



How to Do More

LESSONS FROM ONLINE LEARNING

Save time and money
in your classroom
while increasing student
engagement and digital
age competencies.

Schools everywhere are facing a difficult conundrum. Parents and the government continue to ask them to educate more children at higher standards with less time and less money. On top of that, students must master a whole new set of skills—digital age skills—if they are to succeed. What’s a school to do?

These strategies and resources can help teachers from any learning environment, including traditional face-to-face classrooms, engage students and teach them digital age skills more efficiently and affordably.

Make Time

Two innovative online learning strategies—the blended classroom and the flipped classroom—maximize face-to-face time by enabling increased student-to-student and student-to-teacher interaction as well as more personalized instruction focused on individual learning needs. Both strategies also foster the development of independent learning skills, similar to those gained from online courses, as students learn at their own pace and take responsibility for seeking out free educational resources on the web.

Blended teaching. The term *blended* refers to mixing traditional face-to-face instruction with online learning practices. In blended classrooms, teachers use digital content, resources, and tools to enhance, extend, and transform the learning process. This approach results in the best of both worlds, including

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with Less

whenever/wherever learning, personalized teaching to meet students' individual learning needs and styles, and access to open resources and tools that more fully engage students in the learning process. Some examples of effective blended teaching strategies include:

- Classroom teaching resources (class notes, slideshows, or videos) that teachers post online for students to review after class or at home
- Online assessments that students can use as a self-check
- Online collaborative areas where students can continue classroom discussions or group projects after class
- Homework help through synchronous chat

Flipped classroom instruction. What if we changed the definitions of *homework* and *classroom practice* by asking students to use their time at home to become familiar with content instead of doing homework, and to use their classroom time to actively engage with other students and their teachers to think critically and apply knowledge to real-world problems, group projects, lab work, or classroom discussions? In a flipped classroom, teachers use technology, such as podcasts or videos, to deliver class lectures or demonstrations. If needed, a student can replay a teacher's demonstration or lecture several times until she understands all the concepts. And if she still needs more help, she has classroom time the next day to work one on one with the teacher. By turning the traditional homework model on its head, limited classroom time ceases to be a constraint to learning.

Free the Resources!

Both blended and flipped classroom strategies rely on open educational resources—free online tools and materials designed to support instruction. Web tools and resources can generate new and exciting learning experiences for students of all abilities and learning styles, and teachers can use them to develop digital age literacies. The sheer number and easy accessibility of these tools and resources also gives students multiple options for completing projects, thereby differentiating and personalizing both the learning process and their end products. This allows students with different learning styles to process information and comprehend content in the way that is best for them, and approaching content from several angles allows all learners to better integrate it into their knowledge.

Web tools also address many facets of student motivation by empowering them, giving them choices, allowing them to express themselves in their preferred formats, encouraging them to collaborate, and engaging them with interactivity rather than passive consumption.

Finally, web resources give students the opportunity to develop research, internet literacy, authoring, and publishing skills.

Here are a few categories of free tools that develop these skills in an engaging way:

Blogs. When students write about subject-specific content for an authentic audience, they are learning not only about the topic, but also how to effectively communicate with others. Blogs

promote critical and analytical thinking when students share knowledge and reflect on content.

In one Virtual High School (VHS) anatomy course, for instance, a blog serves as a culminating activity for the study of human systems and how they all work together to allow the body to function properly. Each student chooses a system and homeostatic mechanism and blogs about why they are important. They read their peers' blog posts and comment on each other's examples to explore how they are related.

In the VHS course *Genes and Disease*, students examine genetics and the law. Students review the legal aspects of genetic testing and the rights to a person's genetic information. In response, students have blogged about genetic testing as part of the application process for health insurance, employment, and obtaining parental consent for newborn screening.

Wikis. These sites promote collaboration skills and creativity by enabling groups to work together to create and publish a work online. For example, students can co-create an online study guide to prepare for an end-of-course exam. Contributing to a crowdsourced resource, such as Wikipedia, also gives students experience with researching, authoring, and publishing to an authentic audience.

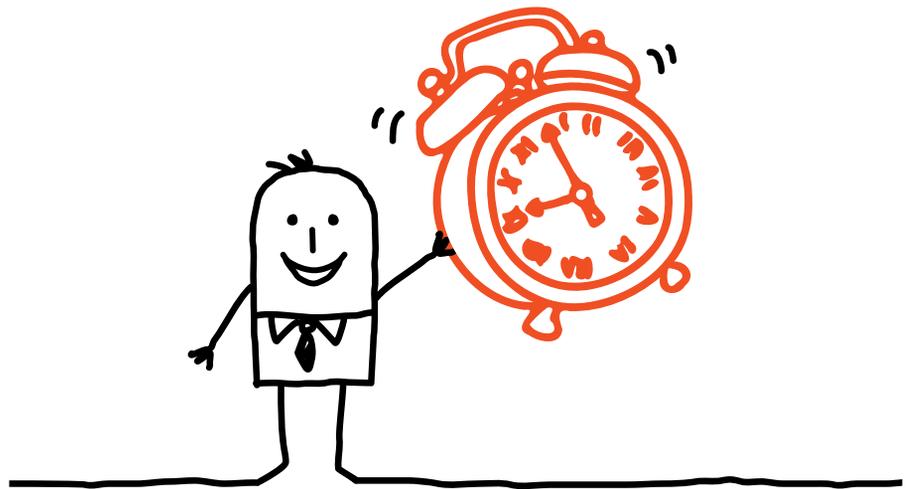
Social bookmarking tools. Sites such as Diigo, Delicious, StumbleUpon, digg, and reddit promote research and information fluency. You can use these free tools to analyze, critique, and evaluate websites, subject-specific resources, or news stories.

