

100+
EdTech Tools
Included

EdTech Essentials

**The Top 10 Technology
Strategies for All
Learning Environments**

Monica Burns

ADVANCE COPY—NOT FINAL. NOT FOR DISTRIBUTION.



1703 N. Beauregard St. • Alexandria, VA 22311-1714 USA
Phone: 800-933-2723 or 703-578-9600 • Fax: 703-575-5400
Website: www.ascd.org • Email: member@ascd.org
Author guidelines: www.ascd.org/write

Ranjit Sidhu, *CEO & Executive Director*; Penny Reinart, *Chief Impact Officer*; Genny Ostertag, *Senior Director, Content Acquisitions and Editing*; Allison Scott, *Senior Acquisitions Editor*; Julie Houtz, *Director, Book Editing*; Miriam Calderone, *Editor*; Thomas Lytle, *Creative Director*; Donald Ely, *Art Director*; Melissa Johnston, *Graphic Designer*; Cynthia Stock, *Typesetter*; Kelly Marshall, *Production Manager*; Shajuan Martin, *E-Publishing Specialist*

Copyright © 2021 Monica Burns. All rights reserved. By purchasing only authorized electronic or print editions and not participating in or encouraging piracy of copyrighted materials, you support the rights of authors and publishers. Readers may duplicate the reproducible forms in Appendix B for non-commercial use within their school. All other requests to reproduce or republish excerpts of this work in print or electronic format may include a small fee. Please contact the Copyright Clearance Center (CCC), 222 Rosewood Dr., Danvers, MA 01923, USA (phone: 978-750-8400; fax: 978-646-8600; web: www.copyright.com). To inquire about site licensing options or any other reuse, contact ASCD Permissions at www.ascd.org/permissions or permissions@ascd.org. For a list of vendors authorized to license ASCD e-books to institutions, see www.ascd.org/epubs. Send translation inquiries to translations@ascd.org. Please note that it is illegal to otherwise reproduce copies of this work in print or electronic format (including reproductions displayed on a secure intranet or stored in a retrieval system or other electronic storage device from which copies can be made or displayed) without the prior written permission of the publisher.

ASCD® is a registered trademark of Association for Supervision and Curriculum Development. All other trademarks contained in this book are the property of, and reserved by, their respective owners, and are used for editorial and informational purposes only. No such use should be construed to imply sponsorship or endorsement of the book by the respective owners.

All web links in this book are correct as of the publication date below but may have become inactive or otherwise modified since that time. If you notice a deactivated or changed link, please email books@ascd.org with the words “Link Update” in the subject line. In your message, please specify the web link, the book title, and the page number on which the link appears.

PAPERBACK ISBN: 978-1-4166-3036-4 ASCD product #121021
PDF E-BOOK ISBN: 978-1-4166-3037-1; see Books in Print for other formats.
Quantity discounts are available: email programteam@ascd.org or call 800-933-2723, ext. 5773, or 703-575-5773. For desk copies, go to www.ascd.org/deskcopy.

ASCD Member Book No. FY21-9. ASCD Member Books mail to Premium (P), Select (S), and Institutional Plus (I+) members on this schedule: Jan, PSI+; Feb, P; Apr, PSI+; May, P; Jul, PSI+; Aug, P; Sep, PSI+; Nov, PSI+; Dec, P. For current details on membership, see www.ascd.org/membership.

Library of Congress Cataloging-in-Publication Data

Names: Burns, Monica, 1986- author.
Title: EdTech essentials : the top 10 technology strategies for all learning environments / Monica Burns.
Description: Alexandria, VA : ASCD, 2021. | Includes bibliographical references and index.
Identifiers: LCCN 2021015509 (print) | LCCN 2021015510 (ebook) | ISBN 9781416630364 (paperback) | ISBN 9781416630371 (pdf)
Subjects: LCSH: Educational technology.
Classification: LCC LB1028.3 .B88 2021 (print) | LCC LB1028.3 (ebook) | DDC 371.33—dc23
LC record available at <https://lcn.loc.gov/2021015509>
LC ebook record available at <https://lcn.loc.gov/2021015510>

EdTech Essentials

The Top 10 Technology Strategies for All Learning Environments

Introduction: EdTech Essentials Every Teacher Should Consider.....	1
1. Help Students Navigate Online Spaces Effectively	5
2. Curate Resources to Support All Students.....	17
3. Introduce Opportunities for Students to Explore the World	26
4. Develop Structures to Give Students the Ability to Collaborate	37
5. Give Students Time and Space to Create Products of Learning.....	49
6. Assess Students to Check for Understanding and Pivot Instruction.....	61
7. Provide Opportunities for Students to Share What They Have Learned... ..	70
8. Connect Student Work to a Relevant and Authentic Audience	78
9. Help Students Develop Skills They Can Transfer Across Digital Spaces ...	85
10. Plan for Tech-Rich Learning Experiences	94
Appendix A: Essentials Versus Extras.....	102
Appendix B: Resources for Taking Action.....	107
Appendix C: 100+ EdTech Tools and Resources for Teachers and Students... ..	114
References.....	118
Index	121
About the Author	126
Study Guide.....	127

Introduction: EdTech Essentials Every Teacher Should Consider

When we think of “the essentials,” a few things come to mind, such as water, food, and shelter. Depending on whom you talk to, some might add Wi-Fi, a smartphone, or a favorite book to the list. Bringing it down to the basics, the Merriam-Webster Dictionary defines *essential* as follows:

- Of the utmost importance
- Something necessary, indispensable, or unavoidable

In today’s environment, the ability to use technology effectively has become an *essential*. New technology has changed how we communicate, navigate the world, and create content—and we know more change is inevitable.

