



Contents

About the Author	\mathbf{v}
Introduction	1
Chapter 1. There's an App for That!	5
Apps—An Overview How Will Apps Be Used? Finding the Right App App and File Management	6 7 7 11
Discussion Points	12
References and Additional Resources	12
Chapter 2. Photography and Tablets	15
Visual Literacy	16
Camera Basics	18
Camera Apps	19
Strategies for Classroom Use	21
Activity Suggestions	23
Discussion Points	25
References and Additional Resources	26
Chapter 3. Video and Tablets	29
Consuming and Creating Video Video Basics Video Apps Strategies for Classroom Use Activity Suggestions Discussion Points References and Additional Resources	30 31 33 34 37 40 40
Chapter 4. Using Tablets to Enhance Speaking and Listening	43
Listening and Speaking—Skills for Life	44
Audio Recording Basics	46
Apps for Recording Audio	47
Strategies for Classroom Use	49
Activity Suggestions	51

Discussion Points References and Additional Resources	55 55
Chapter 5. Student Authors—Compose and Publish	57
The Case for Student Writing	58
E-Publishing—An Overview	59
Tools and Apps for Writing and Publishing	_61
Apps for Reading E-Books	63
Strategies for Classroom Use	64
Activity Suggestions	65
Discussion Points	67
References and Additional Resources	67
Chapter 6. QR Codes in the Classroom	71
QR Codes Defined	72
Generating QR Codes	73
Scanning QR Codes	75
Strategies for Classroom Use	76
Activity Suggestions	78
Discussion Points	79
References and Additional Resources	80
Chapter 7. More Ideas for Creating Content	81
Drawing	82
Screencasting	84
Animating	88
Discussion Points	90
References and Additional Resources	90
Chapter 8. Incorporating Tablets Into Instruction	93
What's an Apptivity?	94
Apptivity Planning	95
In Summary	101
Discussion Points	103
References and Additional Resources	103

Apple offers an App Store Volume Purchase program for educational institutions. Just recently, Google announced Google Play for Education. According to the company's press release, this is "an extension of the Google Play Store for schools, adding curation, bulk purchasing, and instant distribution to students' Android tablets for educational apps, books and videos" (Sadauskas, 2013). And, Microsoft in Education offers Academic Volume Licensing.

HOW WILL APPS BE USED?

Before purchasing apps, it is important to reach an agreement about how apps will be used to support instruction and the kinds of apps that best support that use. Will students be using apps to practice and review skills? Will they play education games and simulations or use productivity apps to complete work? What about as a substitute for textbooks? The underlying premise of this book is that, in terms of potential for academic growth, the most effective use of tablets is for content creation rather than content consumption. Apps that support content creation are those that allow users to make a product, not just play a game or practice rote skills. Apps of this type may be preinstalled on tablets—Camera is an example of one such app, or downloaded from an app store—for example, iTalk, Voice Recorder, or Audio Recorder.

This doesn't mean that it's never appropriate to use a tablet to practice skills or automate tasks that have previously been accomplished in another way. However, when content consumption is the primary reason tablets are brought into classrooms, the technology is probably not being used to its greatest advantage. This is because this type of tablet use nearly always falls into the lowest levels of the Revised Bloom's Taxonomy. Chapter 8 includes a discussion of models and research that support student use of technology to engage in learning based on use of higher order thinking skills as well as a form that can be used to guide educators in designing activities that incorporate thoughtful use of apps into instruction.

FINDING THE RIGHT APP

It's easy to succumb to the glitz of the app world. A slick interface can be more attractive to a user than the actual benefits derived from using

3

Video and Tablets

The first instructional film to find its way into US classrooms appeared in the early 1900s. By 1913, Thomas Edison was predicting the demise of the traditional textbook in the belief that motion pictures would replace print materials as the primary source of classroom content. He was wrong; however, Edison did recognize the power of visual learning and was correct in his viewpoint that there was growing interest in this medium throughout the early part of the 20th century.

When did educational film earn serious recognition as a tool for teaching and learning? You may think that it was the filmstrips, films, and television programs used in classrooms in the 1950s that gave visual learning a real boost, but in reality, it was World War II. The United States needed to train thousands of military recruits in a very short period of time, and one of the primary instructional strategies used was viewing films and filmstrips specifically designed to teach skills in soldiering. This positive outcome created interest in use of instructional film and filmstrips in more traditional classrooms (Marshall, 2002).

Fast-forward to the 21st century. While there have been a number of bumps along the road, visual learning based on use of motion pictures is commonplace. Teachers and students rely heavily on

AUDIO RECORDING BASICS

The Strategies for Classroom Use section of this chapter discusses various kinds of audio recordings students and teachers might want to make. This section covers the basics for making simple audio recordings that enable students to practice both their speaking and listening skills.