When students find good resources, they can use social bookmarking to share their research and analysis with their teachers and peers. Users can form groups to share information, collaborate, and discuss. When students create short descriptions and tags for each item they bookmark, they have to think critically about each site and measure its value. As they accumulate bookmarks, they begin to articulate the comparative value of the different sites against others they encounter.

Diigo, for instance, allows students to highlight content at the bookmarked site and add comments using “sticky notes.” Diigo then provides a unique URL to the annotated version of the article. In addition to comments left by the bookmarker, the reader can comment and ask questions.

Creative expression tools. Students can hone their digital communication and publishing skills while expressing their creativity using a number of free online tools. Here are just a few:

- Glogster is a social networking tool that allows students to create interactive posters with text, graphics, music, and videos.
- VoiceThread allows students to make collaborative, multimedia slideshows with images, documents, and videos that visitors can comment on by voice, text, audio file, or video.
- Popplet combines the features of a virtual bulletin board with mind-mapping, bookmarking, presentation, and collaboration tools. It can incorporate web links, video, or Google maps into a mind map. It is a creative-thinking work space for essay planning or storyboarding and a great environment for group work.
- Prezi is a presentation tool that is similar to Powerpoint except that it uses a web-based 3D canvas rather than a sequential slideshow. Students can incorporate not only text and images, but also videos, mind maps, and other digital resources.



The **blended classroom** and the **flipped classroom** maximize face-to-face time by enabling increased student-to-student and student-to-teacher interaction as well as more personalized instruction focused on individual learning needs.

- Photovisi is a free and easy way to use an online tool to create photo collages. It allows you to choose one of many templates, throw your images together, and gather them into a digital collage.
- My Fake Wall is a tool for creating a fake Facebook wall for fictitious or historical characters. How would your students build a wall for Einstein or President Obama?
- Fotobabble allows students to upload images from lab experiments or field trips and then talk about them. Have students define vocabulary words and offer images to go along with them, or describe an image of a piece of art.

Examples from Real Classrooms

The Virtual High School Global Consortium has partnered with several school districts that are creating blended teaching models. Here are some examples from recent collaborative efforts that demonstrate strategies, tools, and resources that have received positive response from both students and teachers:

Digital storytelling. In Jeanie Keyes-Plante’s seventh grade literacy lab, she asks students from the Westfield (Massachusetts, USA) School District to write a story and create a storyboard. Each student then constructs a digital story of the narrative event that

incorporates text, graphics, musical accompaniment, and voice narration. Digital storytelling transforms students’ work into visual showcases and is a powerful medium for representing their understanding in a form other than traditional writing.

The students use Photo Story 3 to create their digital stories. They begin by importing images from their computers. The software offers several functions, such as adding effects, adjusting color, customizing motion, or rotating images. They can add text to images and choose fonts, then they use a microphone to add voice narration. Finally, they add music by choosing from the software’s free selection or uploading their own audio files.

Comic strips. In Irene Sweigard’s seventh grade language arts classroom at Westfield, students use comic strips to create story lines and poetry and to define language arts terms. They publish their products using ToonDoo, a free online comic strip maker.

Comic generators allow students to visually represent their knowledge and understanding. Because they are so short, they present only the most essential information, so students can focus on and remember key concepts. Comic strips also promote reading in reluctant readers and help teach writing and punctuation.



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ToonDoo allows students to select a layout from a menu of templates and upload images or select them from the site's gallery. They can add text and then publish their comics on the site to share and discuss them with their peers.

Brainstorming. Beth O'Connor's eighth grade language arts students at Westfield use an online tool called *scrumblr* to brainstorm the character traits that best represent the main character in a story. They use *scrumblr* to create a two-column chart that shows the traits and how they affect the story's conflict and resolution.

Next, using a blank ToonDoo comic strip template, pairs of students draft a new scene or ending to the story that shows how the character's traits contribute to the conflict and resolution. Each team shares its scenes and identifies the trait students chose and how it contributed to the conflict and resolution. They give each other feedback on the plot and clarity of the scenes and publish them on ToonDoo.

Digital information organization. Kristen Biancuzzo has built a LiveBinder for her Westfield High School sophomore language arts course to help her students complete a mini-research project on the books *The Bean Trees* by Barbara Kingsolver and *A Yellow Raft in Blue Water* by Michael Dorris.

A LiveBinder is a virtual three-ring binder where a teacher can post information for students to access during and after school for homework, research projects, or studying.