In this book, we will examine the EdTech skills and strategies that are essential for all students if we want to prepare them to succeed in the digital world of today and tomorrow. Although many children have access to digital tools both inside and outside of school, the quality of those experiences can vary greatly. If we truly believe the role of education in society is to prepare all children for success beyond the classroom, students must participate in meaningful, robust EdTech experiences. Because these kinds of experiences are necessary for every classroom, in this book I share stories, ideas, and action items customizable for kindergarten through 12th grade and relevant across all subject areas.

With so much going on in the EdTech space, focusing on the essentials is key. I have narrowed the list to 10 indispensable skills and strategies, highlighting the roles of teachers and students. If you are familiar with my book *Tasks Before Apps: Designing Rigorous Learning in a Tech-Rich Classroom* (Burns, 2017b), you know I firmly believe that, with all things related to technology, *learning* must be front and center, and digital tools should be used with intention.

I am often asked to speak on how to “make the most” of educational technology. Whether in a keynote presentation or in a casual conversation, I often bring it back to the worms—vermicomposting, to be more specific.

As a teacher in New York City, I started my career in a classroom with chalk, a chalkboard, and an overhead projector. Then iPads came on the scene, and I was lucky enough to pilot a one-on-one initiative with my 5th graders. So where do the worms come into play? In one corner of my classroom was a bright and shiny cart of new iPads, and in another was a bucket of worms—a compost bin, to be precise. There was no way we could ever drop a banana peel or an apple core into that iPad cart and expect anything good to come of it. But if we dropped these compostable items into our bin of worms, some serious change would take place. Both the cart and the bin had a purpose, and one wouldn’t replace the other.

Finding the balance between strategic use of technology (such as the iPads) and all-important hands-on experiences (such as those my students had with the compost bin) was a nonnegotiable. Effectively and efficiently achieving this balance and being intentional with technology use require us to identify essential EdTech strategies. You can incorporate these essentials into the learning experiences you design for students over the course of the school year. I have identified the following skills and strategies as the essentials:

- Help students navigate online spaces effectively.
- Curate resources to support all students.
- Introduce opportunities for students to explore the world.
- Develop structures to give students the ability to collaborate.
- Give students time and space to create products of learning.
- Assess students to check for understanding and pivot instruction.
- Provide opportunities for students to share what they have learned.
- Connect student work to a relevant and authentic audience.
- Help students develop skills they can transfer across digital spaces.
- Plan for tech-rich learning experiences.

Although each of these could be a book topic in itself, I have chosen to cover each one in a chapter, focusing on its main components. My intent is to provide information and tips you can put into action immediately as well as ideas to consider for your future planning. Each chapter includes an overview of the skill or strategy being discussed and why it is essential, connections to research, classroom examples for all grade levels, websites and mobile apps to help build your EdTech tool belt, and guiding questions to use for your individual planning and reflection or when planning new learning experiences with colleagues.

At the end of the book, you will find resources to help you design and implement essential learning experiences for students. Appendix A summarizes some of the big ideas from each chapter to help you prioritize how to address the EdTech essentials in your own learning environment. Appendix B provides forms to help you set goals, assess your progress, and build your EdTech tool belt. These forms are also available for download at <http://www.ascd.org/ASCD/pdf/books/burns2021-forms.pdf>. Appendix C is a roundup of popular EdTech tools—some free, some with a price tag; some from companies I have worked closely with, and others from companies that are new on the scene.

Whether you have been teaching for a few years or a few decades, you know every school year is different. In the same way you customize learning experiences for each group of students you work with, you can take the ideas I share and make them your own. As an educator, you are the content expert, and you know your students (and colleagues) best. I am here to help make EdTech easier so you can integrate digital tools into your traditional, virtual, and hybrid classrooms with intention and take advantage of all EdTech has to offer.



Help Students Navigate Online Spaces Effectively

handle • maneuver • operate • journey • transverse • pass • manage

Whether it is early in the morning or late at night, there is a good chance you have already navigated many online spaces in the few or many hours you have been awake today. Scrolling through a blog post, clicking on a link on Twitter, and using a search engine to find an answer to a question are just some of the ways you may have maneuvered across online spaces in the past 24 hours.

Given the prevalence of online activity in everyday life, we need to ensure students know how to find what they are looking for and how to make the most of the information available to them. This capability includes taking advantage of every feature within a website or mobile app, evaluating and synthesizing the seemingly endless amount of content available online, and tackling logistical challenges along the way.

