The EdTech Books User Guide

Tutorials, Tips, and Troubleshooting for the Open Textbook Platform

Julie Irvine & Royce Kimmons

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Endorse

Introduction

About EdTech Books
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About EdTech Books

Open Educational Resources   EdTech Books   Online Publishing Platform   User Guide

EdTech Books is an online publishing platform dedicated to providing access to open educational resources (OER). These resources are more accessible and flexible for students' needs than traditional print books. At EdTech Books, we strive to host and create content that is beneficial to both students and educators. This user guide provides simple walkthroughs of the various features available on EdTech Books. With this user guide, you will be able to create, edit, and publish your own OER!

Account Management

EdTech Books   ORCID   Profile Management   Home Screen   Google Login

You can sign into EdTech Books using either Google or ORCID. Once you have signed in, you can edit your profile.

Profile Management

Click on the profile icon in the top right corner of the home screen, and you will be directed to your EdTech Books profile. On your profile you can

- update your email,
- add your degree or job title,
- link your personal website or professional IDs,
- create a bio,
- upload a profile photo, and
- preview your biography.

Creating a Book

Home Screen   Content Creator Option   Booklist

To create a book, log in to your account and choose the Content Creator option for your user type. On the home screen, click on the box that says "Create a New Book." Type the name of your book in the "Title" box, and press "Create Book." Your new book will appear in your booklist on the home screen. Click on your book. This will bring you to the book's cover, where you can start adding chapters.

Creating a Chapter

Google Docs   EdTech Books   Menu Bar   WYSIWYG Editor   Table Contents

To create a new chapter for your book, click the menu in the top right corner of your screen, and then select the "+ Chapter" option. A screen like the image below will pop up, and you can enter the title of the chapter, along with the URL if you are importing an existing chapter from Google Docs. Press "Create Chapter," and the chapter will appear in the table of contents for your book.

If you have existing chapters in your book, the new chapter will appear at the end of the list in the table of contents. To reorder the chapters, select the "Organize" option in the menu bar. Find the chapter you wish to reorder, and use the arrows by clicking and dragging them to move the chapter up or down the list. Also, make sure to select the appropriate level for the chapter. (Levels can indicate separate sections or subsections of a book.)

Creating a Chapter with Google Docs

To import an existing chapter from Google Docs, make sure the document is shareable. In Google Docs, select the blue "Share" button in the top right corner of the screen. A screen like the one in the image below will pop up. Select "Change" under the option to make the document available to anyone with the link.
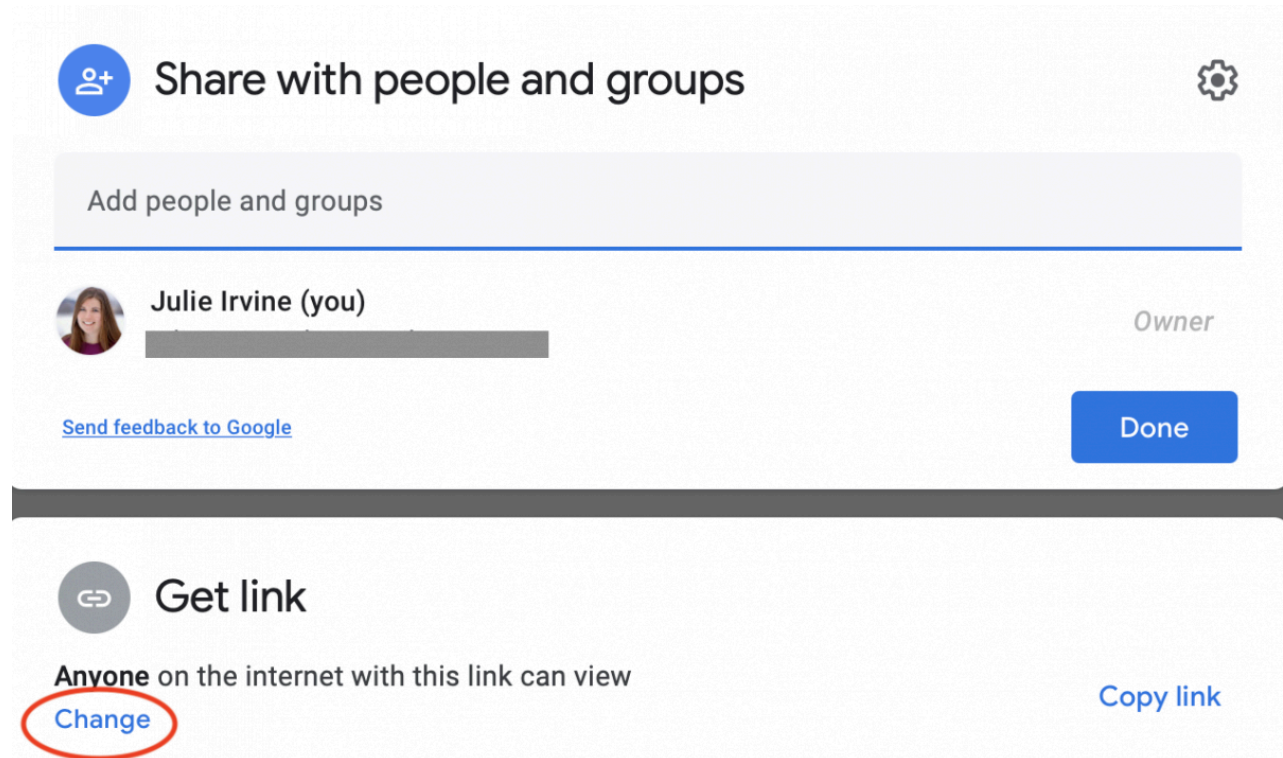
Copy the link that pops up after you select "Change." Using this link, navigate back to EdTech Books to create your new chapter. Follow the steps above, then copy the link from Google Docs into the space provided. Doing this should automatically populate the new chapter with the text from the Google Doc. Once your chapter is created, you can follow our suggestions for editing the chapter, ensuring quality, and publishing the chapter.

Creating a Chapter without Google Docs

If you do not have existing text to import into your chapter from Google Docs, you can follow the steps at the beginning of this chapter and type your new chapter in the WYSIWYG editor.

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Access it online or download it at https://edtechbooks.org/userguide/creating_a_chapter.

Author Management

EdTech Books   Book Authorship   Chapter   Authorship   Menu Button   Orship   Search Bar

Multiple authors can be added to a book or chapter in EdTech Books. Follow the steps in this chapter to add or remove authors.

Adding an Author to a Book

To add authors to a book, click the menu button on the cover of your book. Select "Authorship." This will bring you to a page that looks similar to the following image.
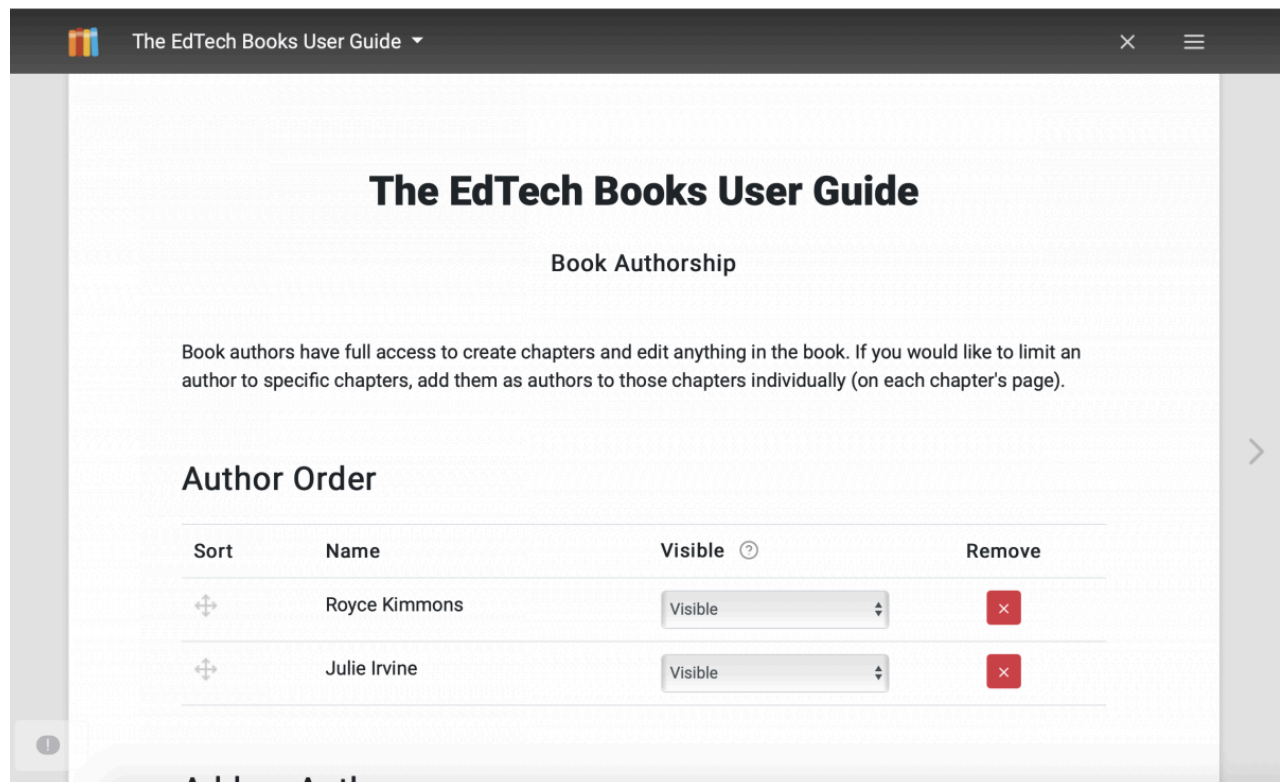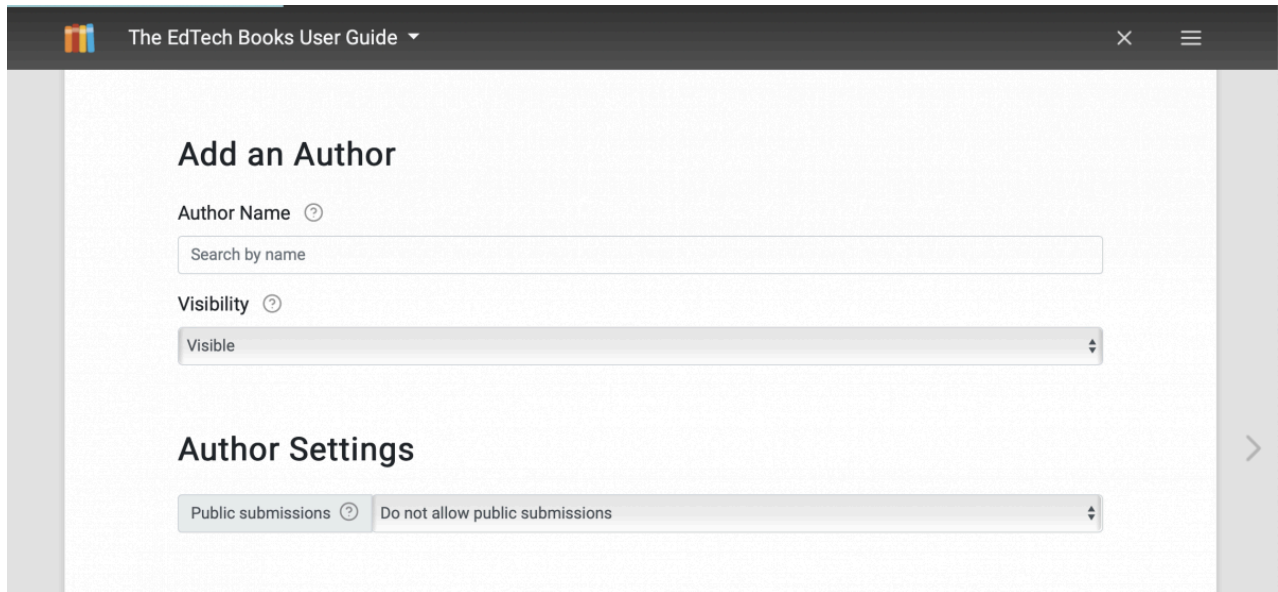
Screenshot of Book Authorship

This part of the page shows the authors that are currently visible. In this area, you can sort the order in which authors appear on the cover of your book, edit whether or not they are visible on the cover, or remove them altogether.

The next section of the screen allows you to add a new author to the book. The following image shows a search bar that enables you to type the name of any existing author in EdTech Books.

If the author has an existing account in EdTech Books, you will be able to click their name in the dropdown menu. To add them, simply click add author.

Screenshot of Add an Author

Once the new author has been added, the Author Order will update to include the new author. From there, you can edit the order or visibility of the new author.

Adding an Author to a Chapter

Along with book authors, individual chapters can also show authorship. If chapters of your book are written by different authors and you want their names to appear on that specific chapter, navigate to the chapter you wish to add the author to. Once there, click the menu, then "Authorship." The page will look almost identical to the book authorship page, but it will say "Chapter Authorship" under the title of the chapter. Once there, you can add authors, sort them, and edit their visibility as described in the section above.

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Ensuring Quality

Quality Assurance   Grammar   EdTech Books   Chapter Headings   Editing Process   Image Use

Proofing Tools   Quality Assurance Checklist   Tag Text Styles   Assurance   Callout Boxes   Headings

Paragraph Text   Preset Styles   Publication Manual   Punctuation   Spelling   Videos
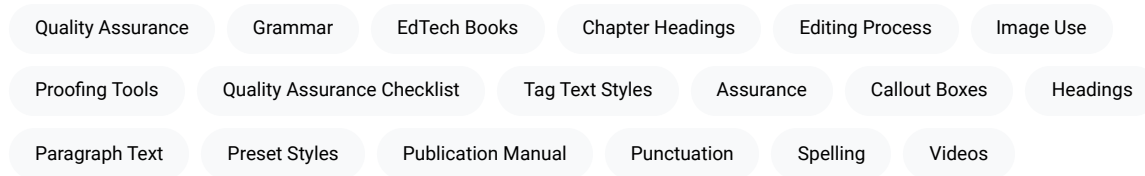
Editing Process

To ensure the quality of your book, we recommend using the following editing process as you prepare to publish your book.

1. Edit each chapter in your book. Check for grammar, spelling, and punctuation. Reference APA's publication manual if you have questions. (Reach out to us if you would like help editing, proofreading, or formatting your book.)
2. Tag text styles. EdTech Books uses preset styles for paragraph text, headings, figures and tables, references, and more.
3. Check for visual appeal. Use callout boxes, images, and videos to break up your body text.
4. Consult the Quality Assurance Checklist. Use this checklist before you publish your book to make sure your chapters are edited and accessible.

Proofing Tools

Tools for proofing your book can be found on the cover of your book, in the menu on the top right corner of your screen (see image below). The proofing feature of your book has four sections: quality assurance, chapter headings, image use, and callouts. The quality assurance tab is discussed in depth in the video below. The other three tabs provide simple ways to check the quality of your book before publication.
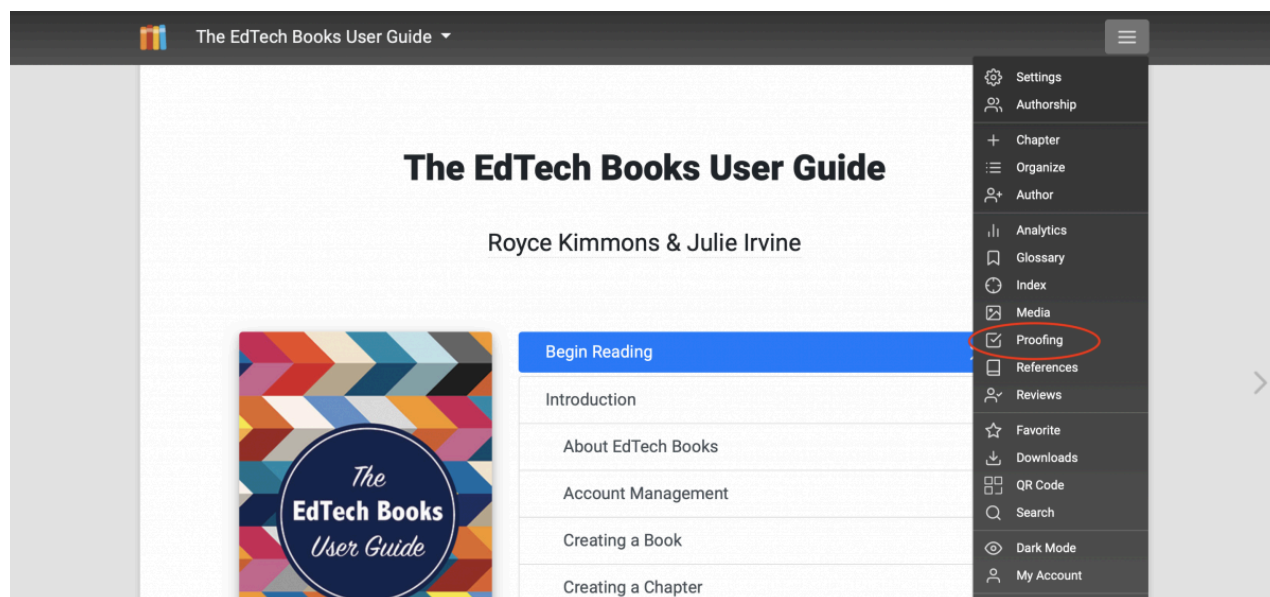
Quality Assurance

To ensure the quality of your book and its individual chapters, we provide a checklist for you to use as you prepare to publish your book on EdTech Books. To learn more about how to find and use the Quality Assurance Checklist, watch the video below.
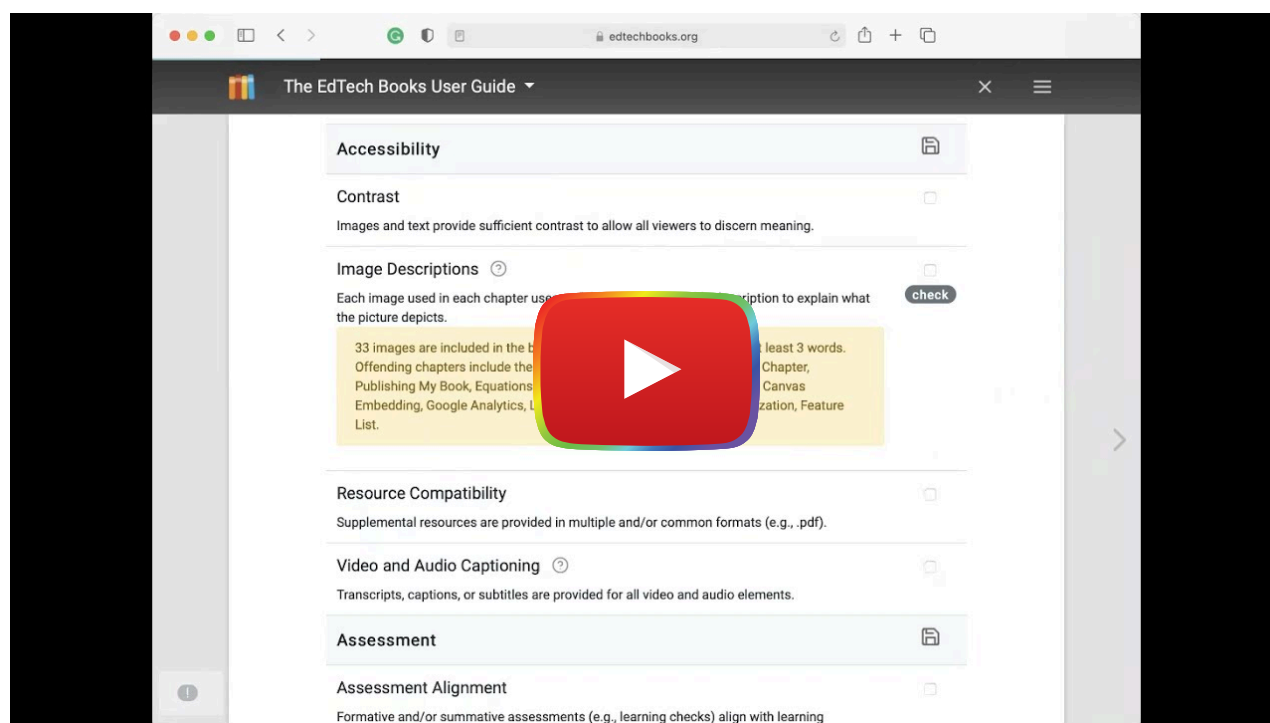
[Watch on YouTube](#)

Chapter Headings

As you write your book, use styles to easily and automatically format headings as you write your book. The Chapter Headings tab under the proofing tools will help you see the heading levels and capitalization of each heading in your book. Make sure you don't skip heading levels (i.e., jumping from an H2 to an H4 or beginning your chapter with an H3). If you find a heading you want to change, click on the title of the chapter you wish to edit, and you will be redirected to the chapter.

Image Use

The Image Use tab in the proofing tools allows you to see the images in each chapter, along with the text surrounding each image. Check that each image has alt text and there is a reference to the image in the surrounding text.

Alt Text

Alt text is a short description of the contents of the image. Screen readers include the alt text so images become more accessible to those who are visually impaired. To add alt text to an image, open the WYSIWYG editor, click the image, and click the image icon at the top right of the editor toolbar. Clicking this icon will bring up a new window. Enter the alt text in the "alternate description" textbox.

Callouts

The Callouts tab shows the callout boxes in each chapter. This enables you to easily check for consistency in the styles of the callout boxes across your book.

Publishing My Book

Quality Assurance Checklist   Wysiwig Editor   Administrators   Dropdown Menu   Indexing   Navigation

Site Maps

This chapter explains how to publish a book and its individual chapters.

Publishing a Chapter

After each chapter in your book has gone through the process of ensuring quality, you are ready to publish it! To publish individual chapters, open the chapter you wish to publish in the WYSIWIG editor, then scroll to the bottom of the screen. You should see a dropdown menu titled "Visibility" like the image below. Change the setting from unpublished to published, and then save your work.
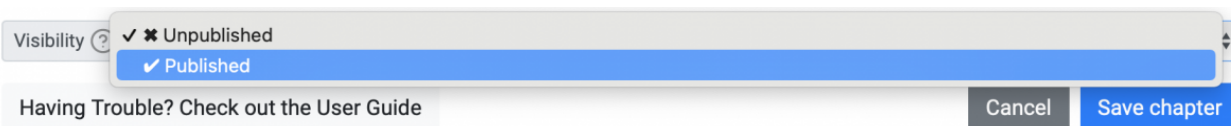
Publishing the Book

Only site administrators can currently publish a book, which is necessary for it to be included in site maps, navigation, indexing, etc. If you have gone through the quality assurance checklist and are ready for your book to be published, please contact a site administrator.

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Essential Concepts

User Interface & Visual Design
Writing For The Web
Copyright and Open Licensing
Color Theory in Experience Design
Multimedia Design

User Interface & Visual Design

Jennifer Haugsjaahabink

Planning   Googledoc   Mindmap   Mindmup   Class Assignments   Educational   Educational Website

Online Resources   Professional Learning Network   Web Design   Website Development
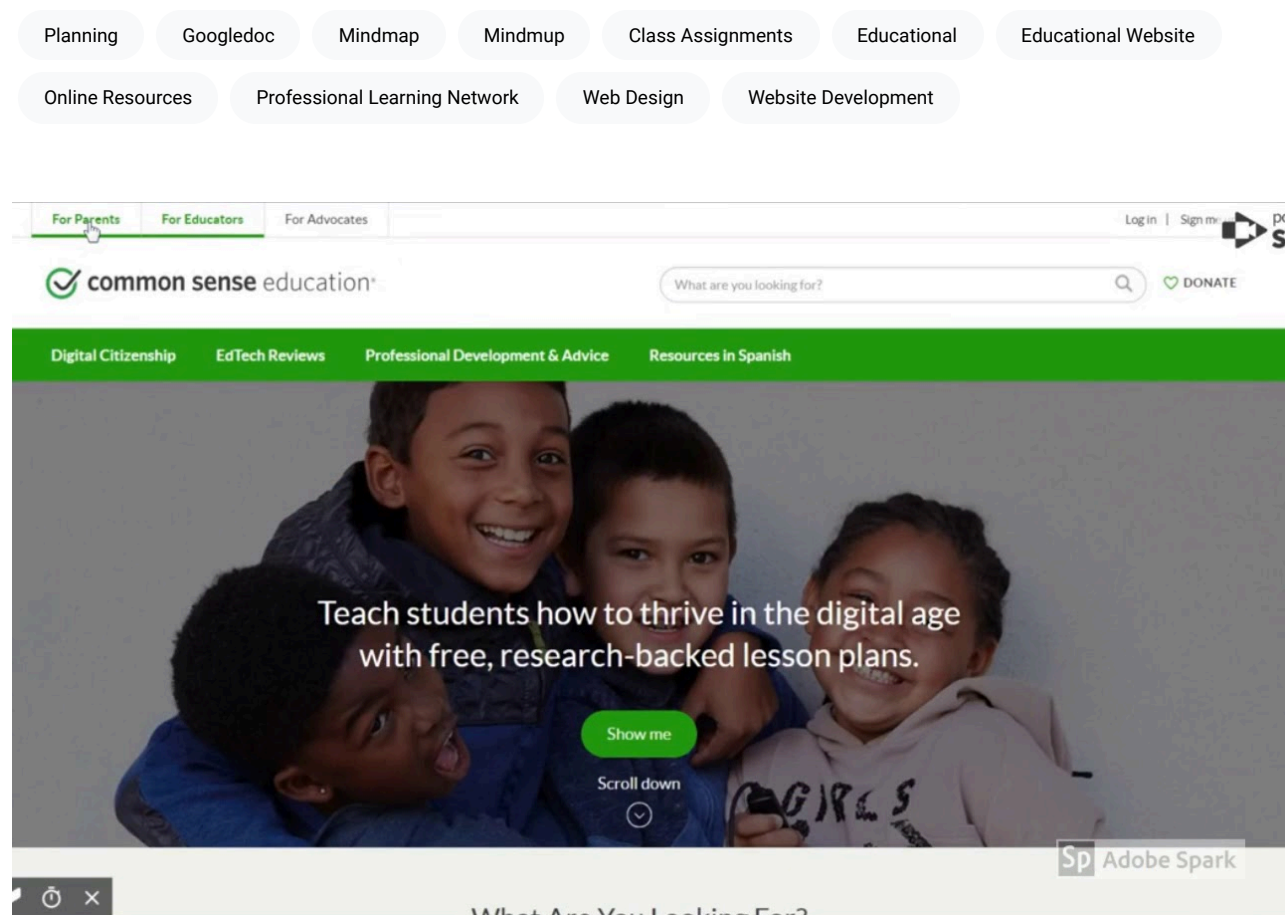
Purpose

Yogi Berra once said, "If you don't know where you are going, you'll end up someplace else." Before you start designing your educational website, it is important to identify the purpose of your site so that you know exactly where you are going to end up in terms of the finished product. To help you identify the purpose of your site, consider two things: 1) **Who are you expecting to visit your site?** (e.g., Students? Parents? Administrators? Colleagues? Your professional learning network?) and 2) **What do you want your audience to be able to do on your website?** (e.g., Access class assignments? View student work? Learn about your teaching practice?)

