout it to our school clients. But I will also share it with colleagues in architectural schools, who will find that it provides a fresh alternative approach to their old ways of teaching.

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