Although it might seem at times that the children in our lives can pick up a device and immediately find the most popular YouTube video or meme of the moment, we know access to devices and quality experiences can vary greatly. All students need to be able to navigate online spaces effectively. Let's look at what it means to navigate online spaces, why it is important, and how we can set up learning experiences to help students cultivate this skill.

Why Is This Essential?

Whether we are traversing the subway system in New York City or driving a car above ground, navigation skills are critical when we enter any new or familiar physical space. The same holds true when students move around an online space.

In this book, I use *online spaces* as an all-encompassing term to describe the content and communication channels students can access online. Online spaces can include websites with articles and blog posts, video platforms with clips and tutorials, and even mobile apps on a smartphone or tablet that present information to students. There are more spaces to consume online content than ever before. Names such as YouTube, TikTok, and Spotify have entered the lexicon of anyone with access to a digital device. People watch more than one billion hours of video on YouTube each day (YouTube, n.d.); TikTok users spend an average of almost an hour viewing content each day (Mohsin, 2020); and Spotify hosts more than half a million podcasts (Spotify, n.d.).

Navigating online spaces effectively is an essential skill that is directly tied to media literacy and is a component of media literacy education. The National Association for Media Literacy Education (NAMLE) defines media literacy education in terms of the skills and knowledge a student needs to “access, analyze, evaluate, create, and act” using all forms of communication. It defines media as “digital media, computers, video games, radio, television, mobile media, print, and communication technologies that we have not even dreamed of yet” (NAMLE, n.d.).

When and how you introduce navigation skills—and how students put them into action—will vary across grade levels and subject areas. However, one thing is certain: students of all ages should have ample opportunity to practice these skills.

Exploring Digital Features

Consumers are not just part of the food chain or the supply chain. This all-encompassing term also includes people (like you, me, and our students) who read, view, and listen to content in online spaces.

As consumers of online content, students will come across four key items—links, embedded items, images, and video—regardless of the

device in their hand or on their desk. Later in the chapter, we will discuss how to model navigating online spaces with these features in mind. For now, let's consider when they might appear on a student's screen.

Links

Links appear throughout online spaces and connect students to content hosted on a separate page. A link could take users to another resource created by the same organization or publication, such as when an article mentions an event and provides a link to one of the publication's articles covering that event. A link could also take readers to another website chosen by the creator of the original resource.

Embedded Items

Online spaces are full of interactive items that give users access to extra content. A web designer or an app developer might insert an interactive item to connect a reader to other content relevant to the topic. The goal of this embedded item, sometimes called a widget, is to add value, make a connection, or provide additional information. For example, in an online newspaper article about an event in Cairo, you might find an embedded item for Google Maps that lets a reader tap and explore a map of Cairo as a way to extend the reading experience. In addition to interactive maps, examples of embedded items include the following:

- Video clips
- Timers or countdown clocks
- Slideshows of pictures
- Forms to collect information

Images

Photographs and illustrations appear throughout online spaces, whether students are scrolling through Instagram or opening up a Wikipedia entry. Similar to the pictures in a textbook or another piece of informational text, both the visual on the page and the accompanying caption provide information. In the same way students learn about using pictures when reading a book, students who navigate online spaces view images

Navigating online spaces may present specific challenges for students who require additional support using digital tools. To make sure you are creating equitable spaces for students, review the needs of your students with accessibility in mind. You may want to explore these three resources:

- Immersive Reader from Microsoft: <https://www.microsoft.com/en-us/education/products/learning-tools>
- Chromebook Accessibility Overview: <https://edu.google.com/why-google/accessibility/chromebooks-accessibility>
- Apple Accessibility Overview: <https://www.apple.com/accessibility>

as sources of potentially valuable information. In online spaces such as Instagram, where images are the core content on the page, captions hold more value than they do when accompanying pictures in longer, text-based forms of content. The term *microblogging* is often associated with lengthy captions that provide a narrative or detailed information on a subject.

We Don't Know What We Don't Know

Sometimes you will want students to go off on a deep-dive search to identify a question or topic they would like to explore further. In a 1st grade classroom, you might share QR codes that students can scan to access links to a few short video clips. They can watch the clips to help them decide which animal they would like to research before reading an informational text or starting a social studies unit on an area that is home to an endangered species. In a high school classroom, you might send students off with a big idea such as "climate change" and then allow time for them to search broadly. Students can gather ideas on subtopics to investigate with more purpose during a unit on persuasive writing or environmental science. Here are some examples of *simple* searches that can lead to *deep-dive* searches:

- 1st grade—*Simple*: How much rain fell last summer? *Deep dive*: Why does it rain more in one state than in another?
- 4th grade—*Simple*: What year did Arizona become a state? *Deep dive*: Why did Arizona gain statehood after the 13 colonies?
- 11th grade—*Simple*: What country is Jane Austen from? *Deep dive*: What factors in Jane Austen's life influenced the themes of her novels? (Burns, 2017b, p. 50)

Video

Although you and I might remember the days of rolling a television cart into a classroom, nowadays the amount of video students consume and the way they access this content have changed greatly. Video content is available on multiple platforms, and Google even includes the option to search for video clips. You can find videos embedded in websites in addition to native video platforms like YouTube and Vimeo. Video content extends beyond these hosting sites and into social spaces such as Instagram, TikTok, and Facebook, where it is often posted with captions and links.