Designing an educational website is much different than other types of website development. You are not trying to get users to buy your product. Instead, your target audience is coming to your website for a reason - what is that reason? You may be setting up a site for your students to keep track of what is going on day-to-day in the classroom or for

students to find online resources and activities that extend learning related to class topics. Your website may end up serving several different purposes, but starting with just one can help simplify the initial design process. Whatever the purpose of your website is, keep that purpose in mind at all times and continually check that you are meeting your goal.
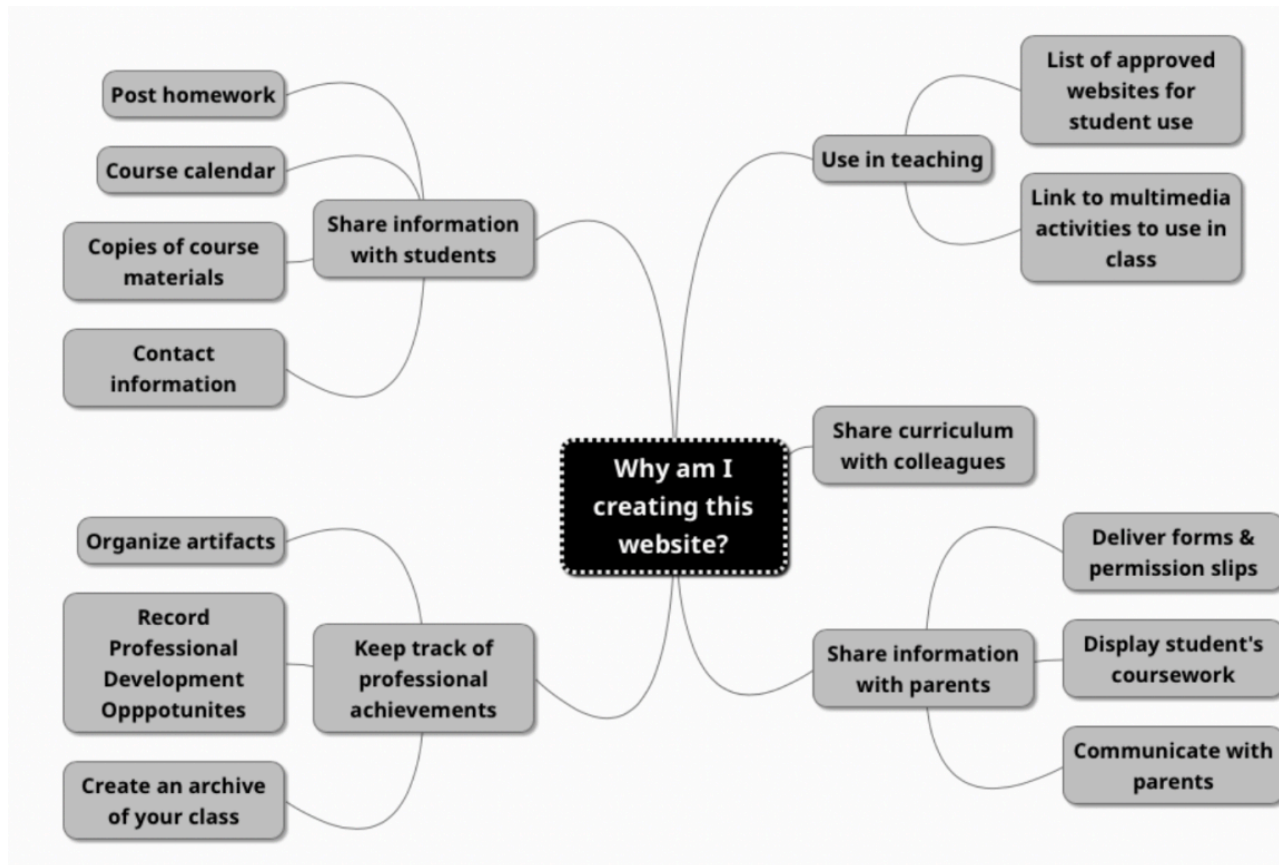
Figure 1: Mindmap of different reasons to create an educational website (created using Mindmup).

Planning

Building a website without some degree of planning can lead to frustration. If you don't have a plan, you may waste a lot of your time setting up your page with images, content, and menus only to find out that you need to start over because the setup does not satisfy the main purpose of the site. To reduce potential frustration, start your web design process with **researching** and **sketching**. For research, explore various websites, including ones that are similar to what you'll be producing. Look for sites that have a similar purpose as yours and identify sites that you found easy to use or particularly memorable. Jot down highlights from those sites that you could incorporate into your site design. You don't have to include everything at first. Just keep notes about what you liked and you can add features in over time.
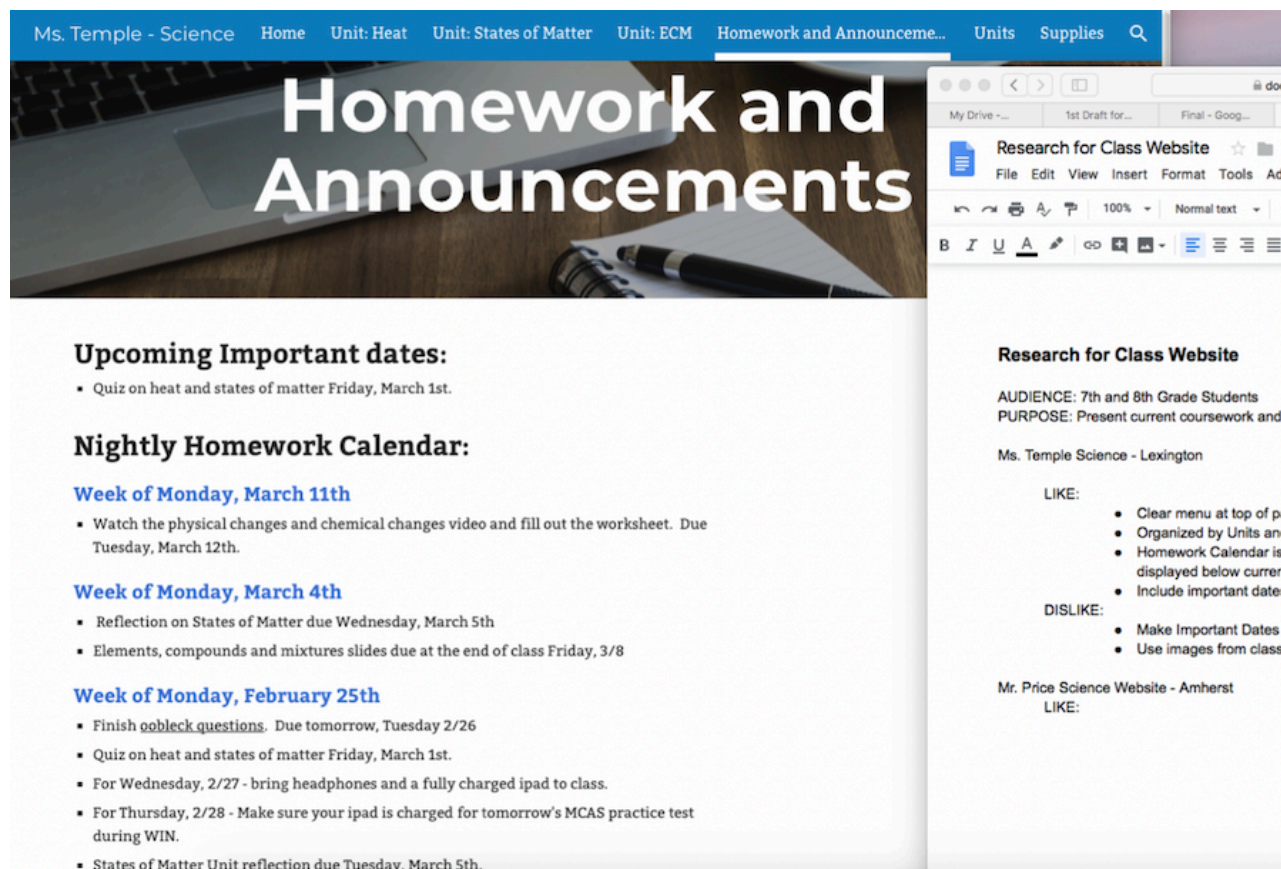
Figure 2: Using GoogleDocs to take notes on Likes & Dislikes of different websites.

Next, sketch out your website organization and visual design. Take a piece of paper and a pencil (several Post-Its work, too) and sketch the layout and content for each page. It is a lot easier in the beginning to rearrange post-it notes or switch around your layout on paper.
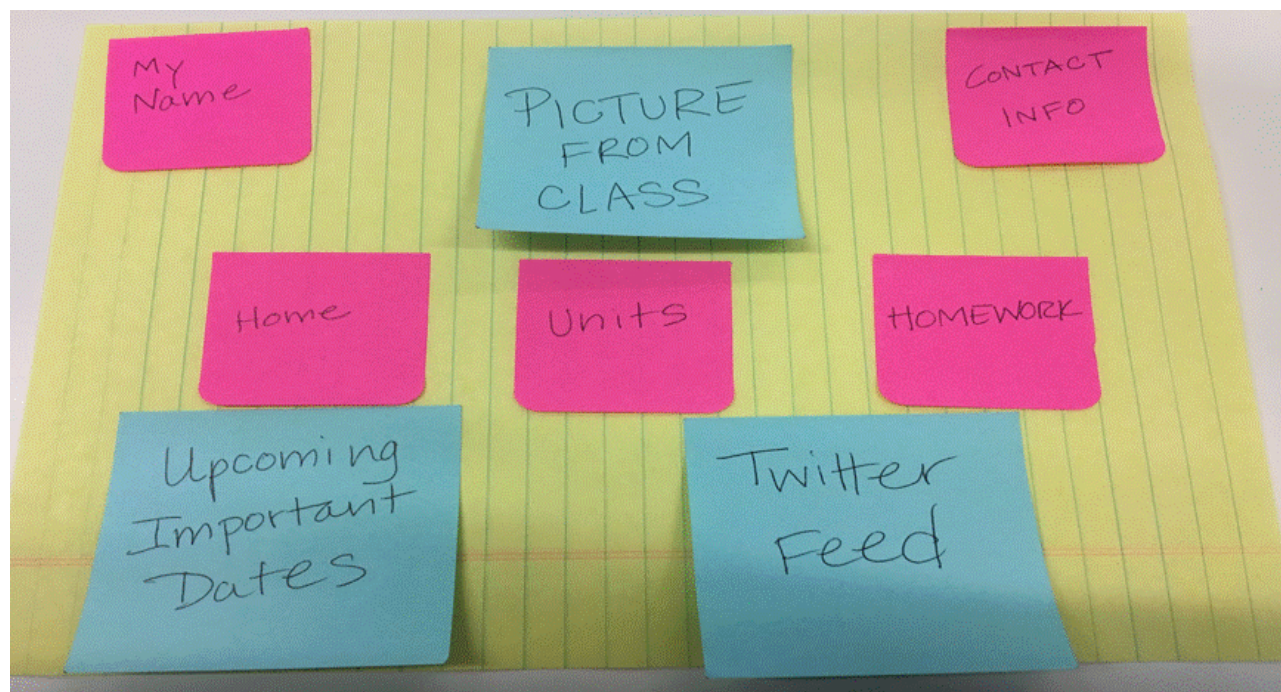
Figure 3: Use paper and pen to experiment with different layout options.

Visual Organization

Layout

The layout of a website defines the location of typical items on a website, including the menu, the banner or logo, the navigation bar, contact information, and social network icons The layout involves decisions about the position of each item on the page, the size of images and text, and placement of visuals. If you were to look at popular websites (e.g., Google, Amazon, and National Geographic) you would find **these typical items in similar locations**. On many websites, the menu, navigation bar, and logo are found near the top of the page. Contact information and social media icons can be found at the bottom of the page or sometimes in the upper right corner of websites.
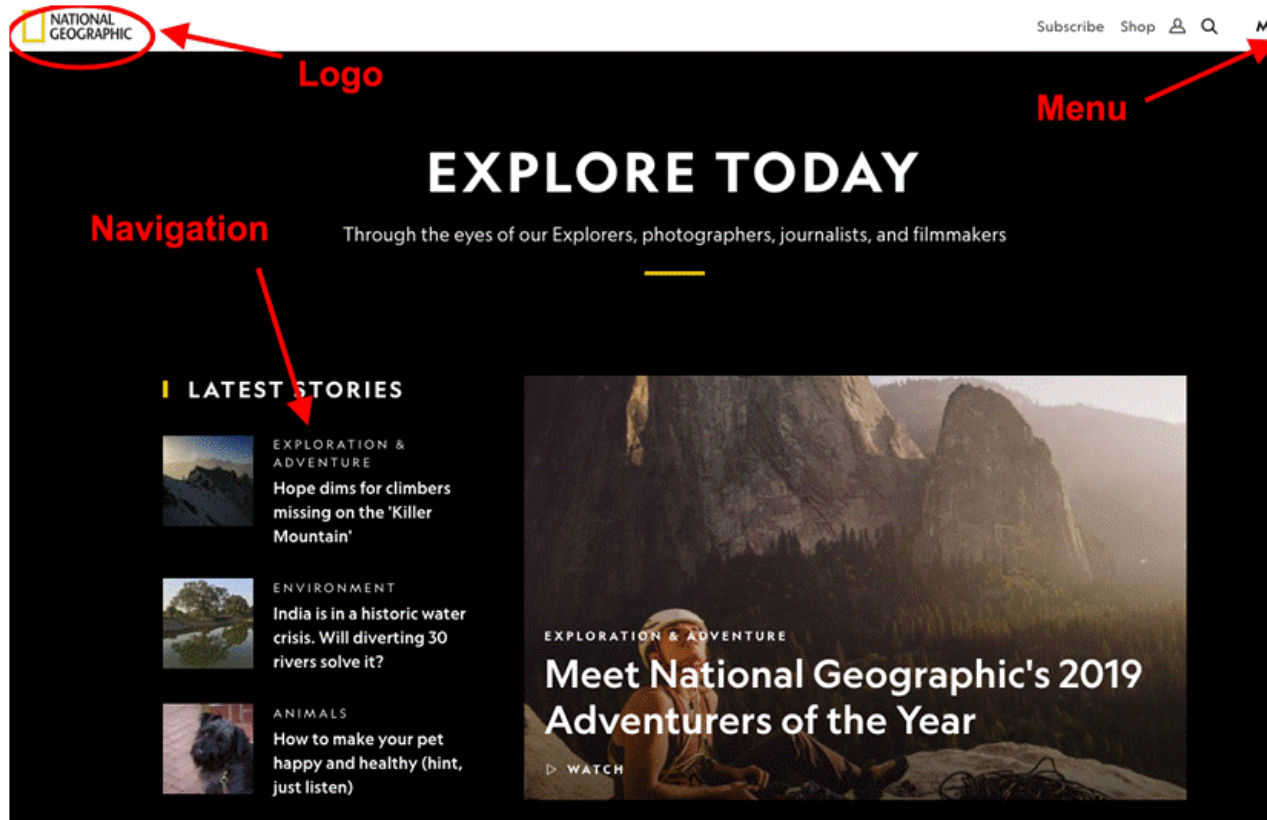
Figure 4: Screenshot of the top of National Geographic's homepage, noting location of logo, menus and navigation bar.
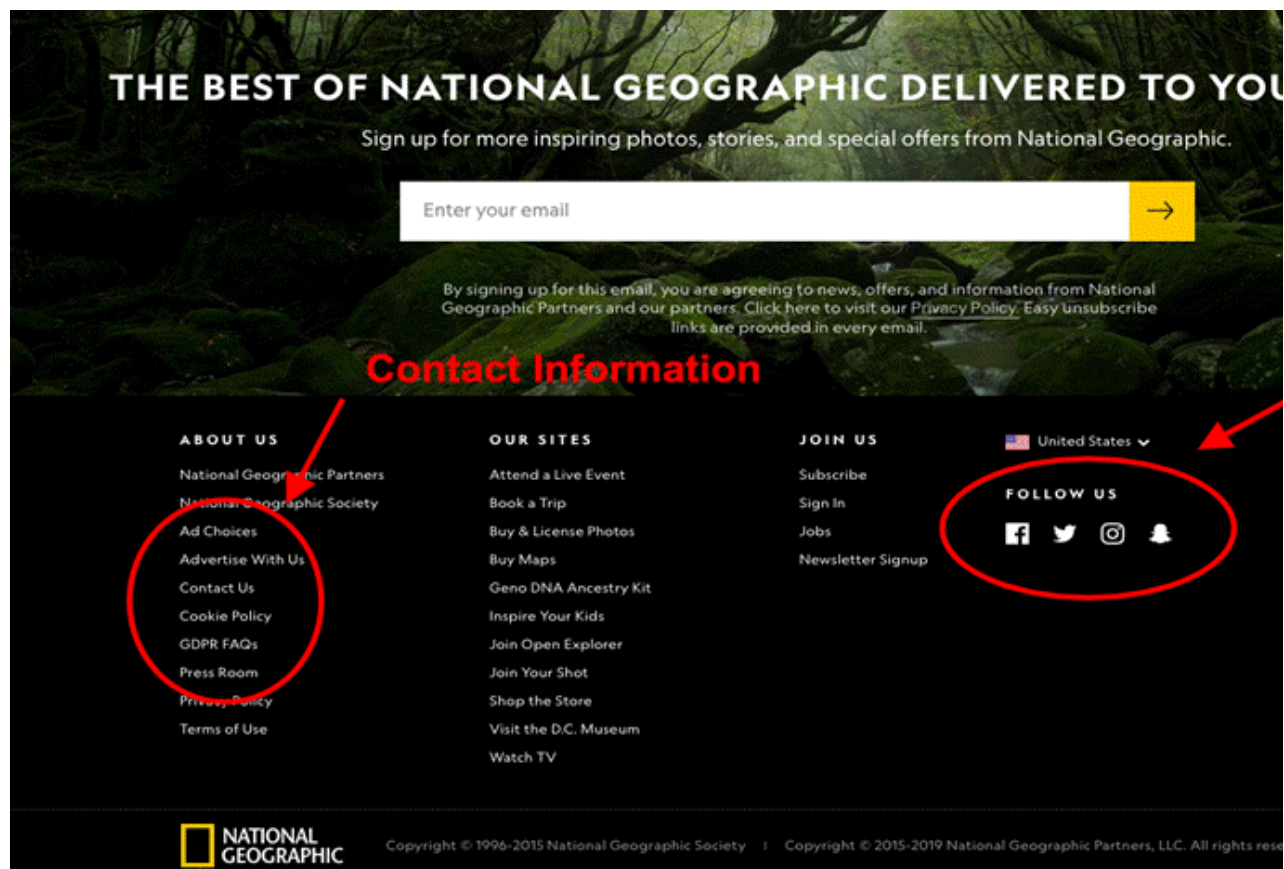
Figure 5: Screenshot of the bottom of National Geographic's homepage, noting location of contact information and social media icons.

Your visitors are most likely well-versed with website layout without even knowing it. They will look to the same place for the items they need to move around your website. For example, on most websites, when you click the header, you will be taken back to the home page. Keeping with this tradition on your site will ease user navigation. The graph below depicts the typical placement of common website elements:

Web Design Layout Standards
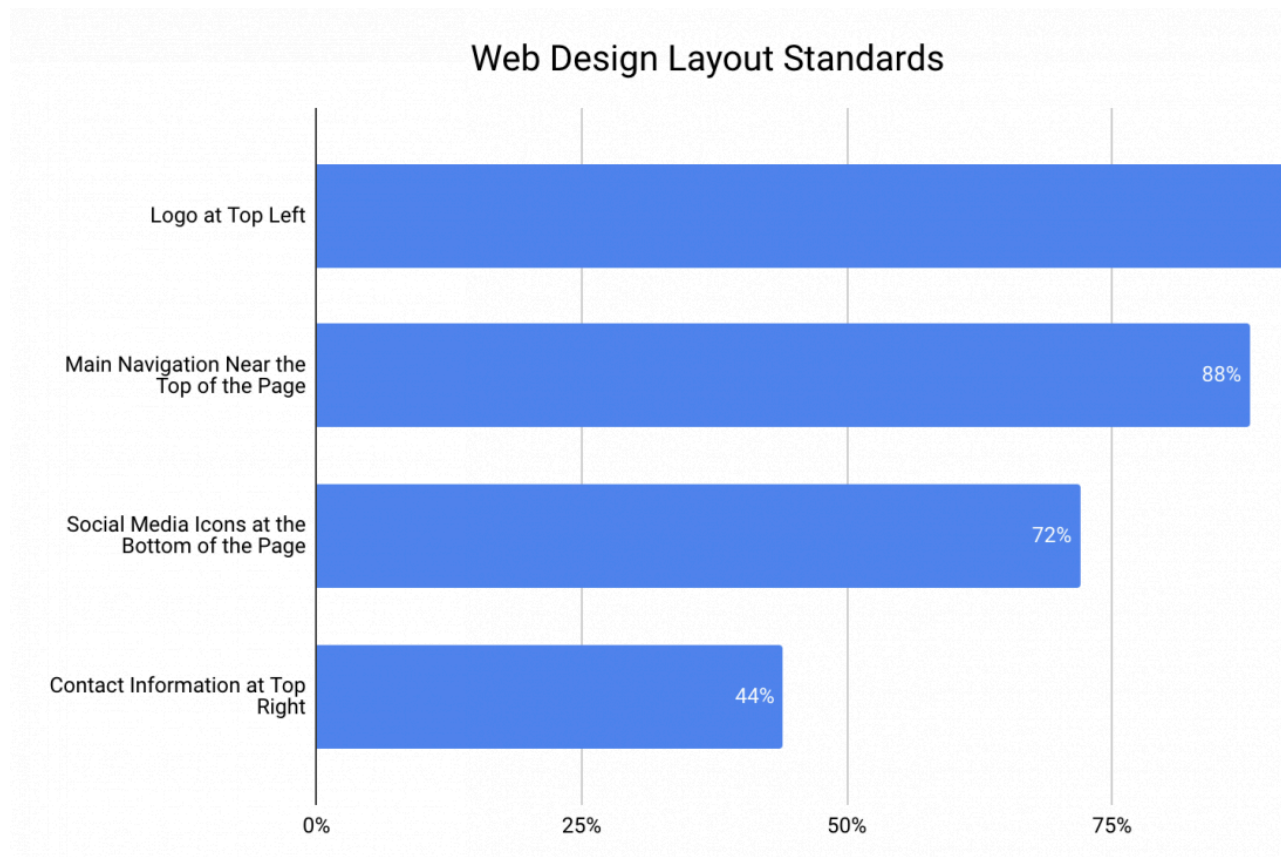
Figure 6: Chart illustrating the percentage of time the placement of key web design features are in a particular location. Figure adapted from Crestodina (n.d.) 27 Research-Backed Web Design Tips: How to Design a Website That Works.