Making a simple audio recording requires a tablet and an app. (See the next section of this chapter for a discussion of apps for recording audio.) Tablets do have a built-in microphone, and audio recordings can be made using this; however, background noise is often a problem in classrooms. Some teachers address this problem by building a small sound booth—not a realistic option for everyone. An alternative solution is to purchase and use earbuds that have a built-in microphone. Reasonably priced third-party options are available online. This is an effective remedy when recording just one person's voice at a time. To capture audio from a group, there are external microphones that interface with iOS, Android, and Windows 8 devices. Available online or at electronics stores, external microphones range in price from less than \$50 to \$199 or more. To determine the best configuration for your classroom, start with the built-in microphone, and see what happens. Then, depending upon those results, add earbuds with a microphone or an external microphone.

Commercial audio recordings run anywhere from just a couple of minutes in length to several hours long in the case of audiobooks. For classroom activities, it's best to begin with fairly brief technologysupported activities for speaking and listening and then expand them as students' skills increase. To start with, making or listening to recordings of three to five minutes will be sufficient.

Designing and making a simple audio recording is similar to planning and recording an instructional video. Here is the list of basic steps:

- 1. Identify ideas related to the assignment topic, and select one (may be identified by the teacher or by students).
- 2. Create a rubric for the final product to identify and describe desired outcomes.
- 3. Outline the contents of the recording. This could be a mind map or flowchart.

There are several web-based tools for writing and uploading text that can be formatted and published into one or more e-book formats. Common file formats for e-books include .epub, .pdf, .mobi (or .prc), and .azw (*Kindle*). Depending on the authoring tool used, e-books can include different elements (e.g., illustrations or a table of contents) and be interactive to a larger or smaller degree. Pages can appear to flip, or simply to move from one page to the next with a swipe of the finger. The next section of this chapter includes a brief discussion of the tools needed to create an e-book.

TOOLS AND APPS FOR WRITING AND PUBLISHING

The tools and apps for writing and publishing include a blend of things that work on computers and things that work on tablets. Using the examples provided in the previous section, a computer may be the best option for setting up a blog, an online document, or an e-book, and a tablet can then be used to post updates, make edits, or read the e-book. Alternatively, for users of tablets running iOS, there are a number of apps that allow creation of e-books right on the tablet. On the other hand, while Android and Windows 8 tablets work well for most strategies discussed in this chapter, there is a dearth of apps designed to allow users to create e-books right on these tablets. Here are some of the online tools and apps available for writing and publishing.

Tools and Apps for Blogging

There are blogging sites specifically for student use; the following sites are suggested because they offer apps for two of the three platforms covered in this book.

- Blogger: Use the free desktop tool to set up a blog, and then blog on the go using the app for either iOS or Android. There's currently no Windows 8 app, but students can blog within Internet Explorer.
- WordPress: Use the free desktop tool to set up a blog. (Check to see if your district or school hosts wordpress.org blogs on a local server; if it does not, ask about using wordpress.com). The free WordPress app for Android or iOS supports mobile blogging.

as a narrator explains the concept. In addition, some apps include a mirroring feature. As the artist draws, both the image and its mirror image appear. This feature can be used to teach children about symmetry.

SCREENCASTING

At this time, screencasting is supported on iPads using free or low-cost apps, and there is one paid app, Explain Everything, that now offers an Android version. Tablets running the full version of Windows 8 can record screencasts using free tools like *Jing* or *Screenr*, but in this case the screencast is a recording of whatever is on the tablet screen, not the whiteboard environment found in apps for other operating systems. As a result of current limited availability for Android and Windows 8 tablets, this section is devoted to a discussion of screencasting on iPads.

Readers may be familiar with the concept of screencasting on computers using a software program like Camtasia Studio (or Camtasia for Mac) or a web-based tool like Screenr. When creating a screencast from a computer, the user is making a recording of what appears on the monitor screen in real time. In addition, narration and other sound can be recorded at the same time. Many of the narrated software tutorial videos that are uploaded to sites such as YouTube or Vimeo were recorded this way. Again, this type of screencasting can be done on a tablet running the full version of Windows 8.

There are two ways to screencast using an iPad. The first uses the built-in AirPlay feature and the mirroring capability of the iPad (generation 2 and later) along with a Wi-Fi connection and a paid software program to make images that appear on the iPad screen also show up on a computer screen. From there, a recording can be made using Camtasia Studio, Screenr, or something similar. Two programs that can be used to mirror the iPad's screen image on a computer are:

■ *AirServer*: Download this desktop application on three to five computers, depending upon the license purchased. Open the program. With the iPad and computer connected to the same Wi-Fi network, enable AirPlay on the iOS device. (See Using AirPlay (2013) in the References and Additional Resources sec-