Guiding Students' Online Search Experiences

Links, embedded items, images, and video are some of the key content types and features students will come across in online spaces. Let's explore how you can create, support, and extend learning experiences that involve searching online. Navigating online spaces to search for information applies to all subject areas. For example, students might look for the exact date of a historical event as they create a timeline in a social studies classroom or seek contact information for a professor at a local university so they can send a question related to a chemistry experiment.

Create Learning Experiences

To create search-related learning experiences for students, first identify what information you would like them to collect. This could include information related to a simple question with a correct/incorrect answer or something more complex and open-ended. Although at times you will want students to search more broadly, such as when you want them to explore a broad topic and choose a subtopic to research, in this case we are talking about setting a narrow purpose so that students go off on a specific mission.

As you create online search experiences, you might work together as a whole class or have students search independently or with a partner. To establish a clear purpose, you can use the following prompts in your planning and in your discussion with students:

- Today we will investigate . . .
- We might use search terms such as . . .
- We will collect our findings by . . .

Figure 1.1 shows some specific examples at various grade levels.

FIGURE 1.1

Cross-Curricular Examples of Prompts and Online Search Experiences

Prompt	Grade Level			
	Early Elementary	Upper Elementary	Middle School	High School
Today we will investigate . . .	What types of food a polar bear eats.	How the winter weather is different in Minnesota and Alabama.	The life and works of Sandra Cisneros.	Different methods for solving quadratic equations.
We might use search terms such as . . .	"Polar bear diet." "Foods polar bears eat."	"Minnesota weather in January." "Average temperatures in Alabama."	"Sandra Cisneros biography." "Sandra Cisneros books."	"Ways to solve quadratic equations." "Strategies for solving quadratic equations."
We will collect our findings by . . .	Sharing what we are learning via video on our class Seesaw page.	Adding the information to a Google doc.	Creating a mind map with color-coded information based on different categories.	Sharing the video tutorial we find most useful in our class discussion forum.

What Is a “Think Aloud”?

Molly Ness, author of *Think Big with Think Alouds, Grades K-5* (2018b), describes this tactic as a powerful comprehension strategy. In an article on the website We Are Teachers, she comments on the observations of a teacher conducting a reading lesson and explains how “throughout her read-aloud, this teacher will stop to ask questions, make observations, and think deeply about the story” (Ness, 2018a). The same process can happen as students listen to their teachers share their thinking while they tackle a math problem, examine a primary source document, or decide if a YouTube video comes from a trusted source.

Support Learning Experiences

Establishing clear expectations and modeling for students will set them up for success as they practice navigating online spaces. Although we all know how easy it is to get distracted in online spaces, setting and sharing a clear purpose for time spent online will help students stay on track. When modeling for students, you might “think aloud” to demonstrate what you are thinking as you move through an online space, saying something like “This link looks interesting, but it is not going to help me find the answer to my question” or “I love videos like this, and maybe I’ll watch it later, but right now, it is not going to help me accomplish my goal.”

Here are a few other things you can do to support your students’ online searches:

- Share keyword search strategies, such as using a phrase instead of a complete sentence or question.
- Brainstorm potential keywords and search terms with students before sending them off on their own.
- Post common search queries for your topic so students do not have to worry about spelling errors, which can lead to unhelpful results.
- If the results of their search queries are not helping them find useful information on the topic, remind students to check for misspellings, or encourage them to try a new keyword or phrase.
- Inform students that voice-to-text search options are available on many websites and mobile apps but will require them to grant the tool permission to use their device’s microphone.
- Introduce students to advanced search options to help them find a specific type of result or file. For example, Google and YouTube have advanced search options to let users search for content published in the last few months or the previous year.

Extend Learning Experiences

The amount of time you allocate for students to navigate online spaces will depend on the task. To extend these experiences and provide more opportunities for exploration, you can have students participate in activities such as a “scavenger hunt” that asks them to find the answers

to a series of questions. If you find yourself in a teachable moment where a student asks a question you cannot answer yourself, you might ask the class to search for the answer to the question. Although you might not pause your planned instruction that very moment, you can revisit the question to model an online search or ask students to find the answer later.

Evaluating Sources

Evaluating sources is a crucial component of successfully navigating an online space. The ability to sort through content and gauge authenticity and authority is an indispensable skill for students of all ages. Students should be able to determine where information is coming from and if the source they have found is trustworthy. Doing so is an important aspect of digital citizenship—a topic that reappears throughout this book.

Examining Authority

When looking at resources in print or digital format, students must determine if a source is legitimate and whether the author or creator is well versed enough to share information on a topic. Essentially, students must ask, “Is this a trusted source?” In the early days of navigating online spaces, we would often first look at the domain of a website to evaluate its authority—for example, .edu, .org, or .com. Although students can still consider this information when evaluating a source, it is only part of the equation. The background and bias of the author and organization should also be a consideration.