Consistency

Your website should have a layout that is consistent from page to page (e.g., the menu, header, and search engine can be found in the same spot on every page of the website). This can make navigation easier for the user, as they will know where to look or click to move seamlessly throughout the site.
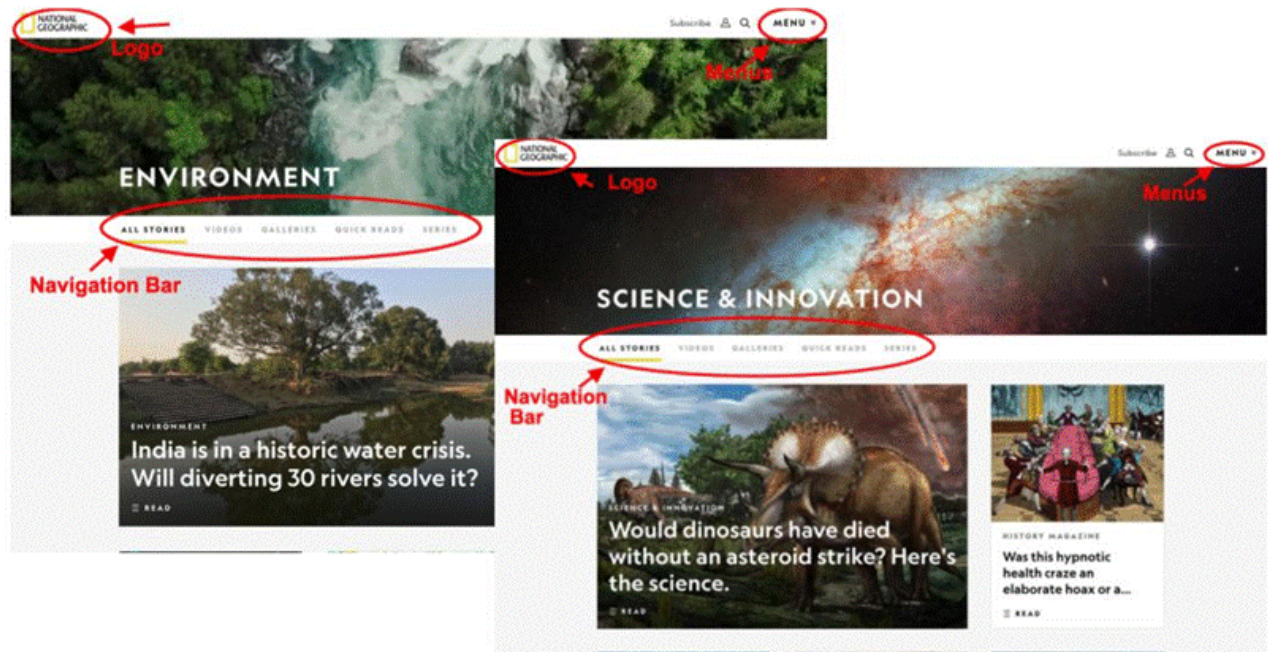
Figure 7: Pages within National Geographic's website, noting consistency in the placement of web design elements like logo, navigation bar and menus.

Above the Fold

When deciding on the layout of your site, consider what information or visuals will be "above the fold." This term originated from the design of newspapers - with only the upper half of the front page of a newspaper (the part above the fold) being visible to passersby, editors placed the **most important and captivating information** there to **attract attention and increase readership**. This concept applies to web design, but rather than a physical "fold," you have the bottom of the screen. Anything that requires scrolling is below the fold. Since people spend only a few seconds deciding whether to stay on a website, you need to capture their attention and present the most relevant and interesting information "above the fold" on every page. You could do this by placing a short video at the top of the page, an attention-grabbing heading, or intriguing visuals or text. Keep in mind that the "fold" will be different depending on what device your visitor is using (see Figure 8). You need to be aware of the fold and design your page so that your most important content lies above the fold (to learn more, explore the Above the Fold vs. Below the Fold article).
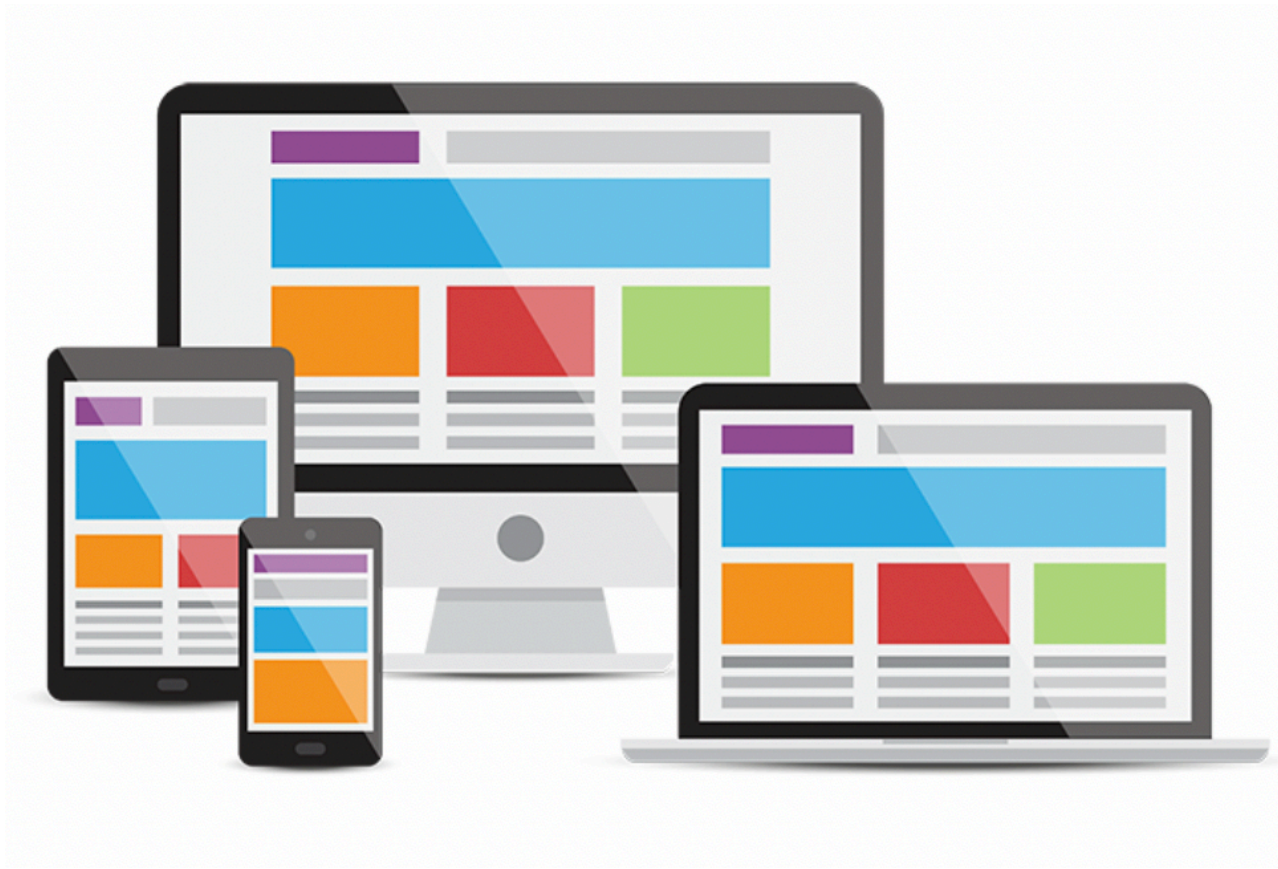
Figure 8: Your home page will look different on different devices - phone, tablet, laptop and desktop. The fold also changes with each device type. Vector Designed By cornecoba from PNGTree.

Navigation

When designing the navigation for your site, keep in mind your website's purpose and make sure that you are using the simplest and clearest method of navigation to accomplish that goal. You will begin the design of your website with your home page - your main page - the page your users will see first. This page may not be able to accomplish everything. Your visitors may need to navigate somewhere else to find what they need. If a visitor is unable to find what they need in an easy way, they will become frustrated and may not use your website (or curse it everytime they do). When someone wants to find something in a book, they look to the table of contents. On a website, **navigation is basically your table of contents**. How can you help your visitors find what they are looking for? The main technique used in all navigation schemes is menus. It is important that they are well-organized, easy to use, and easy to find (remember, the table of contents is always in the front of the book!). Also, keep in mind the concept of "serial position effect." That is, most visitors will look at the first and last items in a list. So make sure the most important items needed to achieve your purpose are at the top of any menu list.
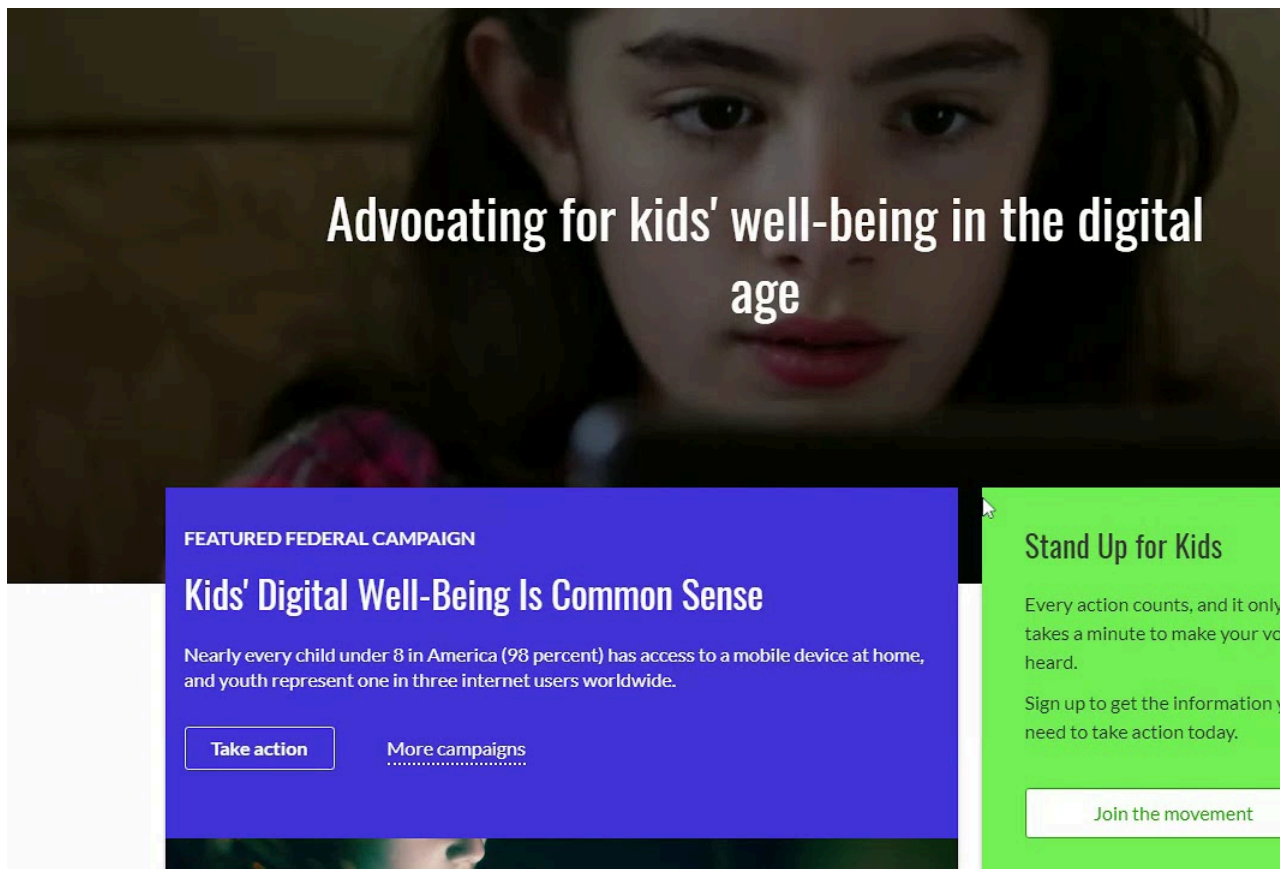
Figure 9: Video from using the Common Sense Media website to demonstrate scrolling, tabs and drop-down menu navigation

Search engines are also a popular navigation tool. Most web design tools, like Wordpress, allow you to embed a search engine within your site. If you opt to do this, make sure the search engine shows up on every page (consistency of layout) and that your pages consist of text (and images with alternative text descriptions) featuring key terms users would search for. For example, if a student visited your site and used the search engine to find "homework," but your homework page is titled "after-school work" then the search engine would not be a helpful navigation tool.

Another type of navigation is **within-page linking**. If you have a long page of text or images, it can be beneficial to break up the content by headings and place a table of contents at the top of the page that users can click on to go to specific sections (rather than having to scroll through the entire page). If you setup your website like this, make sure there's a "back to top" link at the bottom of each section so users can always get back to the table of contents and menu.

One other navigation method worth noting is the use of **accordions**. This method allows the user to view many heading at once and open as many sections as they want.

Figure 10: Video using the Royal Society of Chemistry website to demonstrate accordion navigationCaption

Navigation Tip: If you have your users navigate to an external site, make sure to have it **open in a new window or tab** so that they can always get back to your website.

Visual Design

Visual design covers a lot of territory. Often people hire graphic designers or professional website developers to create visually appealing website designs. Don't worry! Just like all the other pieces of your website, you can do this too. Remember to keep it simple. You can always go back and add complexity. The main purpose of your website shouldn't be lost among cool visual effects. Your visual design should not confuse your visitors while they try to navigate your website. In fact, the **visual elements should help lead the user to the key items on your website**. This is often referred to as **visual hierarchy**. Web design sites like Google Sites, Wix, Weebly and Wordpress take care of some of the visual design decisions by offering simple templates.

Some basic visual design elements are highlighted on this popular website:
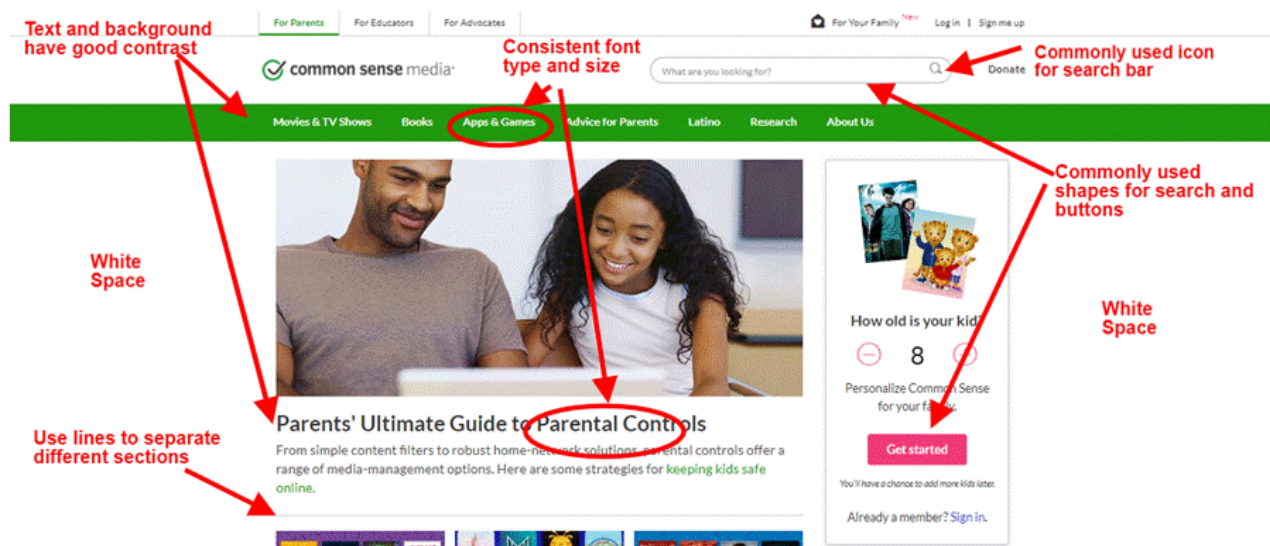
Figure 11: Screenshot of Common Sense Media homepage highlighting different visual design elements.

Guidelines for typical visual design elements:

Text

With text, make sure that it is easy to read. Most browsers default to a **16-point font size** to ensure readability and accessibility. You should use that as a guideline and make sure you don't go any smaller. Use larger text size for titles, headings, and subheadings, so that they stand out from the body of content. Even though it is tempting to use interesting fonts, remember that your website needs to be readable! It is good practice to **limit yourself to no more than 3 fonts** and maintain consistency in font style from page to page.

Color & Contrast

It may be tempting to use lots of color on your website, however **too many colors can be overwhelming and distracting**. Use colors to guide your visitor's eyes to the most important parts of your page. Whatever color palette you choose, whether it is black and white or cool blue tones, use the same colors throughout your website. A helpful color palette generator for websites can be found at Palletton. In terms of accessibility and readability, make sure that color isn't the only thing used to signal important information (e.g., use bold, bigger font size, or italics) and ensure that the colors you select provide enough contrast so that the text is easy to read. Use the **WebAIM Color Contrast Checker** to test the contrast of the colors of your fonts and background.

White Space

It is not necessary (or recommended) to fill every square inch on a page. Use white space on your page to **reduce visual clutter**, make the visual path clear to your user and allow them to find what they are looking for efficiently.

Icons

Use standard icons and shapes on your website. For example, "help" is understood to be represented by a question mark and "home" is often depicted by an image of a house. The Creative Commons website features a list of free (with attribution) icons you can use on your site.

Accessibility

Educational websites are for everyone! Some of your users may have disabilities and your website needs to allow them to access the information you have presented. A recent study of more than 6,000 school and district websites found

that the vast majority failed to be fully accessible ([Accessibility in Mind? A Nationwide Study of K-12 Web Sites in the United States](#)). Use the **[Accessibility Statement Generator tool](#)** to ensure your website is accessible and to put a statement on your site showcasing that you value accessibility. Also, for more information see **[Chapter 5: Digital Accessibility](#)**.

Figure 12: Image of disability symbols - websites must serve and accommodate all people.

Adaptability

Your visitors may be accessing your site using a desktop, laptop, tablet or mobile device. It is crucial that your site work on all of the above. The purpose of your website cannot be lost or inhibited because of different screen sizes. Some of the free website building programs (Wix, Wordpress, Google Sites) incorporate a design or template that is responsive to any device. When thinking about a mobile device, make sure that the text remains legible, your most important information lies above the fold, and that buttons are not too small to be pressed by an average fingertip. Also, make sure to **test your website across multiple devices and browsers**. The big 5 browsers are: Chrome, Edge, Firefox, Opera and Safari ("How to Design a Website", 2017). You must test every path, link, and button for correct function.

Figure 13: Be sure to test that your website responds predictably on all types of devices.

User Interface & Visual Design Checklist

- Declare target audience of website
- Narrow down main purpose of website
- Research other websites
- Sketch out website design
- Build website layout
- Establish clear and easy navigation
- Main purpose remains clear
- Utilize simple visual design
- Make sure to address accessibility
- Test website on different devices
- Test website on 5 different browsers
- Test all links, buttons and navigation path
- Fix any issues

References

Worts, Stephani. (2017) How to Design a Website When You are Not a Website Designer. Retrieved from
https://www.godaddy.com/garage/design-website-youre-not-website-designer/

Crestodina, Anthony. (n.d.) 27 Research-Backed Web Deisgn Tips: How to Design a Website That Works. Retrieved from
https://www.orbitmedia.com/blog/web-design-tips/

Lepard, C. (n.d.). 5 Crucial Web Design Tips for a Professional Site. Retrieved from https://edtechbooks.org/-kZA

Lynch, P.J. and Horton, S. (2017) Web Style Guide. Retrieved from https://edtechbooks.org/-wZd

LinchPinSEO. (n.d.). Tips to Make Your Web Design Look More Professional. Retrieved from https://edtechbooks.org/-Xhc

Sellers, O. (2018). Web Design Best Practices for Greater Business Success. Retrieved from https://edtechbooks.org/-wBn

U.S. Department of Health and Human Services. (n.d.). User Interface Design Basics. Retrieved from https://edtechbooks.org/-pCt

Previous Citation(s)

Haugsjaahabink, J. (2019). User Interface & Visual Design. In T. Trust, Web Design Basics for Educators. EdTech Books. Retrieved from https://edtechbooks.org/webdesign/interfacedesign

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Writing For The Web

Torrey Trust

Bullet Points   Educational Tools   Educational Websites   Font Size   Formatting Techniques

Introduction

The use of websites as educational tools provides a unique way for students to access material in a variety of different formats. However, while educational websites may increase access to information, they also present their own challenges. Research suggests that **only 16% of people read webpages word-for-word**. Most people scan ([Nielson, 1997](#)). Additionally, people often spend only a few seconds exploring a site before determining whether to stay or leave. And, with the distracting world of the Internet, where a funny cat video is only a click away, it is even more challenging to maintain readers' attention on a website.

When you are writing for the web, you must create content that is captivating, engaging, and informative while also being easy to scan. This means writing for the web looks very different than writing for print. Check out our chapter overview video to see an example of how to transform a traditional print paragraph into text that is easy to read on a website.
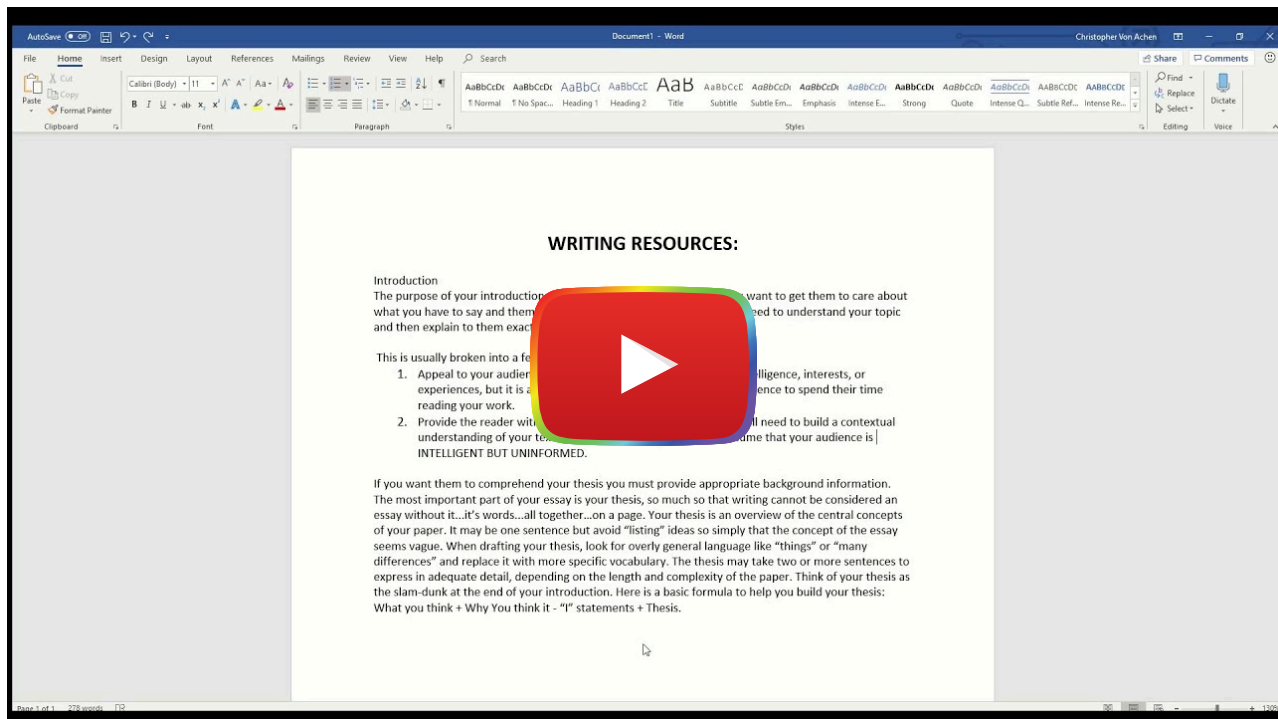
This chapter will showcase the tricks you need to write web content to capture and maintain the attention of your readers. We will begin by discussing how to use formatting techniques (e.g., whitespace, bold, italics, bullet points, headings, and font size) to facilitate quick reading and to draw the attention of the reader to key information. Then, we will cover how to use language in a way that appeals to your audience. Finally, we will showcase tips for writing subject specific content to engage learners.

Formatting

The way you organize and format a website is the first thing visitors will notice. It's essential to design your website to be easy on the eyes. Websites that have a lot going on (often referred to as "busy") are difficult to gather information from and can turn people away from your page. If viewers are overwhelmed and can't figure out what to focus on, how to find information, or where to go on the site, they will make an immediate exit. The following section offers tips and ideas to improve how your website is read by visitors.

White Space

One way to avoid making your website look busy is by utilizing white space. White space is the unfilled space on your website. Keeping some space free of images or text helps to break up your page to make it less cluttered.

In the example below, the Lings Cars site fails to utilize white space as a means of breaking up the content for two reasons. First off, there is very little background space - most of the website has words, pictures, or menus on it. The remaining background has a complex pattern that is jarring to the eyes. This combination creates a website that is difficult to look at for more than a few seconds, which is not ideal when you want visitors to stay on your webpage.

In contrast, the [Pisaccochronicle site](#) featured below uses a lot of white space, which makes it easy to quickly scan. By minimizing content and maximizing white space, readers have only a few options (read, move to the previous or next page, or explore the menu). Rather than feeling overwhelmed, viewers are encouraged to read, scroll, and explore.

Breaking Up Text

Not every website has to be as simple and limited in text as The Pisacco Chronicle. Your website can include paragraphs of text. However, if you are planning to write a lot of text on a webpage, one way to make it easy to read is to break up the text into smaller paragraphs. Take a look at popular news sites, like the New York Times or Dallas News,

which are known for producing long articles of text, and you'll see that most often paragraphs are 2-3 sentences with white space or visuals in between. Another popular technique is bullet points. Using bullet points with short sentences:

- Breaks up paragraphs of text.
- Makes it easy to scan.
- Creates white space.

Take a step back and look at this paragraph again...what captures your attention? The bullet points stand out because they create a break in the text and are easy to quickly scan.

Accessibility tip: If you use bullet points, make sure to put a period at the end of each point. This allows screen readers to know that the sentence has ended.

Typographical Emphasis

Remember: "People rarely read Web pages word by word; instead, they scan the page, picking out individual words and sentences" (Nielson, 1997, para. 1). Since readers tend to scan webpages or skim right over large chunks of text, you can use typographical emphasis, such as **bold**, *italics*, font color, style, and size, to direct their attention to the most important information. Take a step back and look at this paragraph - what is the first word to capture your attention? Likely one of the bolded words since those stand out in contrast to the rest of the words. Italics can be used to capture attention, but not in the dominant way of bolding. **Use bold to draw attention to the most important words and phrases** and *italics to make any additional information standout*.

Changing the font color will also draw attention, but be wary of using color only to highlight key information as that may leave out individuals who are colorblind or visually impaired. While shifting the font style and size are other ways to emphasize text, limit your use of this technique. The more you change style and size, the more overwhelming the text becomes to read.

