
Preface

PURPOSE AND RATIONALE

Deeper Learning Through Technology is a practical guide for teachers to help them to further integrate technology into their classrooms to better meet student needs. The chapters will highlight practical applications that you can employ right away or use as a guide to implement over the school year. Ideally it will be a stepping stone for you to become your own digital muse so that you will be able to find your own resources, improve your classroom, and one day write a book for me to read on how I, too, can change my craft. Be forewarned, though, this is not about integrating technology for the sake of technology, but rather about how to use technology to more effectively individualize learning for your students.

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This book is written for teachers who realize that their classes have been infiltrated by technology with or without their permission. Just a few years ago, very few students had cell phones. Now most not only have smartphones, but often prefer using them to laptops or even tablets. One of the most ubiquitous devices in our society—the iPhone—did not come out until 2007, and the iPad has been available only since 2010. Since the iPad, there has been a proliferation of cheaper tablets and laptops on the market, prompting more students to want to bring a myriad of different Internet-based devices to your classroom. This is in addition to all of the devices schools are purchasing. This book aims to help prepare you for these changes. It is meant as a practical learning manual for **teachers** and **content administrators** who are struggling to teach an ever-growing curriculum and skill set as efficiently as possible.

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The goal of this book is to demonstrate and guide second-order change in classrooms. An example of first-order change is when a teacher uses technology to do something that she used to do with paper. Having students write on digitized paper might help the student better prepare for the digitized workforce, but doesn't necessarily make for better learning. On the other hand, second-order change involves utilizing technology and new resources to accomplish tasks and goals that have previously been impossible, such as collaborating with experts in fields of study or having students collaborate on projects with other students from around the country and around the world.

A BRIEF OVERVIEW

This book is broken into two parts. Part I: The Teacher as Leader of the Digital Classroom and Part II: The Self-Paced Student.

Part I explores the teacher as a lifelong learner and offers tips on how teachers can pursue their professional learning on an ongoing basis. It will serve as a foundation to give teachers the tools to continue the learning process, even as the needs of their students continue to change and the digital environment develops further. To that end, the first half of this book can be used by any educator, be she or he a principal, central administrator, or a teacher to expand his or her learning on a daily basis.

Part II specifically looks at pacing classes to meet the needs of individual learners, acknowledging that not all students will learn at the same speed. The book will further be broken up into the following chapters.

Part I: The Teacher as Leader of the Digital Classroom

Part I will introduce educators to many Internet tools that can be utilized to improve not only student learning but also their own professional learning. Ideally, these online tools will help bring about the second-order changes in teaching and learning that we as educators should be aiming for.

Chapter 1. Our Changing Digital World. This chapter details the responsibilities of teachers and students in the digital age. Students need to focus on creating positive digital footprints, and educators have to be aware of their mandate to protect pupils. The chapter concludes with examples of changes that technology can facilitate such as placing student

work online (first-order) or fundamentally changing the way teachers teach (second-order).

Chapter 2. Teacher Collaboration: Online Professional Learning Communities. One of the most profound and widespread changes in education in the last decade has been the advent of professional learning communities (PLCs). Unfortunately these have been largely limited to content teams within schools. This chapter will show readers how to expand their professional learning communities beyond the school doors across the state, the country, and even the world. By using technology to effect second-order change, teachers will learn how to collaborate with educators they might never meet but who can profoundly enrich their classrooms.

Chapter 3. Storing and Sharing in the Cloud. This chapter will instruct teachers on how to store ideas in the cloud so that the information can be shared with others. By storing information in the cloud, it is accessible at any time on any Internet-based device. Teachers will also learn how to facilitate collaboration between students—within their own classroom, with students from other schools, even with students from around the world.

Part II: The Self-Paced Student

This section makes the case that students learn more effectively at their own pace and offers strategies to help teachers design individualized instruction for their students.

Chapter 4. The Self-Paced Anchor: Flipping the Classroom. This chapter will explain how teachers can deliver content information to students to be consumed at home at their own pace while spending class time providing interactive lessons. This chapter builds on Chapter 3 by detailing the many ways Google Drive can be used to facilitate the flipped classroom.

Chapter 5. Interactive Assignments. This section looks at student abilities, the reading level of materials, and the way material is presented. It builds on Chapter 4's flipped videos by showing teachers how to build interactive lessons, with the teacher serving as the facilitator of interactive student learning. To do this will mean looking at student abilities and at Bloom's taxonomy to develop higher-level student assignments.

Chapter 6. Student Collaboration: Engaging Students With Mobile Learning. This chapter will explore the benefits both of student collaboration as well as how to enhance it with mobile technology. Collaborative learning can take place both face-to-face within the classroom, and also in virtual time and space in the cloud.

Chapter 7. Formative and Summative Assessment of Student Learning. Teachers will learn how to conduct formative and summative

assessments using online tools. The chapter will also explore test review resources (made by other teachers and students) stored in the cloud.

Chapter 8. Looking Forward Into the Present. This chapter summarizes the major components of the book and ends with a look at Mooresville, North Carolina, a school system that embraces technology and that, as a result, has seen dramatic improvement in its test scores.

WHY YOU SHOULD BUY THIS BOOK

This book will help you bring a revolution in learning to your classroom! You will learn how to

- **Expand your Professional Learning Community (PLC)** beyond your school or district's boundaries. This will help you generate amazing new ideas with the advice of the many online leaders you will find by following the suggestions in this book.
- **Individualize instruction**, tailoring learning to the pace and needs of each student. You will be better able to differentiate and also have more one-on-one time with each student.
- **Tackle new tech tools** so that you can create a learner-centered, self-paced classroom. You will find chapters filled with easy to understand bullet points that will help you ease into new tools or explore previously known tools in more depth.
- **Find real classroom examples** that show you how you too can implement the strategies described in the book.
- **Be challenged.** Each chapter contains five Educator Challenges to help you focus on changing your classroom as slowly or as quickly as you feel appropriate.

This book is meant to be used two ways. For those with little experience in implementing Internet-based learning, it can be used to incorporate bite-sized chunks of change. For those who already have been making the shift into digital education and are ready to dive in headfirst, this book can fundamentally change the way you are teaching. So let's get going!