Here are a few questions you can use when modeling for students how to evaluate a source. Students can also use these questions when working independently:

- Who wrote this? Who produced this? Who recorded this?
- Who is the owner of this website? Who made this video or podcast recording?
- Is this author or organization qualified to share this information?
- Does this author or organization have any clear bias?
- Is this content sponsored by another company?

Helping Students Stay on Task

In addition to setting a clear purpose and modeling, you can provide other supports to help students stay on task. Working with a partner, periodic check-ins, and turn-and-talks can help students stay accountable during an online learning experience. Other options include inserting a whole-group discussion in the middle of a lesson, or adding an exit ticket or share-out at the end of a lesson allowing students to post an update on their progress.

- Does the author cite sources for any information referenced or claims made?

When searching online with students, you can model your own thinking when coming across a new source. Again, students should hear you thinking aloud, deciding when to use a resource and when to move on and look for something new. This can happen during teachable or unplanned moments as well as during searches you intentionally model for students.

Practicing Digital Citizenship

Evaluation is an essential skill in both online and offline learning experiences. It is a higher-level cognitive process included in the revised Bloom’s taxonomy (Anderson & Krathwohl, 2001) and an important part of our conversation on navigating online spaces effectively. Your students might take part in a formal digital citizenship curriculum, or their experiences with digital citizenship may be less structured. Activities that include evaluating sources reinforce this effort and enable students

Primary Sources in a Digital World

We often think of the phrase *primary source* as describing something such as an artifact in a museum. Although primary sources can be tangible—for example, a letter or an entry in a journal you can hold in your hand—many are digital. Email correspondence, blog posts, and *vlogs* (blog entries in video format) fall into this category, too.

to apply what they have learned. Here are some recommended resources related to digital citizenship:

- Common Sense Media’s Digital Citizenship Curriculum (<https://www.commonsense.org/education/digital-citizenship/curriculum>)
- *Fact vs. Fiction: Teaching Critical Thinking Skills in the Age of Fake News* (LaGarde & Hudgins, 2018)
- “Digital Citizenship in the Curriculum” (Krutka & Carpenter, 2017)

Organizing Information

As students navigate online spaces, they come across a lot of information. Even as students narrow down the information they collect to what they may want to remember or reference later on, keeping it all organized can be challenging. Some students, especially in middle or high school, might have a system for remembering where they found information, such as bookmarking favorite websites. Teaching students about systems and strategies for organizing online information is an important part of helping them learn how to navigate online spaces effectively.

In the past, we might have used index cards to organize information when researching a topic. Regardless of the type of information students

collect, organizing notes, ideas, links, and files using digital tools is very different than organizing index cards. Digital tools enable students to add notes and ideas by typing or using *voice-to-text* (as well as some video recording options). Students can also add links by *copy-and-pasting* URLs to websites. If students have a file to add to their notes, they can also copy-and-paste a link to that file (such as a Google Drive or Dropbox link) or upload the file itself.

Strategies for organizing digital notes include mind mapping, interactive documents, and journaling. Let's take a brief look at each of these.

Mind Mapping

A mind map is a visual representation of information. Students can organize information visually using shapes in any way they choose. Modeling, providing support, and offering examples are important steps in helping students get started. Using an open-ended tool—one that is not task-specific and can be used for various purposes—is a great choice. Students can add shapes, lines, and arrows to organize information. Mind maps use some of the same principles of traditional graphic organizers but provide more flexibility for organization, making them a more powerful and versatile option than a one-size-fits-all approach. When students use a digital tool for mind mapping, they can add links and images alongside traditional color coding and text. Here are some examples of tools you can use for mind mapping (see Appendix C for more resources):

- Google Drawings
- Idea Sketch
- Popplet
- Jamboard
- Whiteboard.chat

A Search Activity

You might not expect Instagram to be a source for inspiration, but if you follow educators on this social media platform, you will find that many share ideas and tips with their followers. I first came across the following activity from fellow Apple Distinguished Educator Larry Reiff while scrolling through Instagram. To help students practice using online tools, he shares prompts that require them to think critically and combine information from various sources to find the answer. For example, he gave them this challenge: "Add up all of the digits of the zip code for the town where the physicist that directed the Manhattan Project received his undergraduate degree." Students have to work backward and search for smaller pieces of information to help them build toward the answer.

Interactive Documents

Unlike organizing notes on a sheet of paper or in a notebook, an interactive document enables students to connect information from

Definitions

Open-ended tool—a versatile digital tool that is not limited to one prescribed use

Hyperlink—a link that connects two documents or parts of a document; often used in documents with a table of contents or multiple elements

multiple places and make it accessible by clicking on a link. Students can add notes along with any resources they have found and quickly reorganize information with a copy-and-paste. A benefit of interactive documents is the option to share with multiple users for collaboration, commenting, and feedback. This type of document might include *hyperlinks*, which connect users to a different docu-

ment or to a specific place within the document they are currently using. Here are some examples of tools you can use for interactive documents:

- Microsoft Word
- Google Docs
- Pages

Journaling

Digital journals provide multiple ways for students to build upon their learning over time. They are similar to a traditional journal but are equipped with digital tools students can use, including capabilities such as voice-to-text, audio and video recording, and insertion of links. Journaling with digital tools provides more access points for students, enabling them to choose how to interact with content and how they would like to share their learning experiences. Digital journals also make it easier for teachers to check on a student's progress, a topic we will explore further in our discussion of assessment in Chapter 6. Here are some examples of tools you can use for journaling:

Pam Allyn and I created a Quick Reference Guide titled *Engaging Students in Reading All Types of Text* (Allyn & Burns, 2021). This guide includes tips for extending reading experiences and ways to help students interact with online text.