Inverted Pyramid

Using the "inverted pyramid" concept is another technique to captivate and capture the attention of website visitors.
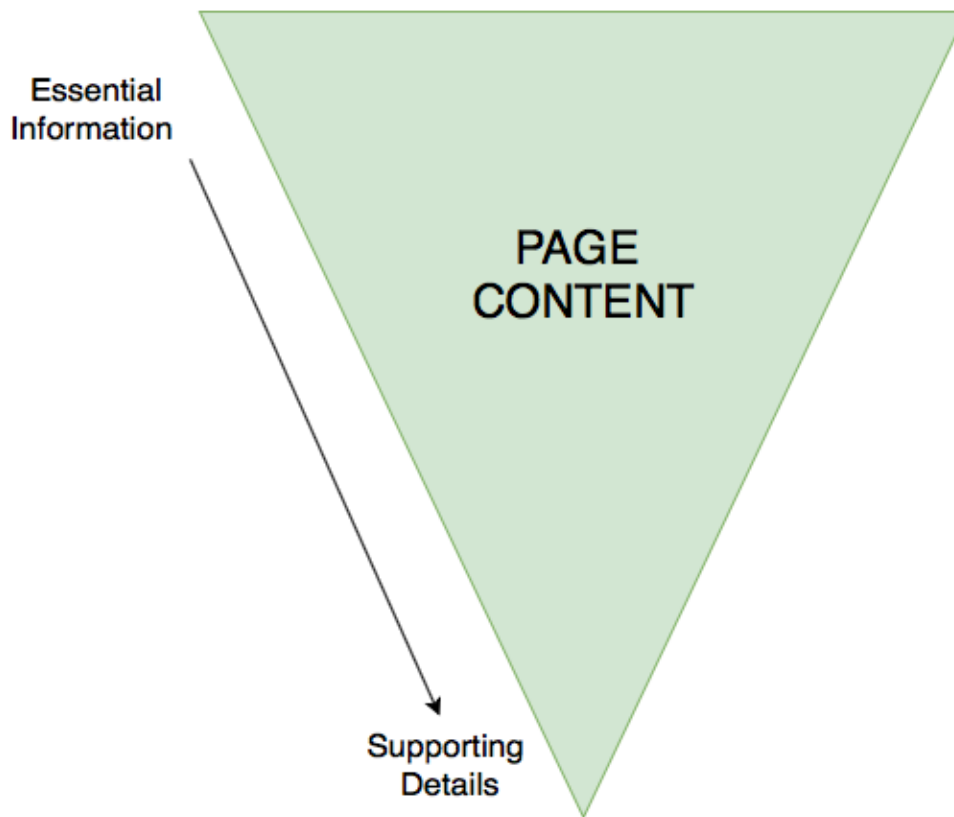
The idea behind the inverted pyramid is to have the most important information "on top" (within your first paragraph), with the details coming in the subsequent paragraphs. Readers often scan pages for information, so by putting the big takeaways early on, you will increase the chances the readers learn the information they need.

Subheadings

Subheadings give the reader a roadmap of your website and are critical for accessibility and screen readers. Using **subheadings helps chunk, or compartmentalize, ideas and concepts, while also reinforcing the hierarchy of information**. For example, if you have a website heading for "atoms," and subheadings for "protons," "neutrons," and "electrons," the subheadings reinforce that they are the parts of an atom. It's important to consider the size of font when making headings, below is the best way to determine it:

- **Heading One (H1)**: The main heading at the top of the page, should be the largest font
- **Heading Two (H2)**: The heading used to separate the content within your main heading, should be larger than your text font, but smaller than H1
- **Heading Three (H3)**: The heading used to make small points/asides, may be the same size as your text font, but bolded or italicized to differentiate from the text

It is worth noting that certain web design platforms (such as Wix, Weebly and Google Sites) automatically set the page title to Heading 1, but you will want to check the settings to confirm this. These platforms often also set the size and style of the headings, so all you need to do is use them!

Language Usage

The most important thing to remember is that writing for the web is different than academic or print writing. You should be using "half the word count (or less) than conventional writing" (Nielson, 1997, para. 3) on a webpage. With less

words to communicate the information you want to present on your website, you need to **ensure that every word that you use, the tone that you take, and the style of writing you employ increase the readability of your page**. Ultimately, the language you choose to use can influence whether a reader explores the content on your site or makes an immediate exit.

Know Your Audience

According to the University of Maryland Baltimore Website Manual ([n.d.](#)), "Most users visit a web page for 10-15 seconds. In that brief time, 80 percent will skim the page for keywords they already have in mind. Therefore, before you create content, it's important to understand your audience and anticipate what content and keywords they're trying to find" (para. 27).

Are you creating a website for your students? Parents? Colleagues? Administrators? Which words or phrases appeals to each of these groups? What type of tone and language do you use when communicating with each of these groups? You will want to keep this in mind when selecting the word choice and writing style for your website.

Use language that appeals to your audience. For example, if you are designing a website for your students, consider what language you use to capture their attention or give directions, and use this same style of language when creating your website content. Also, use a [readability checker](#) to ensure your content is written at a level that is accessible by your audience. By paying close attention to your language usage when designing your website and ensuring it will captivate your audience, you will keep them engaged in your content for longer.

Readability

The majority of Americans read between a sixth and ninth grade level (although your students might be even lower than this). Writing content that is too advanced or takes too long to understand will discourage visitors from exploring your website. **Using plain language that is simple, concise, and concrete "removes barriers between you and your readers"** (Loranger, 2017, para. 4).

While you may be thinking that using plain language will dumb down the content or lower student achievement, this doesn't have to be the case. You can still present the information on your site in a professional manner, while also ensuring it's easy to read or scan. Indeed, using plain language is "welcome by readers; in fact, studies show that it makes the writer look smarter. (If people understand more of what you're saying, they will likely feel that you make sense.)" (Loranger, 2017, para. 4).

While academic literature is made of long complex sentences and highly specialized vocabulary, **studies show that professionals today value content that is "clear and concise**" ([Loranger, 2017](#)). Modeling this type of language on your website will make it easier for students to access and understand the content.

- *Word Choice*: Keep your vocabulary simple and make your points as plainly as possible. Prioritize nouns and verbs - use adjectives and adverbs only when necessary. Get rid of unnecessary words (once you have written your content, read it again and see how many words you can delete, then repeat this process).

- *Sentences*: Your sentences should be short and to the point. Avoid complex sentences. If you need to break up a sentence, a dash is the most effective way to do it. But, it is best to split the sentence in two.

- *Paragraphs*: Paragraphs should be no longer than five sentences long and should only address the specific heading they are connected to. Any information that strays from the topic will confuse the readers trying to move quickly through your page.

HOW TO WRITE A LITERARY ANALYSIS ESSAY

The purpose of a literary analysis essay is to carefully examine and sometimes evaluate a work of literature or an aspect of a work of literature. As with any analysis, this requires you to break the subject down into its component parts. Examining the different elements of a piece of literature is not an end in itself but rather a process to help you better appreciate and understand the work of literature as a whole. For instance, an analysis of a poem might deal with the different types of images in a poem or with the relationship between the form and content of the work. If you were to analyze (discuss and explain) a play, you might analyze the relationship between a subplot and the main plot, or you might analyze the character flaw of the tragic hero by tracing how it is revealed through the acts of the play. Analyzing a short story might include identifying a particular theme (like the difficulty of making the transition from adolescence to adulthood) and showing how the writer suggests that theme through the point of view from which the story is told; or you might also explain how the main character's attitude toward women is revealed through his dialogue and/or actions.

REMEMBER: Writing is the sharpened, focused expression of thought and study. As you develop your writing skills, you will also improve your perceptions and increase your critical abilities. Writing ultimately boils down to the development of an idea. Your objective in writing a literary analysis essay is to convince the person reading your essay that you have supported the idea you are developing. *Unlike ordinary conversation and classroom discussion, writing must stick with great determination to the specific point of development.* This kind of writing demands tight organization and control. Therefore, your essay must have a *central idea (thesis)*, it must have *several paragraphs* that grow systematically out of the central idea, and *everything in it must be directly related to the central idea and must contribute to the reader's understanding of that central idea*. These three principles are listed again below:

DON'T DO THIS

What Makes a Good Literature Paper?

An argument

When you write an extended literary essay, often one requiring research, you are essentially making an argument. You are arguing that your perspective—an interpretation, an evaluative judgment, or a critical evaluation—is a valid one.

A debatable thesis statement

Like any argument paper you have ever written for a first-year composition course, you must have a specific, detailed thesis statement that reveals your perspective, and, like any good argument, your perspective must be one which is debatable.

Examples

You would *not* want to make an argument of this sort:

> Shakespeare's *Hamlet* is a play about a young man who seeks revenge.

> That doesn't say anything—it's basically just a summary and is hardly debatable.

Sidebar navigation:
Writing in Literature
Writing in Literature Introduction
Literary Terms
Literary Theory and Schools of Criticism
Writing About Fiction
Writing About Literature
  Introduction
  Literature Topics and Research
  Formatting
Writing in Literature (Detailed Discussion)
Writing About Poetry
Image in Poetry
Poetry: Close Reading
Writing about World Literature
Writing About Film: Terminology and Starting Prompts

DO T

Tone

Establishing a rapport with your learners can lead to good learning outcomes. The same is true online. The tone that you take in your writing for the web will determine how your students "hear" you. Keep this in mind and follow these guidelines to establish an appropriate tone:

- Choose a tone that mirrors how you interact with learners in real life.
- Establish a tone that is consistent and appropriate for both age and context.
- Don't be too rigid. This can be off-putting and offensive (University of Maryland Baltimore, n.d.).
- When it comes to tone, value brevity over voice and stay consistent.
- Write in an active voice and maintain a uniform verb tense throughout your work.

The woman drove the car down the hill. **DO THIS!**
(ACTIVE VOICE)

The car was driven down the hill by the woman. **NOT THIS!**
(PASSIVE VOICE)

Credibility

As your students scroll through your educational website, they will be evaluating the trustworthiness of your information. The last thing you want is your students questioning whether the content you provide is accurate. The best way to avoid this is simple: Make sure your writing is comprehensive, correct, and current. Use a **spell checker**! When readers find spelling or grammatical errors on a website, they're less likely to trust the content. **Connect your content to the rest of the internet** using links, multimedia, and other resources.

Cite all of your sources - this is not only essential for legal reasons, it's also an important technique to role model for students. You can decide what type of citation style to use (e.g., MLA, APA, Chicago), just make sure to keep it consistent throughout your entire site. **Use quotation marks** to indicate any information directly pulled from another source, such as a website, blog, book, or video. Simply providing a link to an article without identifying the author (e.g., source) is not enough to cite borrowed information.

How to Write in Plain Language for Teaching

In this article, Bendici (2021) shares that it can be helpful to:

- Avoid acronyms.
- Avoid passive voice.
- Aim for a 8th-9th grade reading level.
- Be clear and concise (re-read your text and remove as many words as you can).
- Include relative pronouns (whom, who, which).
- Not use different words for the same subject.

Writing for a Subject-Specific Website

If you are designing a website to present your students with information and resources related to one or more subject areas, here are a few additional tips to engage your learners with the text on your site.

Keep it Simple and Organized: Limit the amount of information on your website so that your students don't feel overwhelmed when they visit. Chunk information and resources for sub-topics into separate sub-pages rather trying to feature everything the student needs to learn about a topic on a single page.

Keep Your Content Up To Date: Have you ever scrolled to the bottom of a website to see its copyright date (e.g., Copyright 2013) and then question the credibility of the information on the site since it hasn't been updated in many years? Your students will do the same thing! Make sure you spend time at least once every few months modifying your

site by revising information, adding or removing resources, and featuring related news. By presenting new content for your subject area, you can hook students in and have them stay on your site longer. For example, if you're designing a social studies website, instead of presenting the same facts about American historical figures, you can add content that usually gets skipped over or left out of history textbooks such as LGBTQ history and notable African-American history. By incorporating interesting new content that appeals to your students, you will be increasing student motivation and engagement.

Create Content that is "Made To Stick": Heath and Heath (2007) developed a set of guiding principles, called the Made to Stick principles, that can be used to create content that is "sticky," (i.e., hard to forget). The acronym **SUCCESS** can help you remember the principles:

- **Simple:** As mentioned previously, don't overwhelm the reader. Focus on one key point per paragraph. Omit extra words. Write in a concise and clear manner.
- **Unexpected:** Present information that surprises the reader.
- **Concrete:** Make it easy for the reader to see how the content is relevant to their life.
- **Credible:** Ensure the information you present is current, accurate, and reliable.
- **Emotion:** Present content in a way that make the readers feel something (e.g., joy, frustration, anger, excitement).
- **Story:** Tell a story. Storytelling is one of the most powerful techniques for communicating information since people who are reading or listening to a story mentally put themselves in the story, thus making it more memorable.

Chapter Conclusion

If you follow the tips from this chapter, you will be able to fill your website with content that your readers will find engaging, interactive, and memorable. Here is a checklist to help you remember the key points from this chapter:

- Keep your website simple - use white space and plain language.
- Break up large chunks of text.
- Use typographical emphasis (e.g., bold, italics, font size/color) to draw readers' attention to specific words or phrases.
- Put the most important information at the top of the page (inverted pyramid).
- Use subheadings and sub-pages to chunk and organize information.
- Use language that appeals to your audience.
- Ensure your content is current, credible, and accurate.
- Keep your content up-to-date.
- Employ the Made to Stick principles to engage your website readers.

References

Loranger, H. (2017, October 8). Plain language is for everyone, even experts. *Nielsen Norman Group.* Retrieved from https://edtechbooks.org/-Kbw

Nielson, Jakob. (1997, October 1). How users read on the web. *Nielsen Norman Group.* Retrieved from www.nngroup.com/articles/how-users-read-on-the-web/.

University of Maryland Baltimore. (n.d.). Best practices for web writing. Retrieved from https://edtechbooks.org/-Gag

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Copyright and Open Licensing

Open Educational Resources   Resources   Fair Use   Public Domain   Open Licensing   Creative Commons

YouTube   Copyleft   Fair   Open Licenses   Royalty Free   Federal Law   Gratis   Legal Protections

Lesson Plans   Libre   Openly Licensed Materials
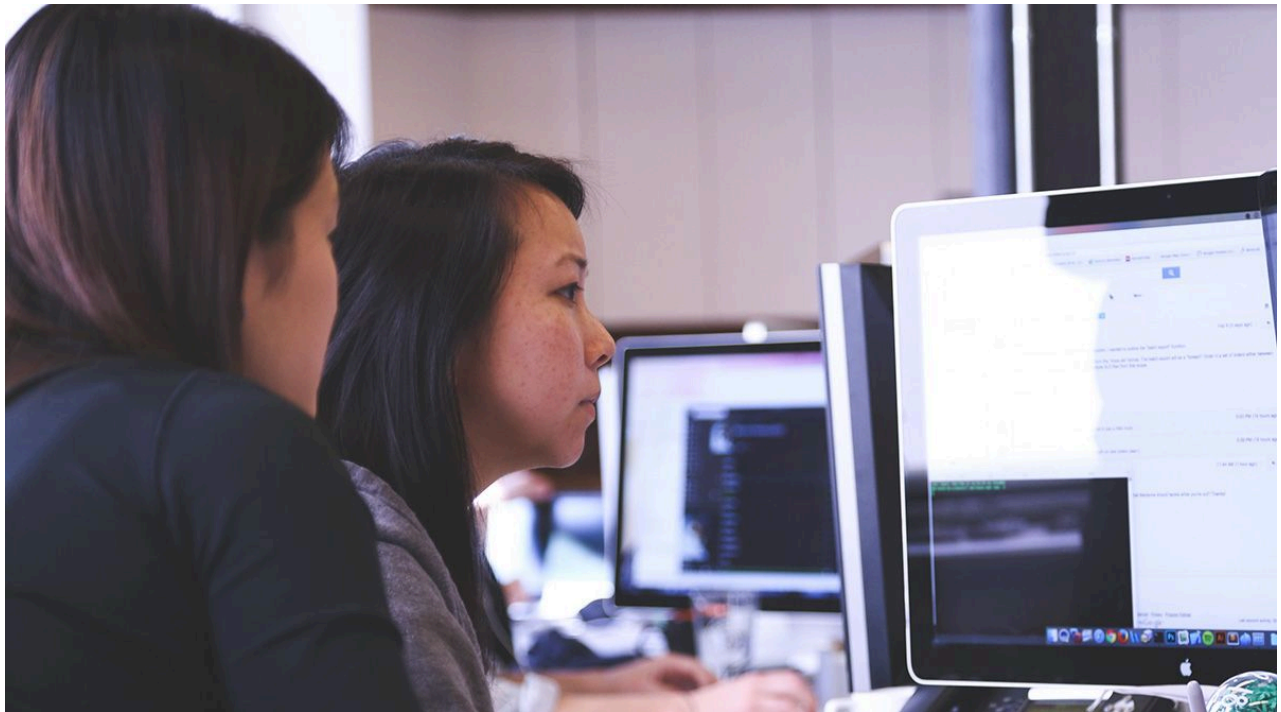
Learning Objectives

- Understand concepts of copyright, public domain, fair use, and open licensing;
- Find open educational resources (OER) online;
- Recognize how to cite and share OER.

Copyright is established in federal law and varies from country to country. In the U.S., copyright was written into the original constitution in 1787, wherein it was stated that copyright is established "to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries" (Article 1.8.8). Thus, at its foundation, copyright in the U.S. exists "to promote the progress of science and

useful arts," and authors are given control of their creative works for a specified period of time so that they can profit from them, thereby encouraging them to create more.

Watch on YouTube

> ### What do you think?
>
> How do you think copyright considerations will affect or has affected your teaching?
>
> ☐   I will often be afraid to use valuable resources
>
> ☐   I will sometimes be afraid to use valuable resources
>
> ☐   I will never be afraid to use valuable resources

Types of Works

Copyright applies to any tangible or electronic creative work, such as a book, movie, video, song, lyrics, poem, picture, lesson plan, web page content, etc. Any creative work is copyrighted as soon as it is created. Intangibles, such as ideas, concepts, and mathematical equations and works that lack originality cannot be copyrighted.

Gaining Copyright

Since copyright applies as soon as a work is created, authors do not need to go through any process to copyright their works. They are copyrighted automatically. However, proving that you hold the copyright on your creative work is another matter. For instance, say that you write a novel and lend the manuscript to your neighbor to proofread. What is to prevent your neighbor from claiming that the novel is her creative work and, therefore, claiming to hold its copyright? To help in preventing and addressing copyright problems, the U.S. government allows copyright holders to register copyright with the [U.S. copyright office](). Thus, while an author does not need to do anything to copyright a work, they do need to go through a process if they would like to register the copyright of that work to safeguard against infringement.

The Copyright Symbol

The copyright symbol may be placed on a work to remind and inform users of its copyright status: ©. However, the copyright symbol is only a reminder. The absence of the symbol does not mean that the work is not copyrighted, and the presence of the symbol is not proof that the work is copyrighted (as will be discussed further in the case of public domain works).

Ownership

By default, the author of a work holds the copyright on that work. The main exception to this rule would be if the author was being paid by someone else to create the work and the author had signed a contract stating that work created while on-the-job belongs to the employer commonly known as "work for hire". Contracts might also stipulate that this depends upon when and where the work was created (during standard work hours vs. after work hours or in the office vs. at home). Some educator contracts state that creative works by an educator are owned by the educator, while others state that they are owned by the school or district. So, if you would like to know who holds the copyright of works you create as part of your job, you should check your teaching contract or contact your employer.

Usage

Copyright generally means that others cannot use copyrighted material without the permission of the author and that permissions are restrictive. For instance, downloading a bootleg version of a movie is a violation of copyright, because you did not purchase the copy from the copyright holder. Further, even if you do purchase the movie from the copyright holder, you can only use the movie in the ways that the copyright holder allows (e.g., for private home use, not for public use). Thus, by purchasing a copy of a work, you do not "own" that work in the sense that you are not free to do whatever you like with it. You must still abide by any copyright restrictions placed on the work, which might determine how and where you use the work, your ability to make copies of the work, and your ability to modify the work.

Linking

You can generally provide a web link to copyrighted material from your own materials without permission from the copyright holder. This is different from copying/pasting the copyright material into your own work, because it allows the copyright holder to maintain control of their content and to generate revenue through web traffic. The primary exception to this rule would be if you provided a link to materials that should not be publicly accessible and, therefore, allowed your users to bypass restrictions placed on the content by the copyright holder.

Losing Copyright

Copyright comes with a time limit. The purpose of this is that the U.S. government recognizes that copyright can only benefit the copyright holder for so long and that at some point copyright should expire. Currently, the U.S. copyright law states that copyright ends 70 years after the death of the author. Upon expiration, copyrighted materials move into the public domain. Copyrighted materials may also lose their copyright status under other conditions. For instance, a copyright holder may relinquish the copyright status on their work, thereby allowing it to pass into the public domain.

Copyright and Technology

Advancing technologies, ranging from the player piano to the internet, have always had unintended consequences for copyright law, and copyright law has always been slow to keep up with advancing technologies. Copyright law has changed over time, but as new technologies empower us to share and use copyrighted materials in new ways and at greater scale, copyright law gradually changes in response.

Common Questions

Can I legally show my students videos from my Netflix account or other subscription streaming services?
No. Your license agreement does not allow you to do this.

When is a work copyrighted?
As soon as it is created or published.

Does a work need to be published to be copyrighted?
No, though it must be in some physical form (e.g., manuscript, recording).

Does an author need to register their work in order for it to be copyrighted?
No. Authors may register their work with the US copyright office to protect against infringement, but even unregistered works are copyrighted.

If something is labeled with a copyright symbol (i.e., ©), does that mean it is copyrighted?
Maybe. The symbol serves as a reminder, but the copyright might have expired.

If something is not labeled with a copyright symbol (i.e., ©), then is it copyrighted?
Maybe. Maybe not. The label has nothing to do with whether or not a work is copyrighted. The copyright label only serves to remind and to inform. If you see no label, you should assume that the work is copyrighted and look into the matter further.

Can I link to copyrighted materials?
In most cases, yes. Just be sure that you are linking to the resource as it is provided by the publisher (not uploaded to someone's personal server, etc.) and that your link does not bypass a copyright holder's login system.

Can I embed copyrighted materials into my presentation or website (e.g., YouTube videos)?
That depends on the terms of the license that the copyright holder has released the content under. Generally, if a site like YouTube gives you an embed script, then you are able to use it (provided that you do not change the script, remove attribution, etc.).

What do you think?

In the last classroom that you taught or observed in, was a DVD player available for showing movies to the entire class?

	Yes
	No

Fair Use

[Fair use](#) is an exception or limitation to copyright law that allows you to use some copyrighted materials in particular circumstances without the copyright holder's permission. Specifically, if used for nonprofit educational purposes, some copyrighted materials may be used for teaching, but your use (a) should directly relate to your educational goals, (b) should only utilize a relatively small portion of the work, and (c) should not negatively impact the copyright holder's ability to profit from the work. Fair use means that copyright-restricted works can be used for educational purposes without permission under certain conditions. The four guiding principles that determine if use is fair are:

> ## "Fair Use" Guiding Principles
>
> - Nature of Use
> - Type of Work
> - Amount Used
> - Commercial Impact

The first principle covers what you are doing with the content and whether your use aligns with the author's intended use. Fair use only applies to uses of works that are transformative in nature. This means that your intended use must be different from the author's intended use. Consider a novel. You can quote lines from a novel in a paper you write without permission from the novel's author, because you are writing the paper to analyze literary elements of the novel, not to tell a story. If, however, you took those same lines and placed them in your own novel, then that would not be an example of fair use, because your intended use would be the same as the original author's intended use. In education, this means that using someone else's educational content (e.g., an image from their textbook) would not generally be fair use, because your intent is the same as theirs (i.e., educational and, therefore, non-transformative).

The second principle gives greater flexibility in using informational or factual works than to artistic or creative works. Thus, copying a few pages from an encyclopedia is viewed as more conducive to fair use than doing the same with a detective novel, because the information's benefit to society is readily apparent.

The third principle ensures that you only use as much of the copyrighted material as is necessary to achieve your goal. Thus, quoting a line from a novel would be considered fair use, but copying multiple chapters of the novel for this purpose would not. This is both a quantitative and qualitative consideration, in that you should not use more than is needed but fair use also should avoid using the "heart" of a work.

And the fourth principle considers whether copyrighted material negatively impacts the author's ability to profit from it. If you copy an article to share with your class, this would prevent the copyright holder from selling access to the article, which would be a violation. However, if you were to copy only a paragraph of an article for this purpose, it is less feasible that the copyright holder would potentially lose money on this use. So, this use would be more defensible as fair use.

Examples

If it weren't for fair use, you wouldn't even be able to write a paper that quoted a famous author without permission, which would be a serious matter for scholarly progress. Consider this quote from *The Fellowship of the Ring*:

> *All that is gold does not glitter, not all those who wander are lost; the old that is strong does not wither, deep roots are not reached by the frost. - J. R. R. Tolkien*

Without fair use, the inclusion of this quote in a paper on literary analysis or on this website would be a copyright violation, because I did not seek the author's prior consent to make a copy of this text from his book or to distribute it online. However, my use in this case is a transformative use and is only large enough to make the educational point, so it is allowable. Would being able to read this quote on this website prevent someone from reading his book (thereby depriving the copyright owner of profits)? Certainly not. On the contrary, however, if I were to provide several chapters of Tolkien's book online without prior permission from the copyright holder, then this would certainly be a copyright violation that could be acted upon.