Educators can upload resources to a LiveBinder as PDFs, images, presentations, videos, podcasts, documents, links, and more, which could support both the flipped classroom and blended teaching models.

Students can also use LiveBinders to create products such as digital textbooks. You can give students curriculum standards and instruct them to find websites that fulfill the standards. They can also search for and share websites that engage them and enrich their learning. Such activities encourage self-directed, self-motivated learning experiences; engage students with subject-specific content; and provide an opportunity to practice information and research skills, which means the learning takes place at all levels of Bloom's Taxonomy.

Social networking. Joanne Hentnick, the technology facilitator for the Westfield School District, supports students in responsible technology use with a tool that is very familiar to them—a social networking site. Edmodo is a private, teacher-moderated social network where students can share ideas, publish their work, and learn how to

communicate effectively online. It's an ideal place to build digital age skills, host a blended learning environment, or post content for a flipped classroom.

In Edmodo, teachers and students can share notes, links, and files. Teachers can send alerts, events, and assignments to students and post any item to a public audience. They can even use the platform to poll or quiz students and host discussions. Students can also turn in assignments on Edmodo.

Edmodo integrates with other web 2.0 tools, and students can share and publish products they have created using ToonDoo or LiveBinders to the class Edmodo site. But the tool's best feature is the ability to build an online community, where students can ask questions about assignments or have discussions after school and get responses within a few minutes.

Digital games and simulations. Roberta Roffo, a computer teacher at Tilton Elementary School in Haverhill, Massachusetts, quickly saw the value of using open educational resources to teach mathematics. In one lesson, Roffo used the National Library of Virtual Manipulatives site to introduce concepts and devise a series of differentiated lessons to help her second grade students master the mathematical concept of regrouping. She then created student-centered activities using two of her favorite open math game sites for kids, *Dositey* and *IXL*. Students loved having the opportunity to work at their own pace and test their knowledge through digital games and simulations. Students who grasped the material more quickly helped coach their peers through the content. Using open educational resources to personalize math instruction was a hit with students and teachers alike, and third grade teachers were soon asking Roffo to adapt her lesson plans for their students.

Virtual learning environments. Karen Bernier, an eighth grade math

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teacher at Ashland Middle School in Massachusetts, used what she learned through Project ABLE (Achieving Blended Learning Environments) to transform her teaching and her classroom. Bernier was a self-proclaimed “newbie” to blended learning, but the success she had making information, digital resources, and pre-assessments available to her students 24/7 through her school’s Moodle site made her eager to learn more.

When the Project ABLE training introduced her to the flipped classroom, Bernier decided to give it a try. She first relied on the video resources of Khan Academy but slowly integrated her own vodcasts and other free resources as well. She created a whatever/whenever/wherever online learning environment and blended it into her student-centered, project-based face-to-face classroom.

She was amazed at the impact this shift in approach had on her students. They were engaged and excited about learning math, sometimes even bringing parents to their online classroom to show off what they were learning. Bernier saw students who had struggled with math move to a higher level of competency by the year’s end. She is not only giving her students a rigorous mathematics education and raising proficiency rates, she’s also giving them the opportunity to master a host of digital age literacies.

The rationale for using these technology-enhanced lessons is clear. They help students write more effectively when they plan, revise, edit, and rewrite. They develop visual and multimedia literacy. They encourage self-directed, self-motivated learning experiences. They engage students with subject-specific content, and the learning takes place at all levels of Bloom’s Taxonomy. Best of all, students can apply the digital age competencies they gain to all subject areas and grade levels, ultimately preparing them for success in our technology-driven world.

Resources

Diigo: www.diigo.com
Dositey: www.dositey.com
Edmodo: <http://edmodo.com>
Edmodo example: http://wps.edmodo.com/public/grade-7-cyberbullying/group_id/287598
Edmodo tutorials: <http://help.edmodo.com/userguide>
Fotobabble: www.fotobabble.com
Glogster: www.glogster.com
IXL: www.ixl.com
Khan Academy: www.khanacademy.org
LiveBinders: <http://livebinders.com>
LiveBinders example: <http://livebinders.com/play/play/103765>
LiveBinders tutorials: <http://livebinders.com/?type=video>
Moodle: <http://moodle.org>
My Fake Wall: <http://myfakewall.com>
National Library of Virtual Manipulatives: <http://nlvm.usu.edu>
Photo Story 3: www.microsoft.com/download/en/details.aspx?id=11132
Photo Story 3 screencast: www.youtube.com/watch?v=8oMfzn1I72s
Photo Story 3 student project example: www.youtube.com/watch?v=tLrrGHPnWxQ
Photo Story 3 tutorial: <http://tinyurl.com/7x2qn5h>
Photovisi: www.photovisi.com
Popplet: <http://popplet.com>
Prezi: <http://prezi.com>
Scrumblr: <http://scrumblr.com>
ToonDoo: www.toondoo.com
ToonDoo student project example: www.toondoo.com/cartoon/3340814
ToonDoo tutorial: <http://tinyurl.com/79as5lw>
Virtual High School Global Consortium: www.goVHS.org
VoiceThread: <http://voicethread.com>



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