- Seesaw
- Book Creator
- Spark Page
- Google Slides

Synthesizing Information

Students can create a variety of products to share what they have learned, such as book trailers and interactive science reports. We will explore this topic of student creations in more detail in Chapter 5. For now, let's consider how creating something requires students to take information they

have gathered from different places and pull it all together—to synthesize. What does this look like in online spaces?

In an early-elementary classroom, students may watch a video and hear a book about polar bears read aloud. Then they may make a list or draw a picture of all the things they now know about polar bears. Students can make an audio recording of their digital list or snap a picture of their illustration using a digital journaling tool like Seesaw and record their voice to explain their thinking.

In an upper-elementary classroom, students may read a selection of online encyclopedia entries and watch a short documentary on the Dust Bowl. Then they may create a mind map, independently or with a partner, using Jamboard or an online whiteboard space to explain the who, what, when, where, why, and how of the event. Using color-coding and links to additional resources, students can organize everything they have learned into one space.

In a middle school classroom, students may research the effect that wearing a seatbelt has on injuries caused by a car accident. They may interview a local emergency room doctor via Zoom or Google Meet, watch a series of public service announcements posted on YouTube, and review data collected by a safety organization and posted to its public website. Students can then create an interactive document to organize the information they have collected (and the associated links to additional information) into different categories.

In a high school classroom, students may create an interactive document to organize their research on a topic related to a community action project. They can create a table with their research findings in an online document like Microsoft Word or Google Docs and add their own thinking in a column beside their research. Students can insert links within the document to create a table of contents and record audio notes as they gather information and address lingering questions. By leaving comments in the document or tagging other classmates to ask for feedback or suggestions, students can use this space to work collaboratively, as well.

How to Be Creatively Productive

Author Lisa Johnson (2019) shares lots of strategies for students in her book *Creatively Productive: Essential Skills for Tackling Time Wasters, Clearing the Clutter, and Succeeding in School—and Life!* They include ways to stay organized in digital spaces. Here is one of her favorite tips:

Model and provide access to time management tools. Most students don't inherently know how to keep up with their assignments, determine which tasks are high- and low-priority, break larger tasks and projects into subtasks, or manage distractions in both their analog and digital environments. These skills have to be modeled, and we have to provide scaffolding, tools, and, often, templates to support our students with these types of executive functioning tasks.

Addressing Logistics

To navigate online spaces effectively and use the strategies shared in this chapter, students need basic computing skills. Although these strategies are sometimes taught in isolation, they are not specific to time spent in a computer lab or technology class.

There are a variety of schools of thought on direct keyboarding instruction. I often compare the situation to the need to understand times tables in order to complete complex math problems quickly and efficiently. We may reach a point in the future where voice-to-text replaces the need for keyboarding, but we are not there yet. Ignoring the need for keyboard practice would be impractical; however, as in the example of teaching students times tables, there are different ways to get there. You may want to explore a comprehensive keyboarding program aligned to the needs of your students.

Alongside keyboarding instruction, helping students understand how to use trackpads, touchscreens, and cameras is necessary for their success in navigating online spaces. In Chapter 9, we will discuss helping students develop skills in areas such as problem solving and troubleshooting that will transfer across devices and platforms. Some students can pick up a new device and instantly sense how to use every feature and find every button. However, we know this is not the case for all students, and even those who have ample experience with digital tools might not understand the specific classroom use you have in mind. When introducing or reviewing device features with students, modeling and reminding them of how to maneuver within a particular device is absolutely necessary.

Final Thoughts

Instead of planning to teach a lesson with a teaching point such as “Students will be able to click on a link” or “Students will be able to take pictures with their tablet,” incorporate these essential EdTech experiences into content you are already teaching. Taking a moment to explain what happens when you click on a link can become part of a think aloud during your modeling, or something included in a class discussion after an activity. Similar to the way you teach vocabulary words in context, teaching these essential EdTech strategies within your content demonstrates how navigating online spaces is not an isolated activity but an integral part of interacting with technology in general.