Similarly, copying another teacher's lesson plan, changing a few words, and posting it online would be a blatant copyright violation. Fair use becomes problematic in education if you are trying to use educational works in your own creations (e.g., materials created specifically for education, such as lesson plans or textbook chapters) and/or you are using too much (such that it might prevent the owner of the copyright from profiting from the work).

Guidelines

To determine if a desired use of copyright-restricted material would fall under fair use, ask yourself four questions:

1. Use: Is the use transformative? (Yes = Fair Use)
2. Type: Is the work informational/factual in nature? (Yes = Fair Use)
3. Amount: Is the use minimal? (Yes = Fair Use)
4. Impact: Does the use negatively impact the copyright holder's ability to profit from the work? (No = Fair Use)

Fair use is a judgement call, but the call is made based on the answers to these four questions. Thus, if your answer to all four questions aligns with fair use, then your use would likely be judged as fair. If the answer to one question does not align with fair use, then your use might still be fair, but it increases the potential for it to be judged otherwise. And so forth. In many court cases, uses that met three criteria have been deemed as fair, and in others, uses that only met one or two criteria have been deemed as fair, but there is never any guarantee. In short, only a judge can determine if use is fair, but a judge would use these four guidelines in making the determination.

Institutional Rules

To help safeguard their institutions and employees, many schools will adopt rules for interpreting fair use. For instance, some institutions will allow copyrighted materials to be used up to a certain percent of the work (e.g., a section of a book can be copied as long as it constitutes 10% or less of the entire book). These rules are not perfect reflections of the law but are rather interpretations intended to protect.

Here's a comparison. Let's pretend that 55 mph is the speed limit throughout the U.S. but that the government allows for people to exceed this speed limit "a reasonable amount" in particular cases of emergency. If such a law existed, it would be up to judges to determine if any case of traveling faster than 55 mph constituted a legitimate emergency case and if the actual speed was reasonable. Like copyright, this law sounds fairly fuzzy. Let's also say that you are a bus driver and your school has a rule that this law means that you should only exceed the speed limit if a child is hurt and in these cases you should never go faster than 65 mph. Though this is not actually what the law says, it is your school's interpretation of the law and is intended to keep you and the school safe.

Thus, when considering institutional rules, you should recognize that they are intended to prevent you from breaking a rather fuzzy law but that they also may not entirely reflect what the law actually states. In any case, you are safest

abiding by your institutional rules for fair use, because this helps to ensure that your institution will be on your side if there is any question about your copyright-restricted material use.

Parody

Parody is one example of fair use in which copyrighted materials may be used to critique the author. Thus, using an image of someone to critique that person would probably be fair use (as in the case of [Galvin v. Illinois Republican Party](#)). However, using one person's copyrighted works to critique a different person or an unrelated social issue (as in the case of many memes) would likely not be parody, since the copyrighted work is being used to make fun of something other than the author or the work itself.

Positive Examples

These are examples that would probably qualify as fair use (i.e. they probably do not violate copyright):

- Quoting a few sentences from a book in a paper on literary criticism;
- Adding text to a movie screenshot to critique/parody the movie;
- Including a paragraph of text from a book in a quiz as background for asking questions;
- Showing a short clip from a popular movie to analyze how it was made.

Negative Examples

These are examples that would probably NOT qualify as fair use (i.e., they probably violate copyright):

- Copying pages from a workbook for students to complete;
- Copying or remixing a lesson plan;
- Creating a calendar of pictures that were photographed by someone else;
- Including a popular song as background music on a YouTube video your students create;
- Holding a public screening of a movie in the school auditorium that you have purchased for personal use.

Navigating Fuzziness and Risk

Fair use can be very fuzzy, and it may be that educators violate fair use regularly in their classrooms without worrying about legal repercussions. Even if copyright is violated, the risks associated with violation tend to vary by use. For instance, if you copy a lesson plan for use in your classroom without first gaining permission, the odds are that you will not run into any legal issues. However, if you try to sell this same lesson plan online or share it on your teacher blog, then the legal risk increases. This does not mean that you should violate copyright discretely, but merely that this decision would be based upon a moral imperative rather than legal risk.
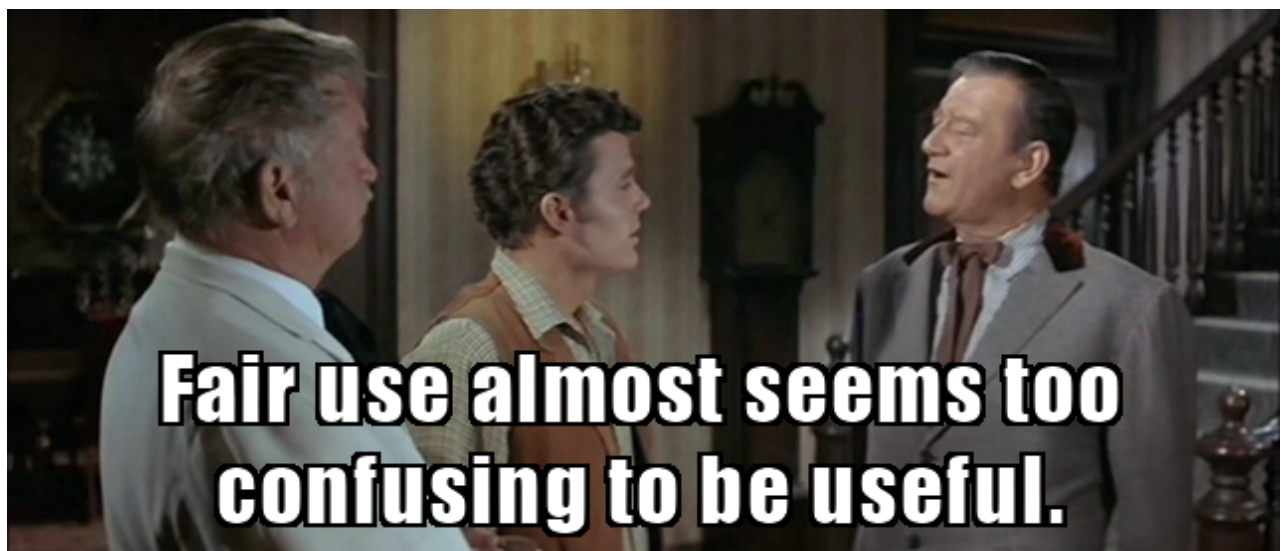
The Bottom Line

Fair use is complicated, only provides educators with limited opportunities for use, and is typically more of a headache than it is often worth when talking about any substantive use of copyrighted materials.

Additional Resources

The U.S. Government has recently started archiving court cases related to fair use, which may be instructive if you have specific questions about what courts are classifying as fair use and not.

What do you think?

If you followed all copyright restrictions, how do you think this would impact your ability to effectively teach your students?

- ☐ It would severely reduce my effectiveness
- ☐ It would moderately reduce my effectiveness
- ☐ It would somewhat reduce my effectiveness
- ☐ It would not negatively impact my effectiveness

Public Domain

Copyright law varies from country to country, but in the US, public domain is a technical term referring to works that are not subject to copyright protection.

Categories

In general, there are three groups of works that are in the public domain:

1. Old works for which the copyright has expired;
2. Exempt works that may not be copyrighted or that were created under certain conditions;
3. Any works that have been released to the public domain by their authors.

Old Works

Under the current US copyright law, any copyrighted work will automatically pass into the public domain 70 years after the death of the author. In general terms, this means that virtually all classics or materials older than 120 years or so are in the public domain. To determine if a specific work is in the public domain, however, you should find out when the author died and add 70 years in order to determine the date at which copyright expires. This time frame has gradually been lengthened in US history, so some works may still be in the public domain that were created less than 70 years ago.

For instance, the John Wayne and Maureen O'Hara movie [McLintock! passed into the public domain in 1994](#).
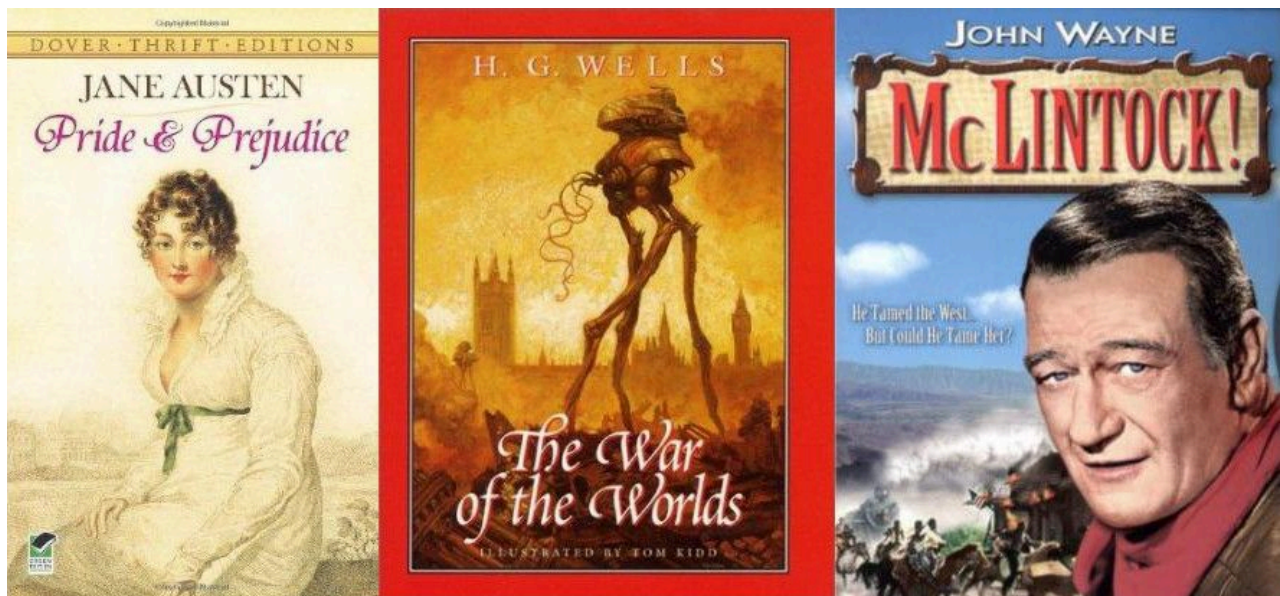
Examples of public domain works

Exempt Works

Copyright can only be applied to specific types of works (e.g., books, movies, images) and cannot be applied to general knowledge. For this reason, you do not need to cite anyone when you state a fact (e.g., "Jupiter is a planet"). Works may also be exempt from copyright if they are created under certain conditions of employment. The most common example of this is when US federal employees create works as part of their jobs (e.g., active duty service men and women in the armed forces). Works that these individuals create (e.g., photos taken) may be placed in the public domain by virtue of their employment.

Released Works

Any author of a work may willingly choose to release that work into the public domain by simply labelling the work (e.g., "this work is in the public domain"). By doing so, the author gives anyone (e.g., individuals, corporations) the right to use their work for any purpose, without limitation or attribution.

Use
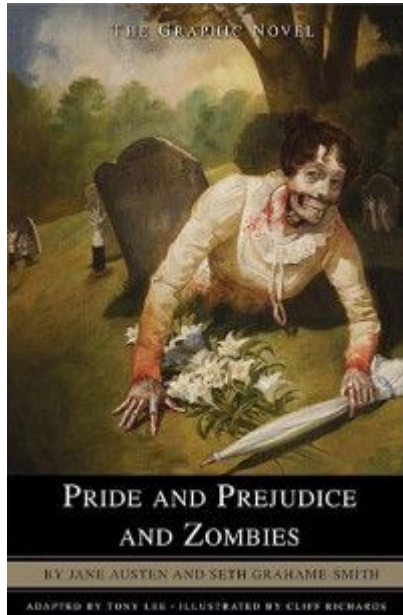
Since they are not subject to copyright protection, public domain works may be used for anything and may even be included in derivative works and may be sold. There are no restrictions on how these works may be used, so citations are not generally needed. However, if you are using public domain content in your own work, it would be helpful for others to know what parts are public domain so that they know how they might also reuse and remix your content.

Public Domain Repositories

- [Project Gutenberg](#)
- [Army Photos](#)
- [Library of Congress](#)
- [Internet Archive](#)
- [U.S. Fish and Wildlife Digital Library](#)
- [Digital Public Library of America](#)

"Open" Resources
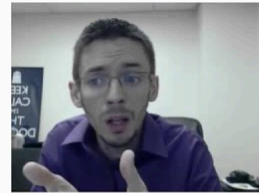
The terms "open" and "free" colloquially have many meanings. "Free" generally has two that may be best understood by referring to their latin equivalents: *gratis* and *libre*. In the context of openly licensed materials or open educational resources (OER), *gratis* means that content and resources are provided at no cost. *Libre* means that you are free to do what you want with these resources.

As an example of this distinction, you may find a website with "free" videos or another teacher may give you a set of old textbooks for "free" (i.e. *gratis*), but you are not then able to do whatever you want with those videos and textbooks (i.e. not *libre*). Similarly, Facebook is a *gratis* service, because you do not pay a fee to use it, but it is not a *libre* service, because you have only limited access to download, delete, or control your data within Facebook. This is an important distinction, because many *gratis* resources are not *libre*, and when we talk about *openness*, we mean both *gratis* and *libre*.

> *That is, Gratis + Libre = Open.*

The Five "R's" of Openness

Openness may mean different things to different people, but when we refer to openness in terms of open licensing, we mean openness that gives us freedom to do the five R's:

1. Retain
2. Reuse
3. Redistribute
4. Revise
5. Remix

Hilton III, J., Wiley, D., Stein, J., & Johnson, A. (2010). [The four Rs of openness and ALMS analysis: frameworks for open educational resources](). Open Learning, 25(1), 37-44.

Open Licensing

Sometimes authors of creative works who want to share them openly want to maintain some control over what others can do with their work. [Open licenses]() have arisen as a means for openly sharing content while at the same time preserving desired rights to the author.

Open licenses find a nice balance between the restrictions of copyright and the unfettered freedoms of public domain, making them a good option for anyone desiring to share their work with others. Authors of creative works have the right to release those works under any license they choose (except in cases where they have signed over that right to a publisher, employer, etc.). The table below provides three examples of common open licenses.

Table 1

Common Open Licenses

Name	Image	Links
Creative Commons		• [Creative Commons]()
GNU General Public License (GNU-GPL)		• [GNU License]() • [Wikipedia: GNU General Public License]()
MIT License		• [MIT License Template]() • [Wikipedia: MIT License]()

Common Open Licenses

Creative Commons

To help authors to release their works easily and in a manner that safeguards the rights that they care about, a number of template licenses have been created by [Creative Commons](). Many works found on the internet are licensed under one of these types of licenses, and in general, you do not need permission to use them in your work as long as you properly attribute (cite) them and abide by any additional requirements set forth in the license.

There are four requirements that may be appended to a Creative Commons license. These include the following:

- **BY or Attribution**—This means that you need to cite the author of the original work if you copy or remix it.
- **SA or Share-Alike**—This means that if you remix the work you should release it under a license similar to the one it was initially released under.
- **ND or Non-Derivative**—This means that you cannot make your own derivative version (or remix) of the work but must use it exactly as-is.
- **NC or Non-Commercial**—This means that you cannot use the work for primarily financial gain.

Depending upon which of these requirements are placed on the work, Creative Commons licenses can come in a number of varieties. Two are merely restatements of [Public Domain](), while the rest provide the author of a work the

ability to retain varying levels of control of how the work may be used. The most common Creative Commons license is the **CC BY** or **Creative Commons Attribution** license, which basically means that others are free to reuse, redistribute, revise, and remix the creation as long as they properly cite the author. More information about each license is provided in the following table.

Table 2

Creative Commons License Brief Explanation Table

License Type	Image	Brief Explanation
Public Domain - By Age		These works are not subject to copyright or their copyright has expired.
Public Domain - Released		These works are released to the public domain by their authors before the copyright has expired.
Creative Commons Attribution (CC BY)		Others may reuse, redistribute, revise, and remix the creation as long as they cite you.
Creative Commons Attribution-ShareAlike (CC BY-SA)		Others may reuse, redistribute, revise, and remix the creation as long as they cite you and share their creation under an identical license.
Creative Commons Attribution-NoDerivs (CC BY-ND)		Others may reuse and redistribute the creation as long as they cite you. They may not create a derivative work (e.g., remix or revise it).
Creative Commons Attribution-NonCommercial (CC BY-NC)		Others may reuse, redistribute, revise, and remix the creation as long as they cite you, but they may not use your creation for commercial purposes.
Creative Commons Attribution-NonCommercial-ShareAlike (CC BY-NC-SA)		Others may reuse, redistribute, revise, and remix the creation as long as they cite you and share their creation under an identical license. They may not use your creation for commercial purposes.
Creative Commons Attribution-NonCommercial-NoDerivs (CC BY-NC-ND)		Others may reuse and redistribute the creation as long as they cite you. They may not create a derivative work or use it for commercial purposes.

Creative Commons License Brief Explanation Table

Finding Resources

In general, copyleft and creative commons licenses value open practices in that they seek to allow for works to be reused, redistributed, revised, and remixed, but licenses vary based upon what is required of the user to do so legally. For instance, the Creative Commons Attribution license (or CC-BY) requires the user of the work to give appropriate credit, to provide links to the license, and to not suggest that the original author endorses any new use of the resource.

More details on specific Creative Commons licenses are provided in the Attribution Quick Reference Guide. There are a number of libraries, search engines, and search engine settings that allow you to easily search for copyleft-licensed works. Some popular examples include:

- [Wikimedia Commons](#)
- [Creative Commons Search](#)
- [Flickr Creative Commons](#)
- [Vimeo Creative Commons](#)
- [Creative Commons Music](#)

If a work (e.g., picture, song, video, lesson plan, rubric) does not have a statement of copyright status attached to it, you should generally assume that it is copyrighted and should seek permission before using it.

Open Content Providers

Open educational resources (OER) are made available from many different sources. This list, though not exhaustive, includes some of the more prominent providers. Explore these resources to find material that will be useful for you in your classroom, taking note of what licenses resources are released under. Watch this video to learn how to use a search engine to find openly licensed content.
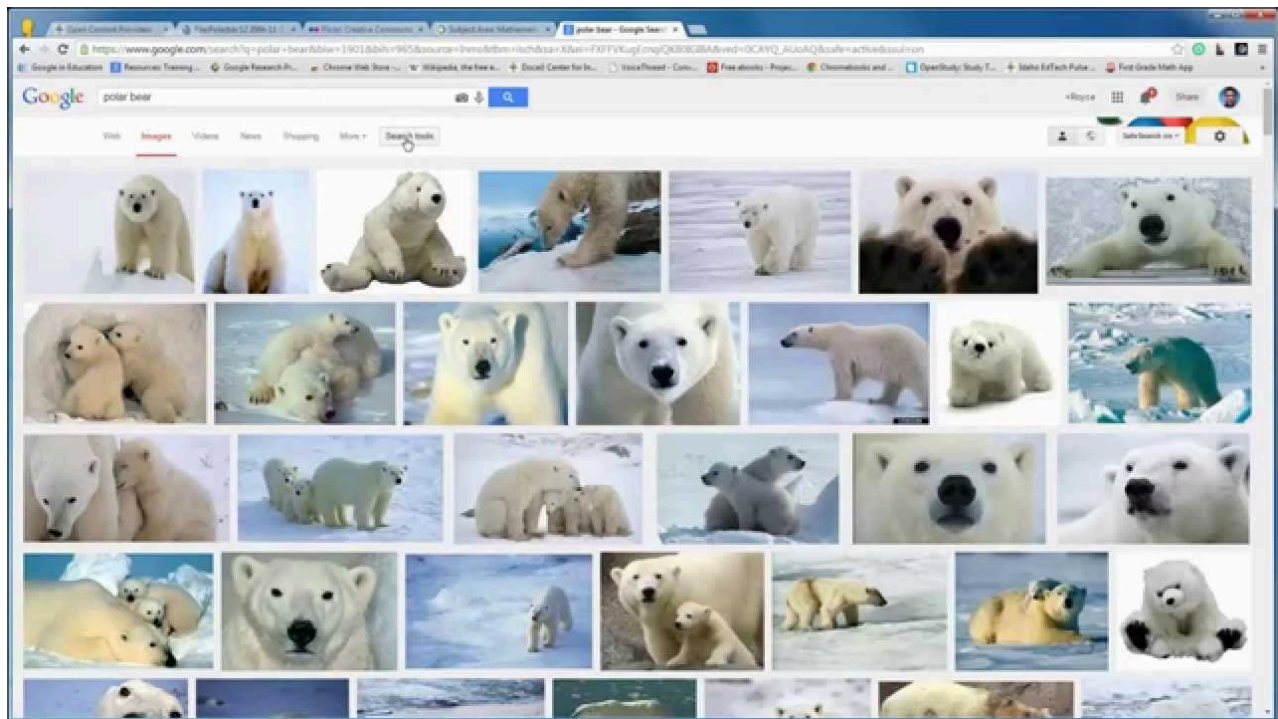
Watch on YouTube

Open Textbooks & Curricula

1. EdTech Books
2. Open Textbook Library
3. CK-12
4. Saylor
5. Connexions / OpenStax Library
6. Textbook Equity
7. Equity Press
8. BC Campus
9. Wiki Books
10. Odell Education
11. Cool4Ed
12. Merlot

Search Engines

1. OER Commons
2. Creative Commons Search
3. Google Advanced Search*
4. Google Advanced Image Search*
5. Yahoo Image Search**

* Be sure to set usage rights to "free to use share or modify".
** Be sure to click the arrow in the top left and select "Labeled for Reuse" in the bottom left.

Text Content Providers

1. Wikipedia - open encyclopedia
2. Simple English Wikipedia - simplified encyclopedia
3. Project Gutenberg - public domain texts
4. Wiki Source - source materials
5. Wiki Quote - quotations

Media Content Providers

1. Wikimedia Commons - open media
2. Digital Public Library of America - public domain works
3. LibriVox - public domain audio books
4. Photo Pin - open photos from Flickr
5. Internet Archive - public domain works
6. U.S. Army - public domain images
7. Flickr - creative commons images
8. Vimeo - creative commons videos
9. Creative Commons Music - various creative commons music sites
10. Jamendo - creative commons music
11. Library of Congress - public domain works
12. Internet Archive - public domain works
13. U.S. Fish and Wildlife Digital Library - public domain works (mostly)

Open Courses

1. Lumen Learning
2. Wikiversity

Tools

These tools are not technically open educational resources, but they can be used to aide you in creating, remixing, and sharing open educational resources.

1. Google Drive - write and create collaboratively
2. Rewordify - simplify difficult texts
3. Text Compactor - summarize texts
4. Simplish - simplify and summarize texts
5. Open Text Summarizer - summarizes nonfiction texts

Attribution

When utilizing someone else's work in your own, you should be sure to attribute the work. In education, we generally use formatting guidelines from the American Psychological Association (APA), and you should cite works according to these guidelines if required for a research paper or publication. However, in most situations, a simpler citation that includes the work's title, author, license, and url will be appropriate. All work licensed under an open license will generally require you to properly attribute (cite) the resource in order to use it in your own work. **Failure to properly cite one of these works if it is used in your own work is a violation of copyright.** At minimum, you should attribute such works with the following information:

Attribution Items

Title
What is the title of the work (e.g., name of article, picture, or song)?

Author
Who created the work?

Source
Where did you find the work (e.g., url)?

License
What license is the work shared under (e.g., CC BY)?

As possible, you should also cite these works in such a way that it is clear to which portions of content the attribution refers and so that the attribution is prominent. For instance, if you include a Creative Commons image in a book you are writing, the attribution should be included as a caption under the image. When such attribution is not possible, including attributions in a works cited page is acceptable if it is clear to which content each reference belongs (e.g., providing page numbers).

Sharing Your Work

As the author of a creative work, you can release your it under an open license or into the public domain. All you need to do is place the Creative Commons license on your work or state that the work is in the public domain, and this allows others to know how they can use it. For example, by simply placing "CC BY 3.0" below a picture, you give anyone the right to use it for any purpose as long as they attribute you as the author.

Public Domain or an Open License?

As the author of a creative work, you should consider the benefits of different ways of sharing your content. In short, if you don't care how it's used but just want others to be free to use it, release it into the public domain. If you want to receive credit (be cited) when others use it, use CC BY 3.0. For a more detailed walkthrough of how you should release your content, follow the steps provided in the table below.

Table 3

Workflow for Choosing a License

Step	Question	Yes	No
1	Do you want to allow anyone anywhere to use the work however they want without giving you credit?	**Public Domain**	Go to Step 2
2	Do you want to make sure that anyone who uses your work also shares their work in the same way?	Go to Step 3	Go to Step 4
3	Do you want to prevent others from profiting from your work?	**CC BY-NC-SA**	**CC BY-SA**
4	Do you want to prevent people from changing your work?	Go to Step 5	**CC BY**
5	Do you want to prevent others from profiting from your work?	**CC BY-NC-ND**	**CC BY-ND**

More details about the Creative Commons licenses may be found on the [Creative Commons website](#).

Example Statements

Releasing your work under an open license is easy. Just place a statement somewhere on your work that states what license you are releasing it under. The Creative Commons site provides a wizard to create a statement and image for you, or here are a few more examples:

- This work is released under a CC BY 3.0 open license by [Your Name Here].
- This work is released into the public domain.

Conclusion

This chapter has provided an overview of copyright, public domain, fair use, and open licenses. With this knowledge, teachers should feel sufficiently knowledgeable to use copyright-restricted resources in a legal manner. They should also be able to find and use public domain and openly licensed resources, to properly cite them, and to release their own creations openly.

Previous Citation(s)

Kimmons, R. (2018). Copyright and Open Licensing. In A. Ottenbreit-Leftwich & R. Kimmons, *The K-12 Educational Technology Handbook.* EdTech Books. Retrieved from https://edtechbooks.org/k12handbook/copyright

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Color Theory in Experience Design

Gender   Retention   Visual Arts   Branding   Comprehension   Corporate Client   Error Screens

Learner Attitudes   Material Design Visual Language   Age

1. Introduction

Outside the visual arts, color is rarely discussed by professionals in systematic ways; among UX and LX designers, color is generally approached in a strange give-and-take between technical prescription and intuitive preference. For instance, the color system outlined in Google's (n.d.) material design visual language provides precise guidance on how to generate a color palette from your primary color, what to use secondary colors for, and what colors are typical for specific elements (such as error screens), but it does not provide designers any guidance on what primary color to pick in the first place, when to use different types of color palettes (e.g., analogous, complementary, triadic), and why. This is likely because, when designing for a corporate client, designers are generally constrained by the preexisting branding requirements of the client (e.g., "our brand is periwinkle") and must work from a particular color starting point when making designs.

But designers must also often counterbalance their own and their clients' everyday assumptions and receive wisdom about color in order to create the best designs for end users and learners. For instance, early in my professional experience creating websites for clients, I delivered a mock-up that I thought looked good and met the client's requests perfectly. Frustrated with what he saw, the client furrowed his brow and slowly replied, "Yes, but I need something that pops." This, in turn, frustrated me, because the only explanation he then provided would result in what I thought would be a terrible-looking design. "What does 'pop' really mean?" I thought. And "How can I fix the design to be something that the client likes and something that I'm proud of?" And, perhaps most of all, "How can my client and I communicate about color in more meaningful ways?"

Beyond this need for designers to meaningfully communicate with clients, color also plays an important affective and cognitive role in learners' experiences. Various studies have shown that color-use influences learner attitudes, comprehension, and retention (Gaines & Curry, 2011). Some of these influences are broadly universalizable, others are contextual to the learner's age, gender, or culture, and others are contextual to the subject matter or learning objectives being targeted. Furthermore, there might be multiple right or useful ways to use color in a particular design project, and inappropriate or ineffective color-use in one project might constitute optimal use in another.

For these reasons, clear and reliable guidance on the what, how, when, and why of color-use in UX design is difficult to come by, and the problem of effective color-use is a prime example of why UX design cannot be approached purely as a science nor as an art but as a craft that synergistically merges the two. Toward this end, I will begin in this chapter by briefly providing some rudimentary groundwork on the underlying physics of color and its technical representation in digital formats. This will give us a common vocabulary for referencing specific aspects of color (e.g., hue vs. tone) as well as some technical knowledge necessary for actually using color in UX design scenarios. After this, I will briefly

explore the science of color-use in UX by summarizing some of the emotional, cognitive, and physiological effects that color-use has on learners.

With this backdrop, I will then address some of the applied aspects of color-use that will influence the craft of UX and ongoing research in this area. Specifically, I will explore four guiding considerations of color-use that should be addressed in UX — contrast, attention, meaning, and harmony—and then provide guidance on how to use color schemes to improve harmony by highlighting five dominant types of color schemes. I will then conclude by providing specific craft guidance on using color for UX projects and comment on how this should connect to ongoing UX research.

2. Physics of Color and Technical Use

We must begin this chapter by reviewing some of the physics of light and color. Color is a visual sensation created in the mind of the viewer from differing wavelengths of visible light, ranging from low-frequency reds to high-frequency violets. Some color sensations can be produced by a narrow band of wavelengths, but others are produced as multiple color wavelengths are mixed. For instance, when all color wavelengths are mixed together, they make white light, which is why a dispersive prism can be used to split white light into a rainbow of spectral colors. By putting the primary colors of light together, then, white can be created additively, as in Figure 1, and various other colors not even present in the rainbow can be created by mixing light wavelengths together, such as red and blue making magenta.
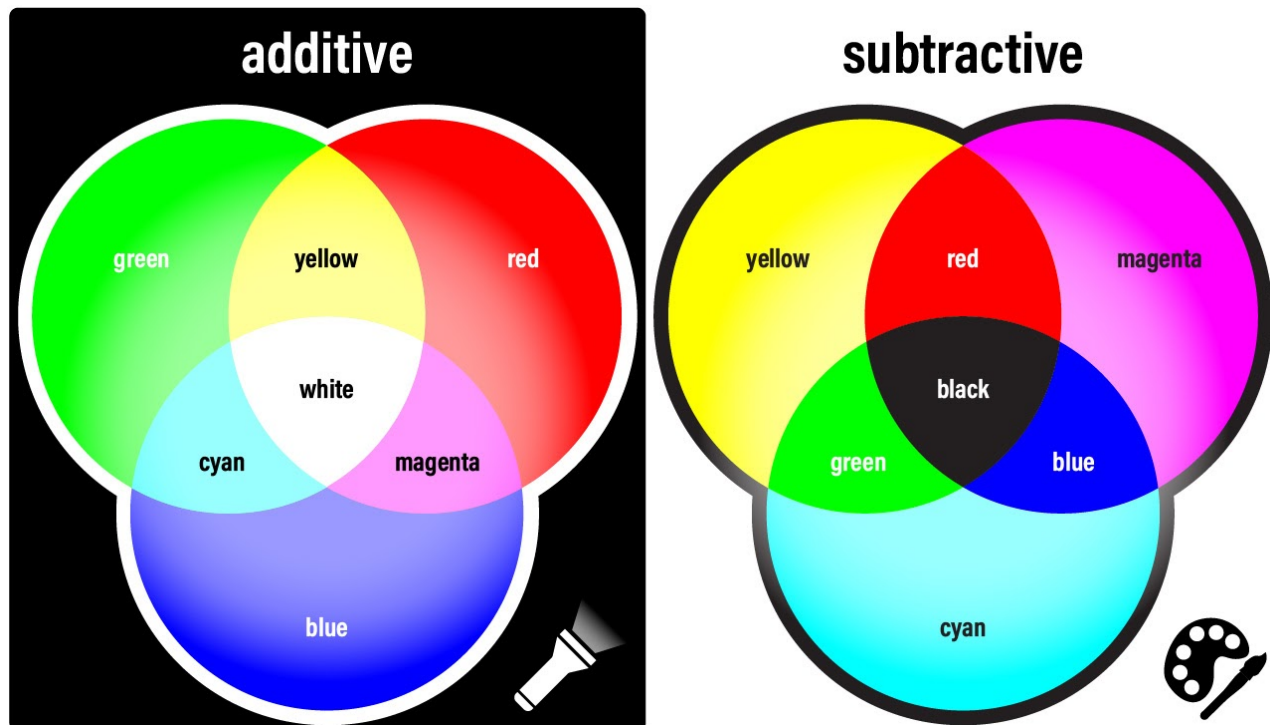

Figure 1

Additive and Subtractive Color Mixing Models

For this reason, computer screens and other displays have historically used differing intensities of only three primary colors of light: red, green, and blue (RGB). On screens, RGB dots are used in combination to create colors ranging from white, when they are at full intensity, to black, when they produce no light, and the millions of color combinations in between that are commonly used in movies, games, simulations, images, and websites.

However, visual media that rely upon physical materials to reflect (rather than generate) light, such as ink and paint, operate from a different model of color mixing. Though mixing a green ray of light and a red ray of light would produce

yellow light, combining green paint and red paint would produce a dark brown. Such materials rely upon a subtractive color model (cf. Figure 1), wherein black is the sum of all colors and white is the absence of all colors.

Recognizing these two approaches to color mixing is important to understand common notations present in design and authoring software. For instance, when creating a website, video game, mobile app, or illustration, RGB notations are used, such as rgb(255,255,0) for yellow, wherein each number represents a range of 0 (lowest) to 255 (highest) intensity for the primary colors. Hexadecimal notations are also commonly used as a shorthand version of RGB, such as #ffff00, wherein the number ranges are converted to a base-16 number system, ranging from 0 to ff, without losing any information. When creating print media, on the other hand, CMYK notation is commonly used, such as cmyk(0,0,100,0) for yellow, wherein each of the primary colors is represented as a percentage of intensity (0-100%) and black is provided as a fourth color mixin, because true black is difficult to make through mixing (in real-world applications, mixing would only generate dark browns and grays). Table 1 provides some notation examples of common colors.

Name	Additive		Subtractive
	RGB	Hexadecimal	CMYK
White	rgb(255,255,255)	#ffffff	cmyk(0,0,0,0)
Black	rgb(0,0,0)	#000000	cmyk(0,0,0,100)
Red	rgb(255,0,0)	#ff0000	cmyk(0,100,100,0)
Green	rgb(0,255,0)	#00ff00	cmyk(100,0,100,0)
Blue	rgb(0,0,255)	#0000ff	cmyk(100,100,0,0)
Yellow	rgb(255,255,0)	#ffff00	cmyk(0,0,100,0)
Cyan	rgb(0,255,255)	#00ffff	cmyk(100,0,0,0)
Magenta	rgb(255,0,255)	#ff00ff	cmyk(0,100,0,0)
Gray	rgb(127,127,127)	#808080	cmyk(0,0,0,60)

Table 1

Notation Examples of Common Colors

Using any of these notations can generate millions of possible colors, including basic hues of the color wheel, low-saturation tints of hues (by lightening toward white), and low-brightness shades of hues (by darkening toward black), along with various mixtures of tinting and shading (cf. Figure 2). These terms will be important moving forward for understanding research on color effects for the affective domain. Thus, hue represents the color's position around the color wheel, saturation represents the amount of white mixed with the hue, and brightness represents the amount of black mixed with the hue.
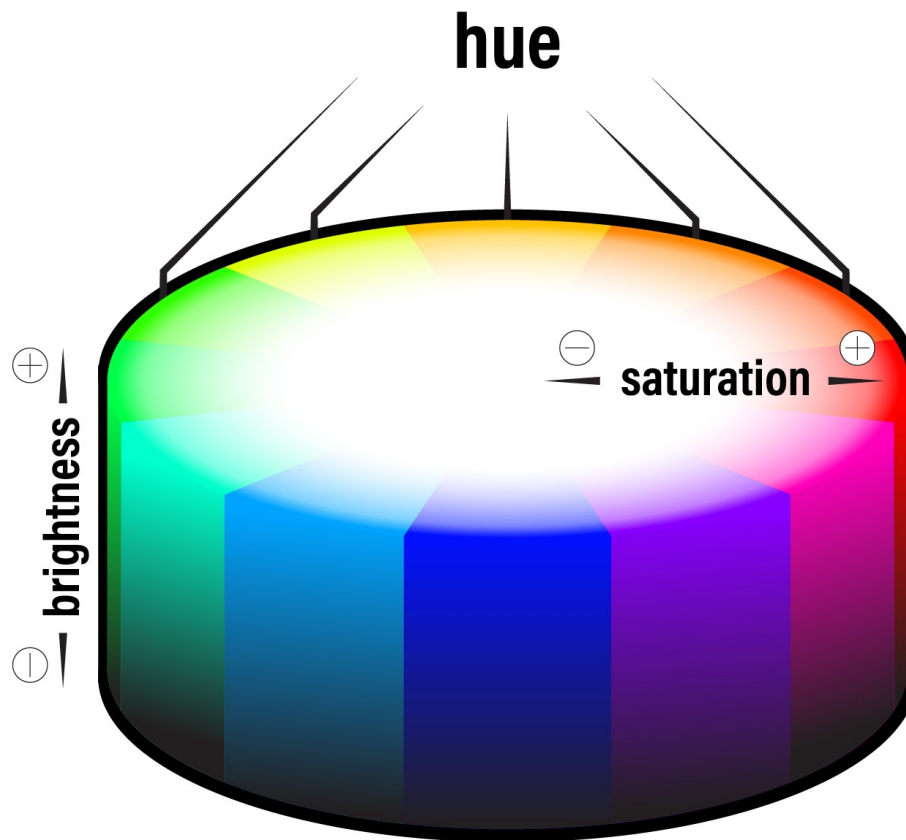
Figure 2

Hue, Saturation, and Brightness on a Color Wheel

3. Emotion and Learning

When people see the colors represented by the color wheel, they have various emotional and physiological reactions to them that influence their general experiences and also their learning. Alongside the famous cognitive domain taxonomy, Krathwohl, Bloom, and Masia (1964) also proposed a taxonomy for what they called the affective domain of learning, or the aspects of learning related to "a feeling of tone, an emotion, or a degree of acceptance or rejection" as expressed through goals oriented toward "interests, attitudes, appreciations, values, and emotional sets or biases" (p. 7). Recent years have seen renewed interest in the affective domain as educators and designers have struggled anew with how to support learner self-regulation, motivation, and persistence. Though the connection between color and learning may not be obvious at first, by influencing learner emotion, attitude, and interest, color can influence learner behaviors and attitudes, which in turn will influence their learning.

For instance, one study found that exposure to red prior to taking an IQ test subconsciously impaired performance, presumably by triggering feelings of danger, failure, or avoidance (Elliot et al., 2007). Though such emotional states might have limited direct effects on learning outcomes, they may play an important role in improving intrinsic motivation and the desire to keep working (Heidig et al., 2015); by employing positive emotion cueing, designers can help increase mental effort in the learner, reduce perceived difficulty of the material (Park et al., 2014; Um et al., 2012), and improve learner comprehension (Plass et al., 2014).

Psychological research on the emotional effects of color extends at least back to the 1950s. In their early work, Guilford and Smith (1959) found that, among the spectral colors, people preferred blue and green the most and orange and yellow the least. Subsequent research found that preference for blue, green, and white generally persisted across

70

countries and cultures (Adams & Osgood, 1973). Additionally, some emotional reactions are universal, such as anger, fear, and jealousy being connected to red and black, while other colors, like purple, are more culturally mediated (Hupka et al., 1997) or are influenced by gender (Osgood, 1971). For example, women take slightly more pleasure in bright colors and find highly-saturated colors slightly more psychologically arousing (Valdez & Mehrabian, 1994). Furthermore, even within a single culture, emotional reactions may change somewhat with age, such as childhood feelings of surprise and fear toward green maturing into adult feelings of happiness (e.g., Terwogt & Hoeksma, 1995).

Physiologically, studies have shown that human reactions to color vary by hue, with long-wavelength colors (e.g., reds and yellows) being more arousing (e.g., increased heart rate and respiration) than short-wavelength colors (e.g., blues and greens; Jacobs & Hustmyer, 1974; Wilson, 1966). Additionally, many studies have found that primary hues are preferred to secondary or tertiary hues (Kaya & Epps, 2004) and that all of these are preferred to grays. Some of these reactions can be explained by differences in intensity of photoreceptor stimulation in the eye (e.g., the eye is more sensitive to red), while others likely stem from common environmental experiences, such as associating white with cleanliness and blacks and grays with dirtiness (Valdez & Mehrabian, 1994).

Figure 3

*Four Interface Examples That Cue Differing Behaviors, Trust Levels, Attitudes, etc.*

For a simple example of how this relates to UX and LX design, consider the password prompt interfaces in Figure 3. If you were presented with each of these interfaces, how might your emotional and behavioral reaction to the prompt differ based upon its color? Seeing a red prompt might make you stop and consider "Is this really a secure site?" On the other hand, an orange prompt might get your attention but be somewhat confusing or concerning, a gray prompt might feel bland but also seem secure or professional, and a blue prompt might make you feel comfortable about entering your information when perhaps you should not be comfortable.
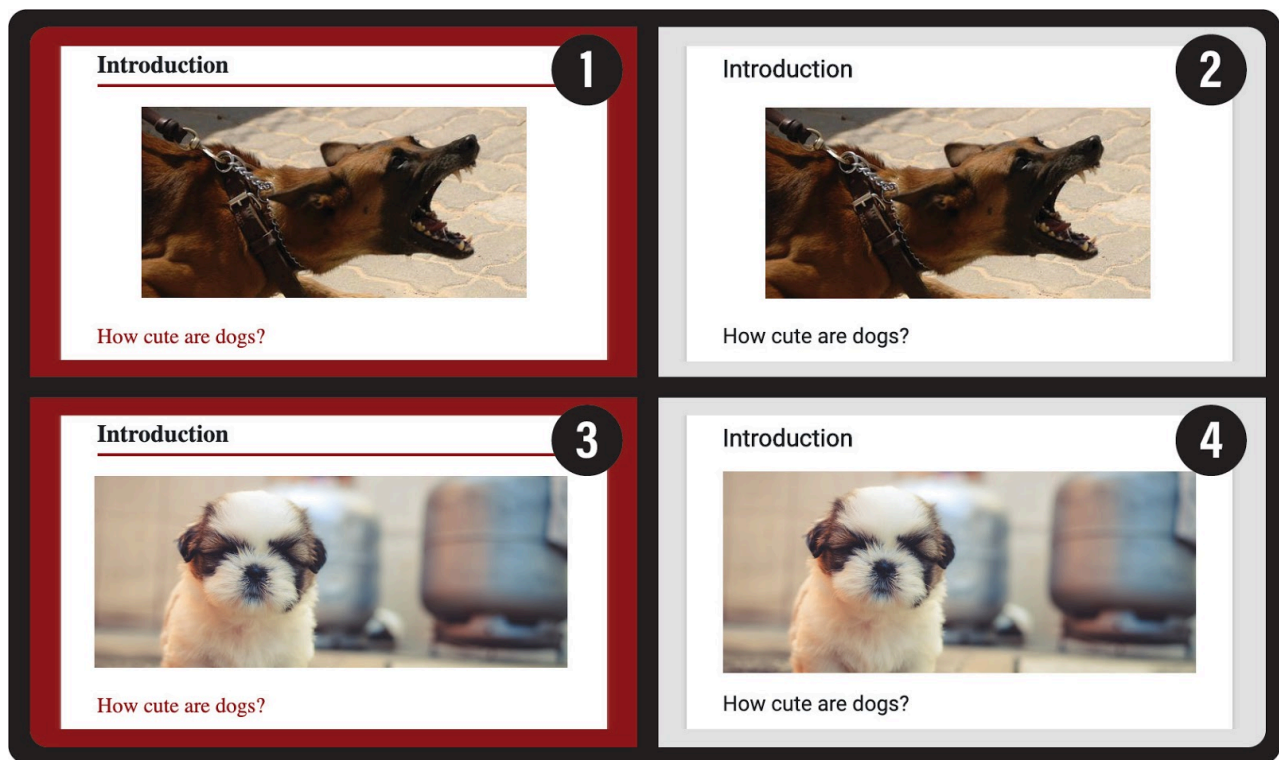
Figure 4

*Four Display Options for a Mobile App About Pet Care With Variations on Color and Content*

Similarly, suppose you are designing a learning app for young children on how to responsibly care for pets. In Figure 4, four options are provided. Two use an aggressive image of an adult dog (1, 2), while the other two use an image of a soft puppy (3, 4). Two also use a blood red background (1, 3), while the other two use a neutral grey (2, 4). What might be student affective reactions to each of these and how might it impact their ability to achieve learning objectives related to being a responsible pet owner? Option (1) feels very aggressive both because of the content and the color, while option (3) feels like there is a mismatch between what is shown and how it is presented, thereby evoking conflicting emotions. The neutral grey background for (2) and (4), however, allows the content to convey the emotion. And so, if our objective is for children to have a positive attitude toward pet care, then option (4) would likely be the best.
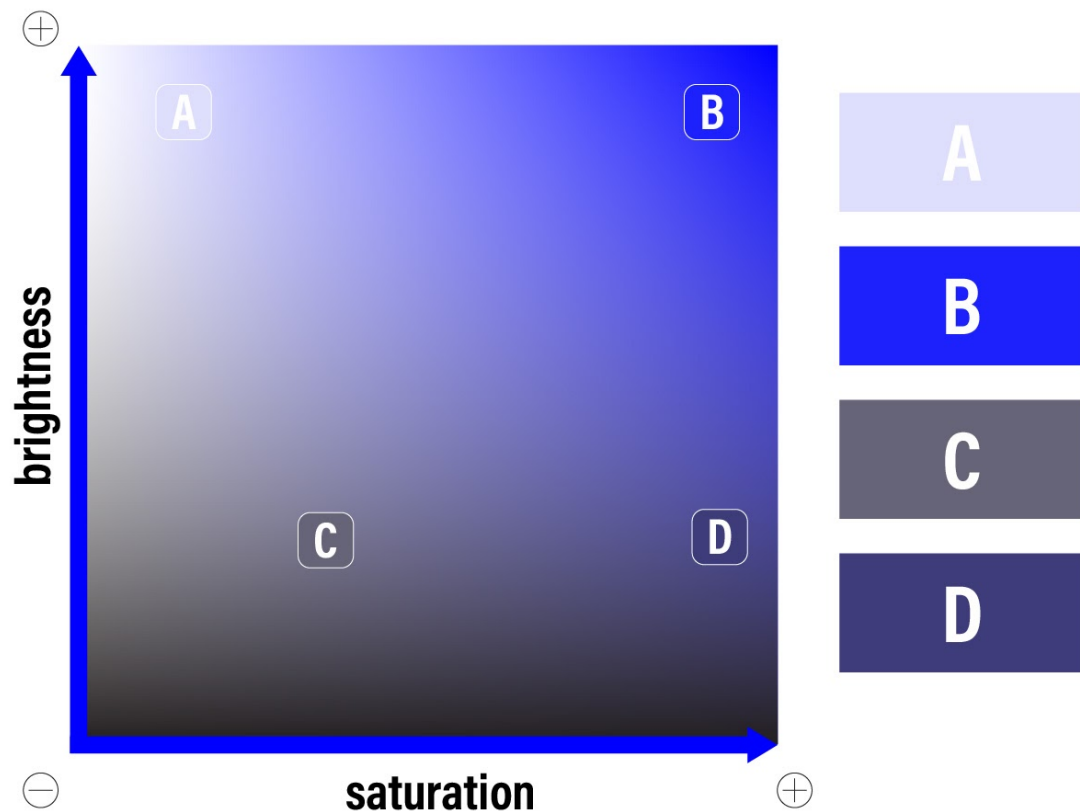
Figure 5

Brightness and Saturation Levels of the Primary Blue Hue With Four Examples

Hue is not the only aspect of color that influences emotion; a color's saturation (how little white is mixed in with it) and a color's brightness (how little black is mixed in with it) also has an effect. In research studying color effects on the Pleasure-Arousal-Dominance emotion model (Mehrabian & Russell, 1974), brightness was found to positively impact pleasure and negatively impact arousal and dominance, while saturation positively impacts all three (Valdez & Mehrabian, 1994). So, if using a blue hue, as in Figure 5, you might choose from a variety of brightness and saturation levels, including (a) light blue (high brightness, low saturation), (b) azure (high brightness, high saturation), (c) blueish gray (low brightness, low saturation), or (d) indigo (low brightness, high saturation). Though each of these is a variant of blue, they all elicit different emotional responses in the viewer. For instance, (a) would be fairly pleasurable but not arousing or dominant, eliciting a feeling of tranquility; (b) would be the most pleasurable and somewhat arousing but not dominant, eliciting a feeling of amazement or awe; (c) would be the least pleasurable and fairly neutral for arousal and dominance, eliciting a feeling of boredom; and (d) would be the most arousing and dominant but neutral-positive for pleasure, eliciting more of a feeling of boldness or antagonism (Valdez & Mehrabian, 1994). In fact, brightness and saturation account for two-thirds to three-fourths of the detected variance in users' feelings toward color (Valdez & Mehrabian, 1994). This means that shifting from soft pink to blood red in a design would likely impact users' feelings more than shifting from soft pink to soft green or blue.
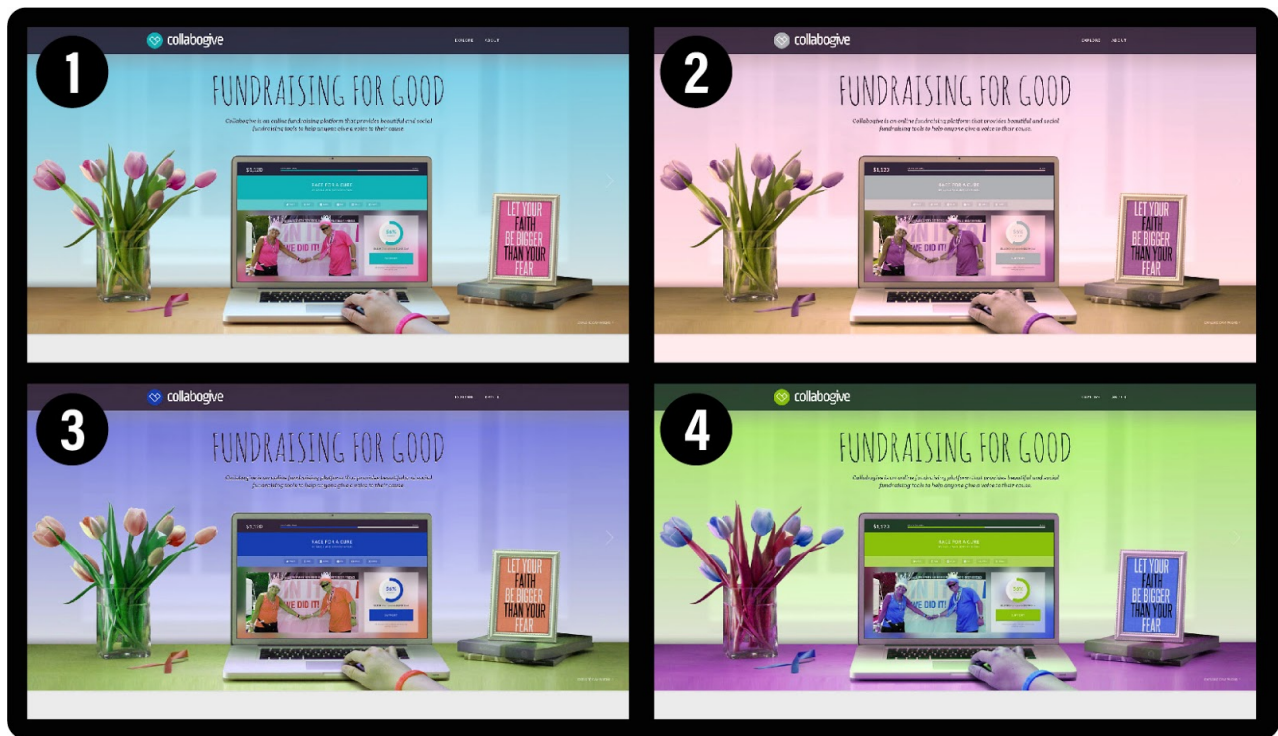
Figure 6

Four Variations of the Same Design That Elicit Different Affective Responses

In addition, the context of color-use is important, as in the case of otherwise pleasant colors being used in inappropriate or unnatural ways (Valdez & Mehrabian, 1994). Consider the four variations of the same website design in Figure 6. Which of the four color variations is your favorite? For most people, (1) would likely be the preferred variation, because not only are the colors pleasant but the color-use more appropriately aligns with prior positive experience. In the other examples, the skin color of the hand looks a bit green, which may subconsciously suggest experiences of bodily disease or death to the user; similarly, the stems of the tulips in (4) are red rather than the expected green, which signals to the user that the experience is artificial or unnatural. In such ways, whether intentionally or unintentionally, our designs evoke affective responses; just as (1) might evoke memories of beautiful blue spring days with new life, the others might conversely evoke experiences of sadness, frustration, confusion, or discomfort, all of which will influence a user's motivation and persistence with using the product.