References

- Aguada-Hallberg, L., & Santiago, L. (2019). Leading for equity: 5 steps from awareness to commitment. *ASCD Express*, *14*(23). Retrieved from <http://www.ascd.org/ascd-express/vol14/num23/leading-for-equity-5-steps-from-awareness-to-commitment.aspx>
- Allyn, P., & Burns, M. (2021). *Engaging students in reading all types of text* (quick reference guide). Alexandria, VA: ASCD.
- Anderson, L. W., & Krathwohl, D. R. (Eds.). (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. New York: Longman.
- Anderson, M. (2016). *Learning to choose, choosing to learn: The key to student motivation and achievement*. Alexandria, VA: ASCD.
- ASCD. (n.d.). The whole child. Retrieved from <http://www.ascd.org/programs/The-Whole-Child/Engaged.aspx>
- Burns, M. (2017a). *#FormativeTech: Meaningful, sustainable, and scalable formative assessment with technology*. Thousand Oaks, CA: Corwin.
- Burns, M. (2017b). *Tasks before apps: Designing rigorous learning in a tech-rich classroom*. Alexandria, VA: ASCD.
- Burns, M. (2020a). *Distance learning essentials* (quick reference guide). Alexandria, VA: ASCD.
- Burns, M. (2020b). What leaders should know about remote learning [*Easy EdTech Podcast* episode with Eric Sheninger]. Retrieved from <https://classtechtips.com/2020/05/19/remote-learning-leadership-063>
- Butler, M. (n.d.). The 9 habits of highly successful content creators. Hubspot. Retrieved from <https://blog.hubspot.com/marketing/5-habits-of-highly-successful-content-creators-list>
- CareerExplorer. (n.d.). What does an app developer do? Retrieved from <https://www.careerexplorer.com/careers/app-developer>
- Collaborative for Social and Emotional Learning (CASEL). (n.d.). SEL is . . . Retrieved from <https://casel.org/what-is-sel>
- Cunningham, G. (2009). *The new teacher's companion: Practical wisdom for succeeding in the classroom*. Alexandria, VA: ASCD.

- Entrepreneur*. (n.d.). Branding [definition]. Entrepreneur Media. Retrieved from <https://www.entrepreneur.com/encyclopedia/branding>
- Fisher, D. B., & Frey, N. (2011). *The purposeful classroom: How to structure lessons with learning goals in mind*. Alexandria, VA: ASCD.
- Fisher, D. B., & Frey, N. (2014). *Checking for understanding: Formative assessment techniques for your classroom*. Alexandria, VA: ASCD.
- Gabriel, J. G., & Farmer, P. C. (2009). *How to help your school thrive without breaking the bank*. Alexandria, VA: ASCD.
- Greenstein, L. (2010). *What teachers really need to know about formative assessment*. Alexandria, VA: ASCD.
- Hardie, E. (2019). *The relevant classroom: 6 steps to foster real-world learning*. Alexandria, VA: ASCD.
- International Society for Technology in Education (ISTE). (n.d.). ISTE standards for students. Retrieved from <https://www.iste.org/standards/for-students>
- Johnson, L. (2019). *Creatively productive: Essential skills for tackling time wasters, clearing the clutter, and succeeding in school—and life!* San Diego, CA: Dave Burgess Consulting.
- Krutka, D. G., & Carpenter, J. P. (2017, November). Digital citizenship in the curriculum. *Educational Leadership*, 75(3), 50–55.
- LaGarde, J., & Hudgins, D. (2018). *Fact vs. fiction: Teaching critical thinking skills in the age of fake news*. Portland, OR: International Society for Technology in Education (ISTE).
- Mohsin, M. (2020). 10 TikTok statistics that you need to know in 2021. Retrieved from <https://www.oberlo.com/blog/tiktok-statistics>
- National Association for Media Literacy Education (NAMLE). (n.d.). About NAMLE. Retrieved from <https://namle.net/about>
- Ness, M. (2018a). Improving reading comprehension with think-alouds. *We Are Teachers*. Retrieved from <https://www.weareteachers.com/think-alouds-reading-comprehension>
- Ness, M. (2018b). *Think big with think alouds, grades K–5: A three-step planning process that develops strategic readers*. Thousand Oaks, CA: Corwin.
- Palmer, E. (2014). *Teaching the core skills of listening and speaking*. Alexandria, VA: ASCD.
- Reich, J. (2020, Summer). Keep it simple, schools. *An Educational Leadership Special Report: A New Reality: Getting Remote Learning Right*, 77, 2–5. Retrieved from <http://www.ascd.org/publications/educational-leadership/summer20/vol77/num10/Keep-It-Simple,-Schools.aspx>
- Roake, J., & Varlas, L. (2013, December). More than words: Developing core speaking and listening skills. *ASCD Education Update*, 55(12), 1, 4–5.
- Robinson, K. (2006, June). *Do schools kill creativity?* TED. Retrieved from https://www.ted.com/talks/ken_robinson_says_schools_kill_creativity/transcript?language=en
- Spotify. (n.d.). 2019 wrapped for podcasters: Your year on Spotify. Retrieved from <https://podcasters.spotify.com/blog/podcaster-wrapped-2019>
- Stone, E. (2017). The science behind the growing importance of collaboration. KelloggInsight. Retrieved from <https://insight.kellogg.northwestern.edu/article/the-science-behind-the-growing-importance-of-collaboration>
- Stoppard, L. (2020, March 3). Everyone's a curator now. *New York Times*. Retrieved from <https://www.nytimes.com/2020/03/03/style/curate-buzzword.html>
- Sullo, B. (2009). *The motivated student: Unlocking the enthusiasm for learning*. Alexandria, VA: ASCD.
- Tomlinson, C. A. (2017). *How to differentiate instruction in academically diverse classrooms*. Alexandria, VA: ASCD.
- Tomlinson, C. A., & Imbeau, M. B. (2010). *Leading and managing a differentiated classroom*. Alexandria, VA: ASCD.