4. Guiding Considerations

All of this research into the science of color-use is valuable, but how each of us then translates these findings into the actual, embedded craft of UX and LX design is a different matter. For this reason, a few considerations may be useful for guiding any color-use in UX and LX projects, including attending to contrast, attention, meaning, and harmony.

4.1. Contrast

First, ensuring high contrast is important in all designs for aesthetics but is especially important in those that use text. It is also a legal requirement for many UX projects to meet minimum accessibility expectations in many countries, such as those stipulated in the W3C's Web Content Accessibility Guidelines (WCAG) 2.0. Contrast problems are widespread in learning products. In fact, a recent study on K-12 school website accessibility across the U.S. found that contrast errors were the most common type of error among all sites (Kimmons & Smith, 2019). Contrast errors arise because, though two similarly-saturated colors, such as crimson and blue, may look quite different to most viewers, when superimposed (as in Figure 7) they can become difficult to decipher from one another. As a simple check of this,

colored designs can be converted to grayscale to allow you to quickly see how similar the colors are to one another, or an automated contrast checker like the one provided by WebAIM can be helpful. To solve contrast problems, white and extremely light tints should be used to contrast highly-saturated colors, and black and dark grays should be used to contrast light tints.

Figure 7

Low-Contrast and High-Contrast Examples of Analogous Color-use With Grayscale Conversions

4.2. Attention

Second, colors can be used to quickly and efficiently draw the attention of the eye to visual elements that matter. For instance, one eye-tracking study found that adding random colors to word labels on a grayscale figure moderately improved learner retention and transfer performance by improving the efficiency by which learners could differentiate textual elements (Ozcelik et al., 2009). On an app or VR interface, this might mean using a vibrant color only to effectively draw the learner's attention to a few important elements, such as commonly-used buttons or interactive elements necessary for progression. Similar principles are often applied to print media, with color only being applied to text in the case of headings, key terms, or blockquote elements. Any variation in color will generally draw the eye of the learner to the variation, and this means that UX designers should use this principle to intentionally draw user attention to elements that matter and avoid unnecessary color variation in elements that are less important. It also means that color cues can effectively be used as guideposts for directing the learner through progressive elements and to influence user pathways in desired ways.

4.3. Meaning

Third, because color conveys emotional (and sometimes even conceptual) meaning to learners, colors should be used in a manner that synergistically emphasizes the intended meaning conveyed by the overall project and individual content elements. As with the pet care mobile app example in Figure 4, improperly using color can subvert intended meaning or set a tone that is either unhelpful, dissonant, or repulsive for learners. As mentioned early, actual meaning and affective influences of color can be complicated, contextual, and individual, but some influences are fairly universal, such as grays denoting lack of importance; warm colors evoking passion, dissent, or engagement; cool colors evoking comfort, closeness, or agreement; and so forth.

4.4. Harmony

And fourth, to use colors well in any design effort, the designer must not only understand the emotions elicited by each color itself but also understand how to use colors together in harmonious ways that meet the intended purposes of the project. For instance, it is common knowledge that warm (low-wavelength) colors draw more attention than cool (high-wavelength) colors and that highly saturated colors draw more attention than washed-out tints, but the mark of a skilled designer is knowing both (a) which colors to use and (b) how to use varieties of colors together in harmonious and intentional ways.
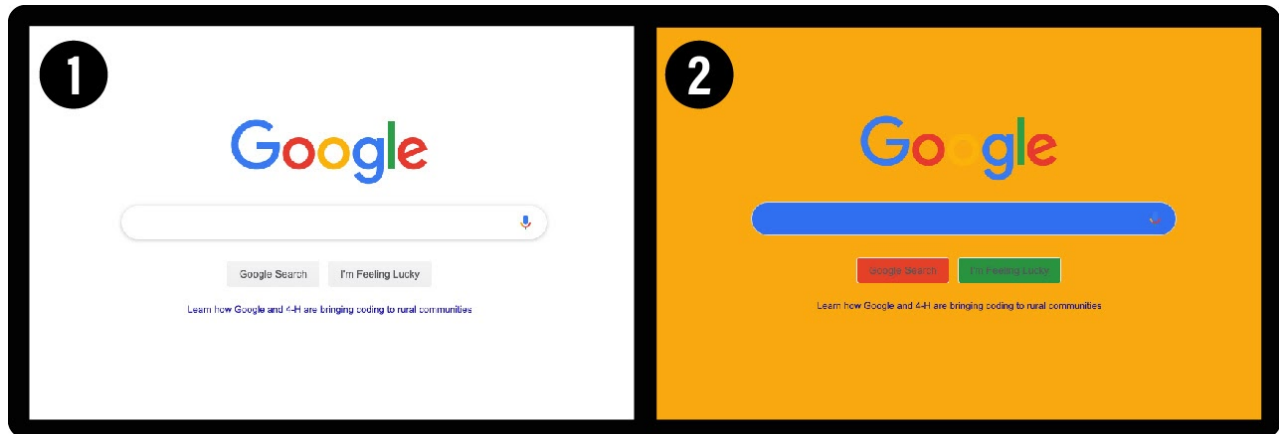

Figure 8

Two Websites Using the Same Colors but in Different Ways

Even when two products use the exact same colors (as in Figure 8), how the colors are used in relation to one another will influence the learner's affective experience. So, though both 8.1 and 8.2 use the same colors, 8.1 might feel cool, inviting, and professional, while 8.2 might feel comical, distracting, and amateurish.

As a rule of thumb, many designers propose following what is called the 60-30-10 rule, which is commonly used in many other visual fields such as interior design. According to this rule, you should choose a primary color to dominate 60% of the field of view, followed by a secondary color for 30%, and an accent or tertiary color for no more than 10%. For most UX products, this would mean choosing a subdued color as the primary color (such as the soft blue in Figure 6.1 or the white in 8.1), a vibrant color as the accent color (such as the pink in Figure 6.1 or the "Google" primary colors in 8.1), and some variation in between as the secondary color (such as the brown in Figure 6.1 or the grays in 8.1).

5. Color Schemes

To promote color harmony, and to implement the other guiding considerations mentioned above, most designers will begin color-use in a project by developing what is called a color scheme. In most cases, color schemes include between two and six colors that will be drawn upon in intentional ways. Common color scheme types include: (a) monochromatic, (b) analogous, (c) complementary, (d) complex, and (e) achromatic. Each type has its own strengths and weaknesses as well as design considerations to attend to, which I will now explain. For each type, an example image will also be provided, which has the five scheme colors depicted on the right of the image and the color wheel placements of each scheme depicted on the bottom-right.

5.1. Monochromatic

Monochromatic schemes (from mono meaning one and chroma meaning color) utilize a single, dominant color and provide color variation only by using desaturated versions (or tints) of the dominant color. Since they rely on a single color, monochromatic schemes are easy to use in complicated designs to provide a sense of cohesion and uniformity. Because the overall scheme is simple (i.e., one color), this also allows you to include richer secondary elements, such

as images in a Facebook news feed or a variety of images on a Pinterest board. The trade-off, however, is that monochromatic designs can be boring or overbearing if highly-saturated versions of the dominant color are overused. To prevent this, use plenty of white and very lightly-saturated tints of the dominant color to offset the more highly-saturated attention areas. In the provided example (Figure 9), the navigation bars are a highly-saturated blue, so the content on the rest of the design needs to use plenty of white and very light blues for balancing.
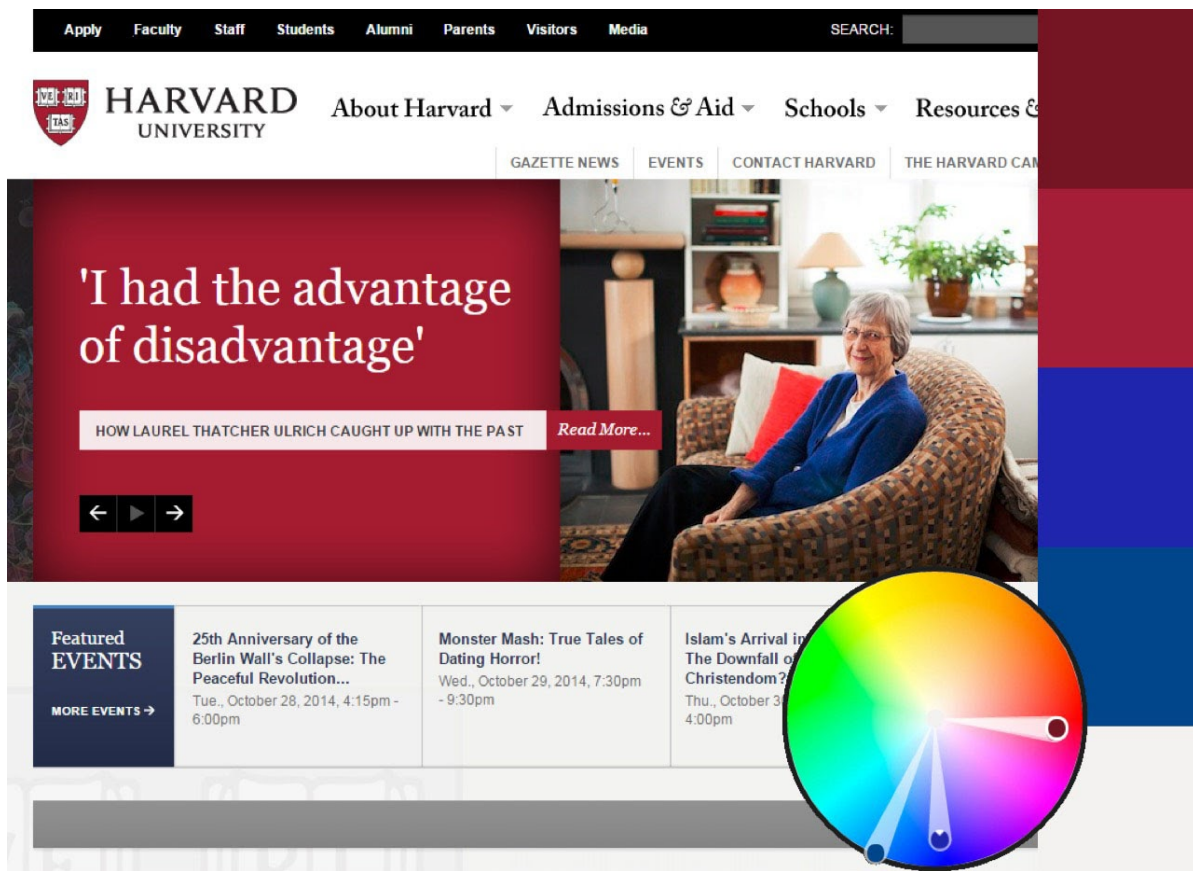

Figure 9

Monochromatic Schemes Use a Single Dominant Color of Different Saturations

5.2. Analogous

Analogous schemes rely upon two or more nearby colors on the color wheel, generally spanning no more than one-third of the color wheel (e.g., red and blue, green and orange, cyan and violet). Since the colors are not distinct enough from one another to allow them to be placed side-by-side, plenty of white space should be used to separate instances of the two colors. Analogous schemes are more visually interesting than monochromatic schemes, because they provide more color variation, but they are also more difficult to use, because the two dominant colors must be well-separated, and any other visual elements should fit the scheme. In the provided example (Figure 10), the crimson logo and carousel are clearly separated from the blue events block, and the image in the carousel has a dominant blue color (via the woman's sweater) that roughly matches the other blues in the design. If the woman's sweater was orange or green, however, the design would struggle to be harmonious; because the design is already using so much color complexity, any more complexity introduced by the secondary elements would be distracting. Because their colors are so close to each other on the color wheel, analogous color schemes in particular may introduce contrast problems.
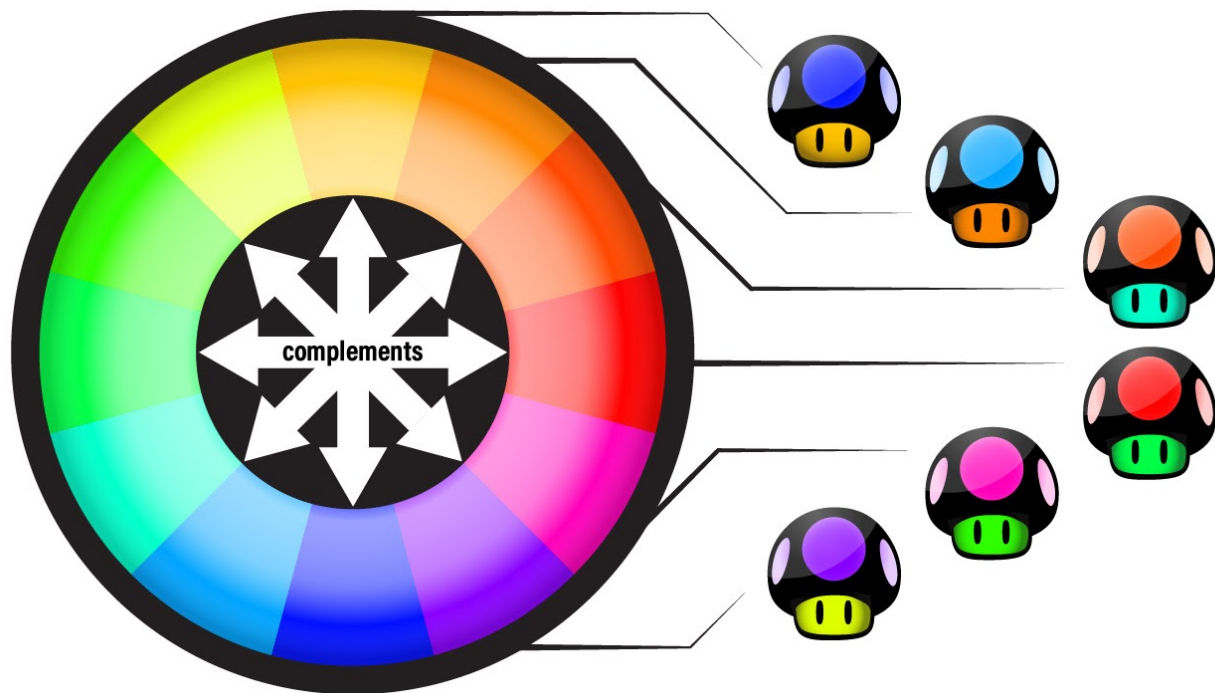
Figure 10

Analogous Schemes Use Two Dominant Colors Less Than One-Third of the Distance on the Color Wheel From One Another
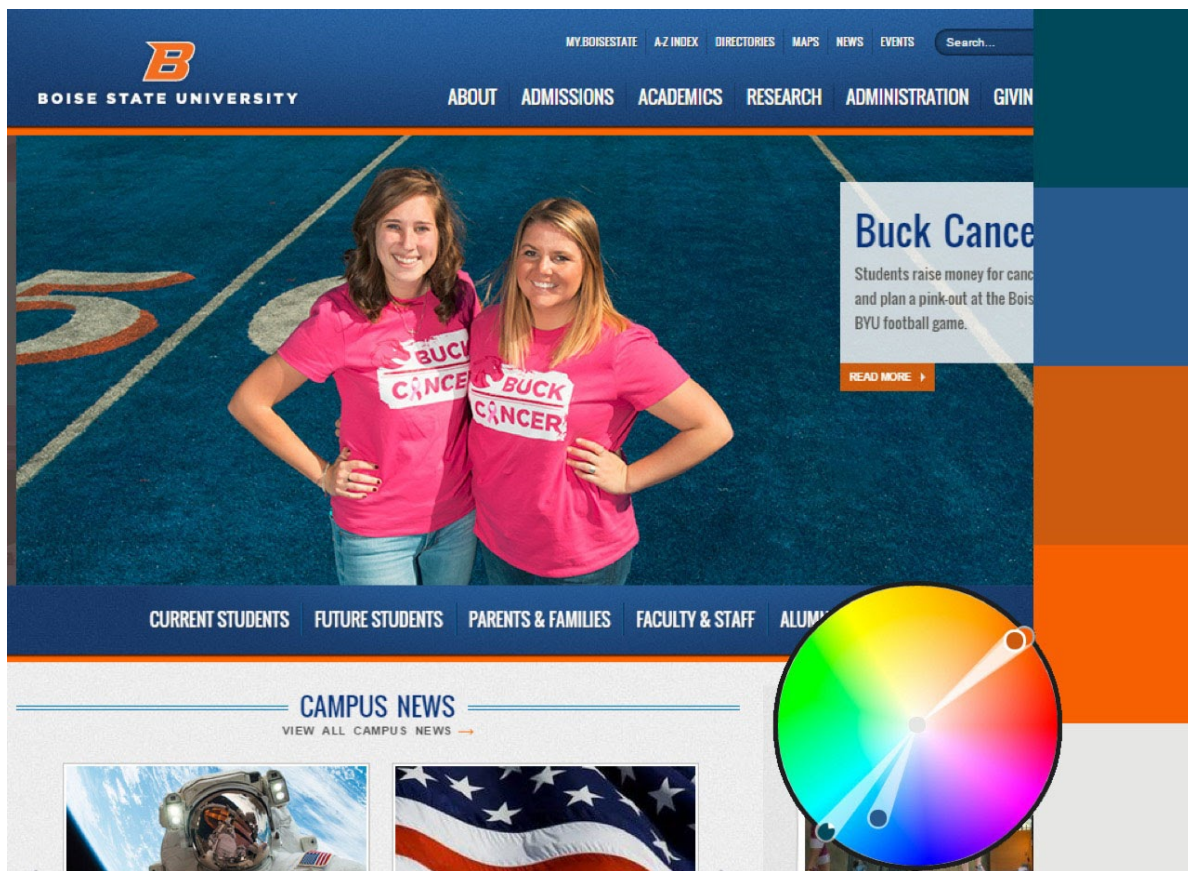
5.3. Complementary

The color wheel is conceived as circular rather than linear, because colors on opposite sides when (additively) mixed will make white. These are called complementary colors (cf. Figure 11). Complementary schemes, then, use two dominant colors that are on opposite sides of the color wheel, such as blue and gold, orange and cyan, or pink and green.

Figure 11

Complementary Colors Reside Opposite One Another on the Color Wheel

Complementary schemes are also visually interesting, but the dominant colors are distinct enough from one another that they can be used in closer proximity than can analogous colors. In the provided example (Figure 12), the orange logo and thin horizontal bars are placed nicely beside or on top of the dark blues of the menu. However, though the two colors complement each other, one should be treated as the visually dominant color, and the other should be treated as the accent (in this case, the orange is the accent). Typically, the cooler color is used as the visually dominant color, and the warmer color is used as the accent. This allows for the design to show interesting variation while also using the accent color to draw the viewer's attention to specific parts of the design, such as the logo, buttons, or content separators.
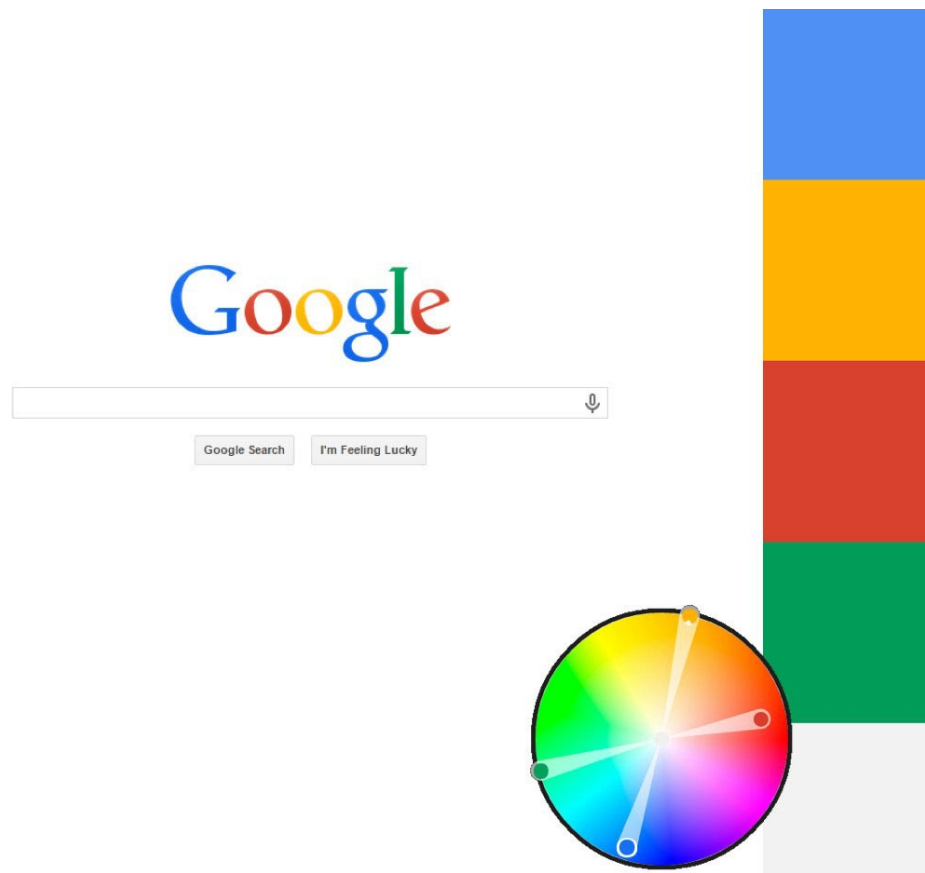
Figure 12

Complementary Schemes Use Two Dominant Colors on Opposite Sides of the Color Wheel From One Another

5.4. Complex

As the name suggests, complex schemes are the most complicated, because they use three or more dominant colors equally situated around the color wheel (e.g., blue, orange, red, and green). Because they use so much color variation, the visual space that the color takes up in the design should be very small and offset with plenty of white space. In the provided example (Figure 13), the website uses a large logo with four very different colors but offsets this by using little to no color in the rest of the design. Because of their variation, complex schemes can be very bright and interesting but can quickly become overpowering if the visual footprint of any of the colors becomes too pronounced (as in Figure 8.2).

Figure 13

Complex Schemes Use Three or More Colors Equally Situated Around the Color Wheel From One Another

5.5. Achromatic

Achromatic color schemes (meaning no color) use only variations on black, white, and gray. Of all the schemes, this scheme is the easiest to use but can also be the least interesting, because it provides the least color variation. Sometimes, however, less design complexity is desirable. In the provided example (Figure 14), the overall site design uses an achromatic scheme so that when colors are used in secondary elements they will draw the attention of the viewer (in this case, products that the vendor is seeking to sell are provided in full color, while menu items and logos are muted grays). Achromatic schemes may be helpful if secondary elements are complex and rich, but without these secondary elements, the design itself would be visually boring.

Figure 14

Achromatic Schemes Use Only Black, White, and Grays

5.6. Choice and Use

Various tools are available to designers that provide color scheme examples, such as the [Adobe Color](#) website or the [Google Material Palette Generator](#), and there are many different ways to create a color scheme. For our purposes, however, I will offer two simple techniques to create professional-looking color schemes that anyone can follow.