- Tomlinson, C. A., & Moon, T. R. (2013). *Assessment and student success in a differentiated classroom*. Alexandria, VA: ASCD.
- Tyson, K., Hintz, A., & Hernandez, K. (2014, November). How to foster deep listening. *Educational Leadership*, 72(3). Retrieved from <http://www.ascd.org/publications/educational-leadership/nov14/vol72/num03/How-to-Foster-Deep-Listening.aspx>
- Williams, J. (2019). *Teach boldly: Using EdTech for social good*. Washington, DC: International Society for Technology in Education (ISTE).
- Wilson, D., & Conyers, M. (2016). *Teaching students to drive their brains*. Alexandria, VA: ASCD.
- YouTube. (n.d.). YouTube for press. Retrieved July 7, 2020, from blog.youtube/press

About the Author



Dr. Monica Burns is a curriculum and EdTech consultant, Apple Distinguished Educator, and founder of ClassTechTips.com. As a classroom teacher in New York City, Monica used digital tools to create an engaging, differentiated learning experience to meet the unique needs of her students. Monica started her blog, ClassTechTips.com, in 2012 to help make EdTech easier for fellow educators and launched the *Easy EdTech Podcast* and her membership site, the Easy EdTech Club, to support educators who want to simplify and streamline technology integration.

Since starting ClassTechTips.com, Monica has led workshops and webinars and provided keynote presentations to teachers, instructional coaches, administrators, and tech enthusiasts at numerous national and international conferences, including SXSW EDU, ISTE, FETC, and EduTECH. Monica is the author of *Tasks Before Apps: Designing Rigorous Learning in a Tech-Rich Classroom* and two ASCD Quick Reference Guides (*Distance Learning Essentials* and *Classroom Technology Tips*), among other publications.

Email: monica@classtehtips.com

Instagram: @ClassTechTips

Twitter: @ClassTechTips

Related ASCD Resources: Educational Technology

At the time of publication, the following resources were available (ASCD stock numbers appear in parentheses).

Print Products

- 5 Myths About Classroom Technology: How do we integrate digital tools to truly enhance learning?* (ASCD Arias) by Matt Renwick (#SF115069)
- Classroom Technology Tips* (Quick Reference Guide) by Monica Burns (#QRG120045)
- Demonstrating Student Mastery with Digital Badges and Portfolios* by David Niguidula (#119026)
- Distance Learning Essentials* (Quick Reference Guide) by Monica Burns (#QRG120097)
- The eCoaching Continuum for Educators: Using Technology to Enrich Professional Development and Improve Student Outcomes* by Marcia Rock (#117048)
- Engaging Students in Reading All Types of Text* (Quick Reference Guide) by Pam Allyn and Monica Burns (#QRG121059)
- Enhancing the Art and Science of Teaching with Technology* by Sonny Magaña and Robert J. Marzano (#313077)
- Flipping the Learning* (Quick Reference Guide) by Jonathan Bergmann (#QRG118053)
- The i5 Approach: Lesson Planning That Teaches Thinking and Fosters Innovation* by Jane E. Pollock with Susan Hensley (#117030)
- Increasing Engagement in Online Learning* (Quick Reference Guide) by Stephanie Smith Budhai and Laura McLaughlin (#QRG121063)
- Tasks Before Apps: Designing Rigorous Learning in a Tech-Rich Classroom* by Monica Burns (#118019)
- Teaching the 4 Cs with Technology: How do I use 21st century tools to teach 21st century skills?* (ASCD Arias) by Stephanie Smith and Laura McLaughlin Taddei (#SF116038)
- The Tech-Savvy Administrator: How do I use technology to be a better school leader?* (ASCD Arias) by Steven W. Anderson (#SF115015)
- Using Technology with Classroom Instruction That Works, 2nd Edition* by Howard Pitler, Elizabeth R. Hubbell, and Matt Kuhn (#112012)

For up-to-date information about ASCD resources, go to www.ascd.org. You can search the complete archives of *Educational Leadership* at www.ascd.org/el.

PD Online

- Blended Learning: An Introduction (#PD14OC009S)
- Technology in Schools: A Balanced Perspective, 2nd Edition (#PD11OC109S)
- Enhancing Teaching with Technology (#PD16OC001S)

ASCD myTeachSource®

Download resources from a professional learning platform with hundreds of research-based best practices and tools for your classroom at <http://myteachsource.ascd.org/>.

For more information, send an e-mail to member@ascd.org; call 1-800-933-2723 or 703-578-9600; send a fax to 703-575-5400; or write to Information Services, ASCD, 1703 N. Beauregard St., Alexandria, VA 22311-1714 USA.