The first approach is to start with a single, dominant color that matches your overall emotional objective for your product—blues might be calming or sad, greens might be fresh or healthy, yellows might be fun or playful, reds might be outrageous or dangerous, etc. However, this decision might already have been made for you via institutional branding or logo decisions. Once you have this color, plug the color into a color scheming tool such as Adobe Color, and use the provided radio buttons to switch between color scheme types (e.g., analogous, monochromatic, complementary). If you want a simpler, safer design, go with a monochromatic type, and drag the circles on the color wheel to various saturation levels to give you sufficient variation in the five-color scheme. If you want something more interesting, try the complementary or analogous type. In the case of analogous, you can drag the circles around the color wheel to increase color variation, but the colors generally should not extend more than one-third (120-degrees) the circumference of the circle, lest the variation be too great. In the example image (Figure 15), I started with the Twitter logo blue (#00bbff) and found that an orange hue (#ff8400) might serve as a nice accent (complementary) color.
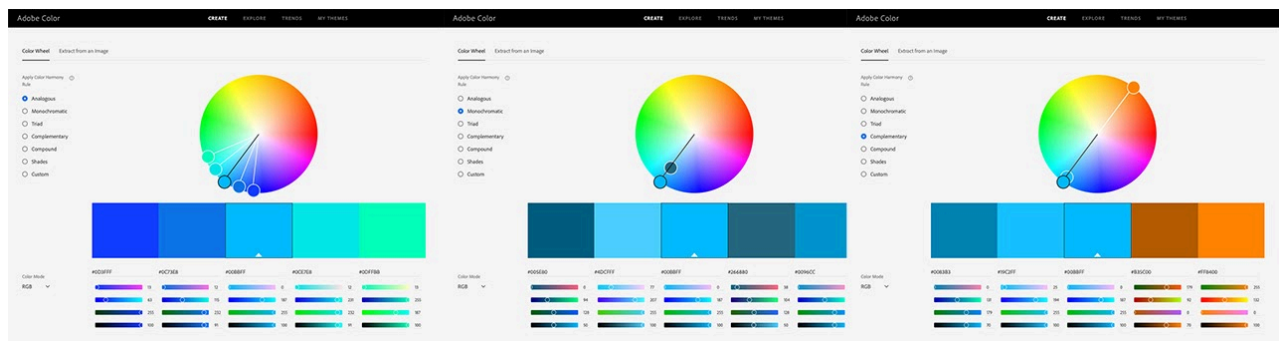
Figure 15

Choosing Different Color Scheme Types in Adobe Color From a Single Dominant Color

The second approach is to choose a picture or painting that you enjoy (preferably of a natural setting) that you feel exemplifies the emotional state you want to create with your design. Then, upload the image to Adobe Color via the "Extract from an image" feature. This will attempt to identify the dominant colors in the picture and to situate them in relation to one another in a harmonious manner. Once imported, you can click back on the color wheel to see where the colors fall and to switch between color scheme types. In the provided example (Figure 16), the image of trees in autumn generated an analogous color scheme of oranges, yellows, greens, and burnt orange.
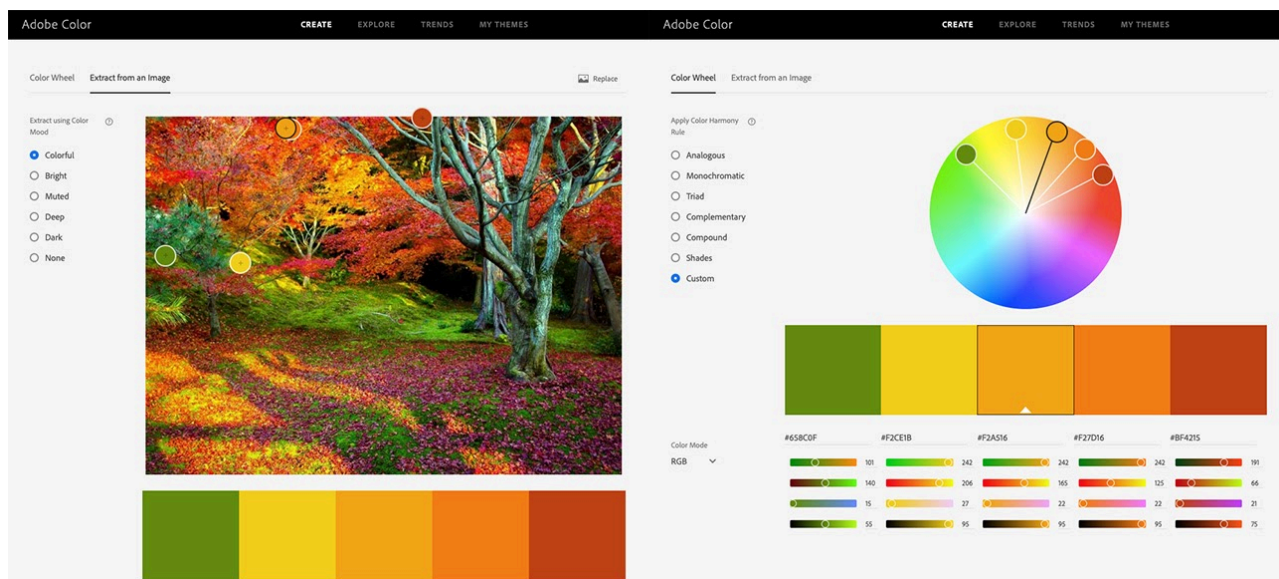

Figure 16

Extracting a Color Scheme in Adobe Color From an Existing Image

Once you have created a color scheme you are happy with, you can import the color scheme into other applications in a variety of ways. The simplest and most versatile method, however, is to simply take a screenshot and place it into your authoring tool or to manually transfer the hexadecimal codes.

6. Conclusion

This chapter has provided an overview of (a) the physics and technical notations for color, (b) scholarly literature on the relationships between color, emotion, and learning, (c) some guiding considerations on how to use color in UX design, and (d) concrete information on effectively using color schemes to improve harmony and contrast in designs. Some major takeaways for designers should include the following:

- Choose dominant colors that will influence emotions aligning with your intended design goals.
- Use colors in ways that are intentional (e.g., accentuating important content) and natural or appropriate by drawing upon users' prior experiences.
- Ensure that color contrast is sufficient and that color is used strategically to allow learners to clearly and readily identify important content and follow intended user pathways.
- Choose a color scheme that counterbalances the complexity of your content (complex content requires a simpler color scheme, while simpler content can use a more complex color scheme).
- Use whitespace and white, black, or gray text to increase contrast and to balance color-use.

By following these suggestions, UX and LX designers can create designs that increase motivation and persistence by making user experiences more pleasing, more intentional, and less frustrating.

From a research perspective, much work is still needed to help designers better understand issues of contextual color-use, differential affective influences on learners, and interactions between various colors as well as between color, content, and objectives. Because effective color-use in UX design is best described as craft (or synergy between science and art) and because learning contexts vary so greatly, it is reasonable that the most important research in this area moving forward will focus on applied, focused uses of color through iterative design cases and continual improvement. Though UX designers might not have the same obsession with color that Monet expressed, hopefully our obsession for learning will help us to more fully recognize that color is an important aspect of the learner's experience that should be better understood and more skillfully applied.

References

Adams, F. M., & Osgood, C. E. (1973). A cross-cultural study of the affective meanings of color. J*ournal of Cross-Cultural Psychology, 4*(2), 135–156.

Elliot, A. J., Maier, M. A., Moller, A. C., Friedman, R., & Meinhardt, J. (2007). Color and psychological functioning: The effect of red on performance attainment. *Journal of Experimental Psychology: General, 136*(1), 154–168.

Gaines, K. S., & Curry, Z. D. (2011). The inclusive classroom: The effects of color on learning and behavior. *Journal of Family & Consumer Sciences Education, 29*(1), 46–57.

Google. (n.d.). *The color system*. Material Design. https://edtechbooks.org/-Cqk

Guilford, J. P., & Smith, P. C. (1959). A system of color preferences. *American Journal of Psychology, 72*, 487–502.

Heidig, S., Müller, J., & Reichelt, M. (2015). Emotional design in multimedia learning: Differentiation on relevant design features and their effects on emotions and learning. *Computers in Human Behavior, 44*, 81–95.

Hupka, R. B., Zaleski, Z., Otto, J., Reidl, L., & Tarabrina, N. V. (1997). The colors of anger, envy, fear, and jealousy: A cross-cultural study. *Journal of Cross-Cultural Psychology, 28*(2), 156–171.

Jacobs, K. W., & Hustmyer, F. E. (1974). Effects of four psychological primary colors on GSR, heart rate, and respiration rate. *Perceptual and Motor Skills, 38*, 763–766.

Kaya, N., & Epps, H. H. (2004). Relationship between color and emotion: A study of college students. *College Student Journal, 38*(3), 396–405.

Kimmons, R., & Smith, J. (2019). Accessibility in mind? A nationwide study of K-12 websites in the U.S. *First Monday, 24*(2). https://edtechbooks.org/-pRn

Krathwohl, D. R., Bloom, B. S., & Masia, B. (1964). *A taxonomy of educational objectives — Handbook II: Affective domain*. David McKay Company, Inc.

Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. MIT Press.

Osgood, C. E. (1971). Exploration in semantic space: A personal diary 1. *Journal of Social Issues, 27*(4), 5–64.

Park, B., Plass, J. L., & Brünken, R. (2014). Cognitive and affective processes in multimedia learning. *Learning and Instruction, 29*, 125–127.

Plass, J. L., Heidig, S., Hayward, E. O., Homer, B. D., & Um, E. (2014). Emotional design in multimedia learning: Effects of shape and color on affect and learning. *Learning and Instruction, 29*, 128–140.

Terwogt, M. M., & Hoeksma, J. B. (1995). Colors and emotions: Preferences and combinations. *The Journal of General Psychology, 122*(1), 5–17.

Um, E., Plass, J. L., Hayward, E. O., & Homer, B. D. (2012). Emotional design in multimedia learning. *Journal of Educational Psychology, 104*(2), 485–498.

Valdez, P., & Mehrabian, A. (1994). Effects of color on emotions. *Journal of Experimental Psychology: General, 123*(4), 394–409.

Wilson, G. D. (1966). Arousal properties of red versus green. *Perceptual and Motor Skills, 23*, 942–949.

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Multimedia Design

Sai Satish Gattupalli, M.F., J.M., & Torrey Trust

Means   Universal Design Learning   Digital Tools   Podcasts

Teens today spend, on average, **8.5 hours every day consuming media** (Common Sense Media, 2021). Similarly, "American adults spend over 11 hours per day listening to, watching, reading or generally interacting with media" (The Nielsen Company, 2018, para. 2).

In a world where **media consumption is deeply embedded into nearly everyone's life**, it is essential that your website offer the same type of multimodal learning experience. Multimedia can increase the appeal of the website, while also offering visitors different ways to connect with and explore the site content.

Consider the Universal Design for Learning (UDL) framework, which was designed to "improve and optimize teaching and learning for all people based on scientific insights into how humans learn" (CAST, Inc., 2019, para. 1). One of the three UDL principles is Multiple Means of Representation - providing learners with more than one way to access and learn content. When you provide videos, podcasts, or images that present the text-based information in a multimodal format, you are giving the viewer a choice in deciding how to explore the information.

In [Chapter 3](#) you will find tips, resources, and tools for using media designed by others on your website without infringing on copyright. This chapter focuses on how you can create your own multimedia to enrich the way you present and communicate the information on your site.

The chapter will start with a brief overview of design techniques and then will be followed by a showcase of digital tools for creating audio, video, and images for your site.

Multimedia Design

It's easy to design digital media with the tools available today, however, designing digital media that positively impacts learning (aka whether visitors acquire information from your site) is quite challenging. This section will provide some tips and strategies for creating effective multimedia.

First and foremost, **design with your audience in mind** (see: [Getting a scientific message across means taking human nature into account](#)).

- Who is the audience of your website?
- What do they know already about your website topic?
- What type of words or phrases do you use when speaking with typical audience members about this topic (use this same language in your audio/video products)?

Consider any **myths or misconceptions** your audience might have about your topic and make sure to debunk those first! Researchers have found that students are less likely to watch a science video when they think they already know the information from the video, even if their knowledge is incorrect ([Helll-ooo! Watching Videos Does Not Necessarily Lead to Learning](#)).

Here are some more tips to creating more impactful media products:

- **Make sure the multimedia is accessible** - Add accurate closed captions to videos, include a transcript for audio recordings/podcasts, and use ALT text to describe an image.
- **Hook your audience** - Use humor, surprise, inquiry, a short vignette (Need more ideas? Read [12 Presentation Hooks Used By the Best TED Presenters](#)).
- **Be creative and social** - Break away from the traditional mold of educational multimedia (aka lecture videos, documentaries, infographics full of far too much information).
- **Use visuals** - quite simply, visuals are more memorable than words. The less on-screen text, the better. After watching this short TED Talk, what do you remember most? The visuals or the words? (Research article: [Pictures Move People More than Words Emotional images can change people's behavior, while similarly charged words do not](#)).
- Read **[What Makes Good Design? Basic Elements and Principles](#)** to learn basic visual design techniques.
- **Use media in an ethical and legal manner** - If you upload a video to YouTube with a popular song as the background music, it will be flagged and taken down. Use your own original art or Creative Commons works with attribution (explore [Chapter 3](#) for more information about finding and using Creative Commons media).

[Heath & Heath's Made to Stick Principles](#)

The following principles provide a valuable guide to designing captivating media:

- **Simple** - Don't overwhelm with facts, ideas, or information. Use [the rule of 3](#) (what 3 things do you want the audience to take away from your media?).
- **Unexpected** - Information and ideas that are shocking are more memorable. How can you surprise the audience with your media?
- **Concrete** - Don't use abstract terms or complex jargon. Present information in a way that is relevant to the audience.
- **Credible** - Why should the audience believe you? Credibility can come in many forms (education degree, profession, personal experience).
- **Emotion** - Simply increasing an individual's heart rate results in a higher likelihood of sharing a video. "Virality is partially driven by physiological arousal. Content that evokes high-arousal positive (awe) or negative (anger or anxiety) emotions is more viral. Content that evokes low-arousal, or deactivating, emotions (e.g., sadness) is less viral" ([Berger & Milkman, 2011](#), p. 1).
- **Story** - When you tell a story, people not only listen/watch, parts of their brain activate as if they are experiencing the story themselves (read: [The Science of Storytelling: What Listening to a Story Does to Our Brains](#)). Thus, storytelling is an incredibly powerful and impactful teaching tool (learn more: [Stories are better than lectures at teaching us about health](#)).

Multimedia Learning Principles

Through extensive research based on how multimedia impacted college students' learning, Richard Mayer (2009) developed 12 guiding principles for the design of multimedia. The following bullet point list is a synthesis of the key points from these principles:

- **Don't Distract** - Get rid of extraneous information, stories, images, sounds, or content (while it might be fun to tell the story of the time you were white water rafting and saw a beautiful Scarlet Macaw, if this story is not relevant to your video about dividing fractions, then leave it out!).
- **Direct Attention** - Use text, arrows, bolding, sound effects, or other tools to signal key information (notice how the bolded text stands out and draws your attention!).
- **Use Visuals with Narration** - The combination of spoken words *and* pictures or videos is stronger than words by themselves.
- **Keep it Together** - In an image, keep your graphics and their labels as close as reasonably possible to one another. In a video, make sure the visuals match the narration.
- **Chunk it** - Break up podcasts, audio files, and videos into shorter media files.
- **Keep in Conversational -** Speak in a conversational tone. Don't use technical or academic jargon. Use plain, easy-to-understand language (review the Writing for the Web chapter for tips on how you can improve your audio or video scripts). If you do plan on using acronyms or uncommon words in your audio or video, make sure to define them early on.

For an in-depth overview of the 12 principles, visit Davis and Norman's (2016) [Principles of Multimedia Learning article](#). Also, take a look at the [Principles of Accessible Multimedia Learning](#) (Hinderliter, 2022). Keeping these principles in mind can help you create media that enriches, rather than detracts from, the content on your site.

Designing Audio for Your Website

Audio is one of the most common ways to keep your audience engaged. In classrooms, learners listen to their peers and the instructor. However, websites tend to overemphasize text and underemphasize the power of audio. One of the major advantages to using audio over text is the use of high pitches, low pitches, tones and inflection to match the context of the subject matter being taught. People tend to process auditory information quicker and easier than similar information in a text-based medium (to learn more, explore [The Use of Audio in eLearning site](#)). Your audio could be an instructional clip, an interview, a narrated story, or a podcast. In this section, we'll cover the basics of how to record audio using the free online tools and software programs: [Vocaroo](#), [Online-Voice-Recorder](#), and [Audacity](#).

> ### Design Tip
>
> Before you proceed to record your audio file, make sure you are in a quiet location without any background noise. Use an external microphone, such as a lavelier or shotgun mic, rather than your computer or smartphone mic to capture higher quality sound. Pay attention to any external noises such as a person walking by, a door shutting, a car starting - as these can ruin an audio file.

Tool #1: Vocaroo

Vocaroo is a popular and intuitive flash-based tool for recording audio clips. Simply visit [Vocaroo.com](#) and select "Click to Record" to start creating an audio file.
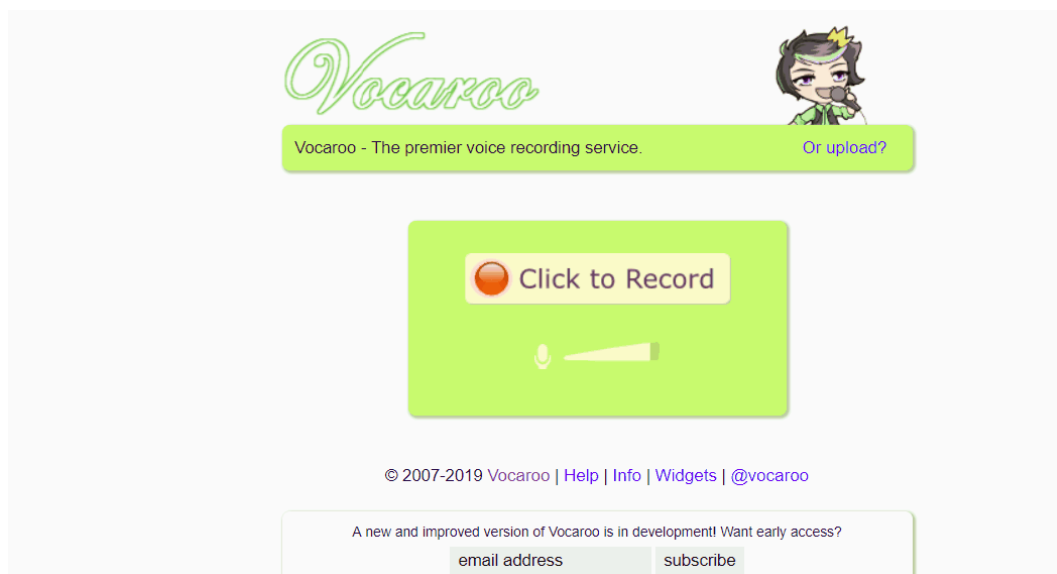
That's it! You can now download your recording as an mp3 or WAV file or share it via a link. If you'd like to re-record, you may do so.

Tool #2: Online-Voice-Recorder

Similar to Vocaroo, this is an online voice recording tool that is convenient and simple to use. You can also use this site to trim your recording and save a particular section. Head to Online-Voice-Recorder, click the red microphone icon, and start your recording.
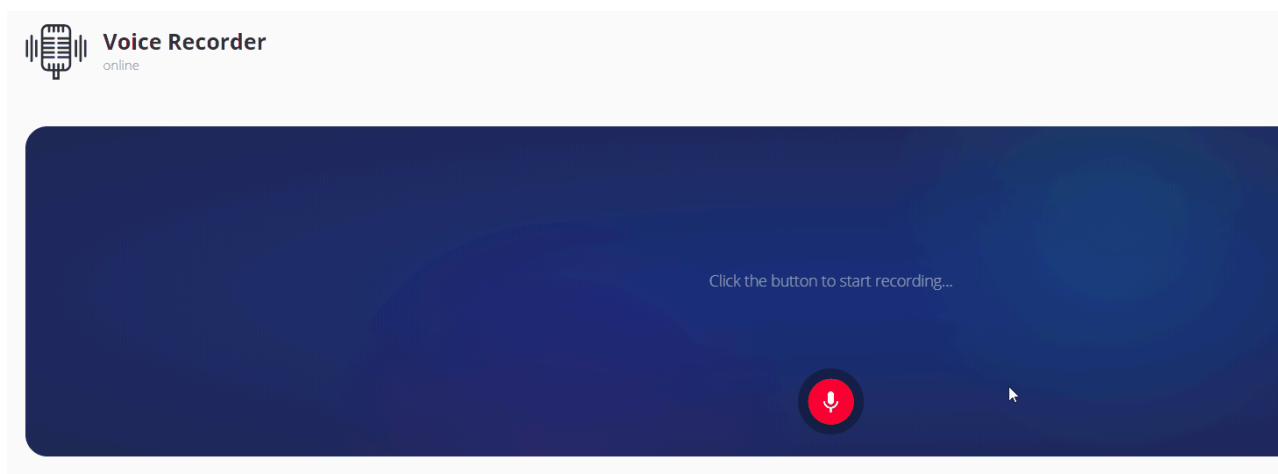

You can now **Save** the file in an mp3 format.

Tool #3: Audacity

Audacity is a more complex multi-track audio recorder and editor. It is also a free and open-source software. Unlike other online tools, Audacity is a program that needs to be downloaded to your computer before you can record your audio files. Visit the Audacity Download page and to get the software for your computer. While the basic recording function is virtually identical to that of the prior two resources, it's highly suggested that you take some time to familiarize yourself with the more advanced features (such as noise cancellation) if you choose to use Audacity.
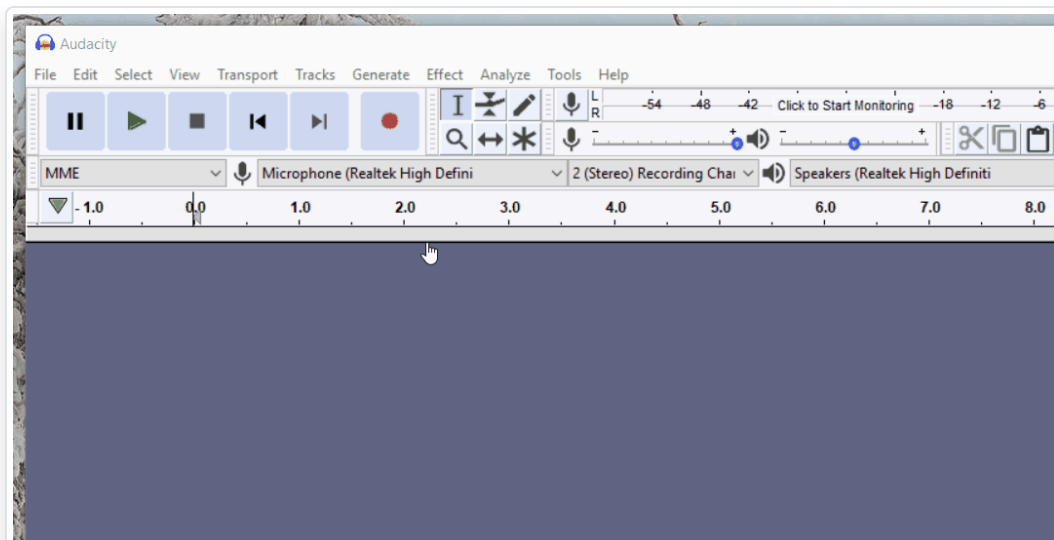
Using Audacity, you can export your recording in various formats, including mp3, WAV, and OGG. Here is how you **Export** your file.
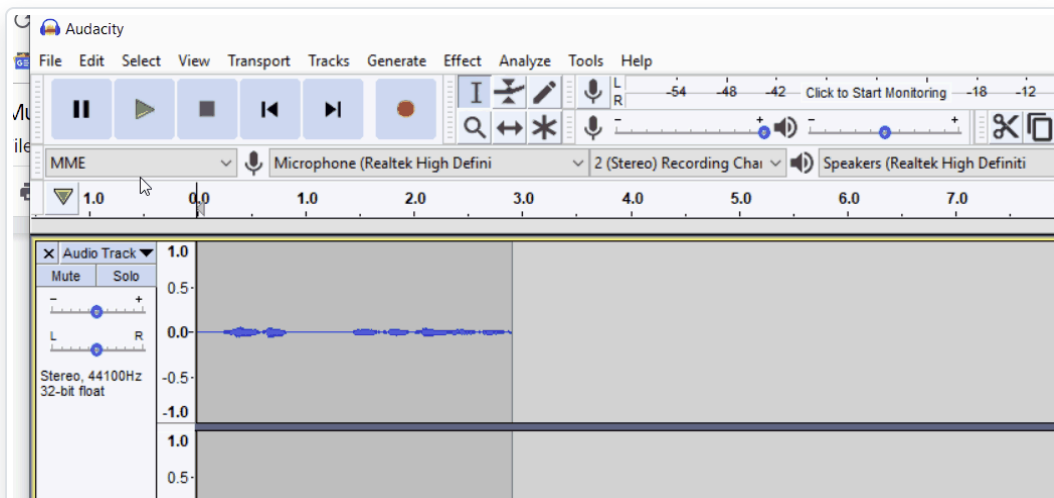
Audio Design Tips and Tricks

- Do a test run by recording a short bit of audio and playing it back to hear how it sounds.
- Anticipate the sounds you might hear during the recording (e.g., a person walking by your recording area or a plane flying overhead) and make adjustments to avoid noise.
- Stay close to the microphone, but not too close (hold the mic about 6 inches or a fist-width away from your mouth).
- Avoid typing on the keyboard while recording to avoid distracting keystroke noises.
- Don't breathe heavily into the mic.

Designing Video for your Website

A properly made video will mesmerize your website visitors. Videos have become the most popular instructional tool and being able to provide your learners with videos like Khan Academy or Ted-Ed will make your website more engaging and appealing. Designing a video can be time consuming, and sometimes frustrating, but with the right tools and design skills, anyone can make captivating videos. The following section features two web-based design tools for creating videos: Adobe Spark and Screencastify. You can also use software, such as iMovie, Adobe Premiere, Shotcut (free), Windows Video Editor, or Final Cut Pro, to edit together professional quality videos.

Tool #1: Adobe Spark (now Adobe Express)

Adobe Spark is a free online tool that lets you create beautiful videos, images, and web pages. This video-making software allows you to create compelling video stories quickly by piecing together slides of visuals with audio. Here is how you use it:

1. Visit Adobe Spark and create a free account.
2. After you sign in, click the blue "+" icon at the very top of the screen and select "Video".
3. You will now be prompted to pick a story template or you may start from scratch.
4. Pick any template and you will be brought into the video editing mode.

This editing mode is comprised of three elements - the **timeline area** (at the bottom), the **styling area** (on the right), and the **main video content area** (in the center).
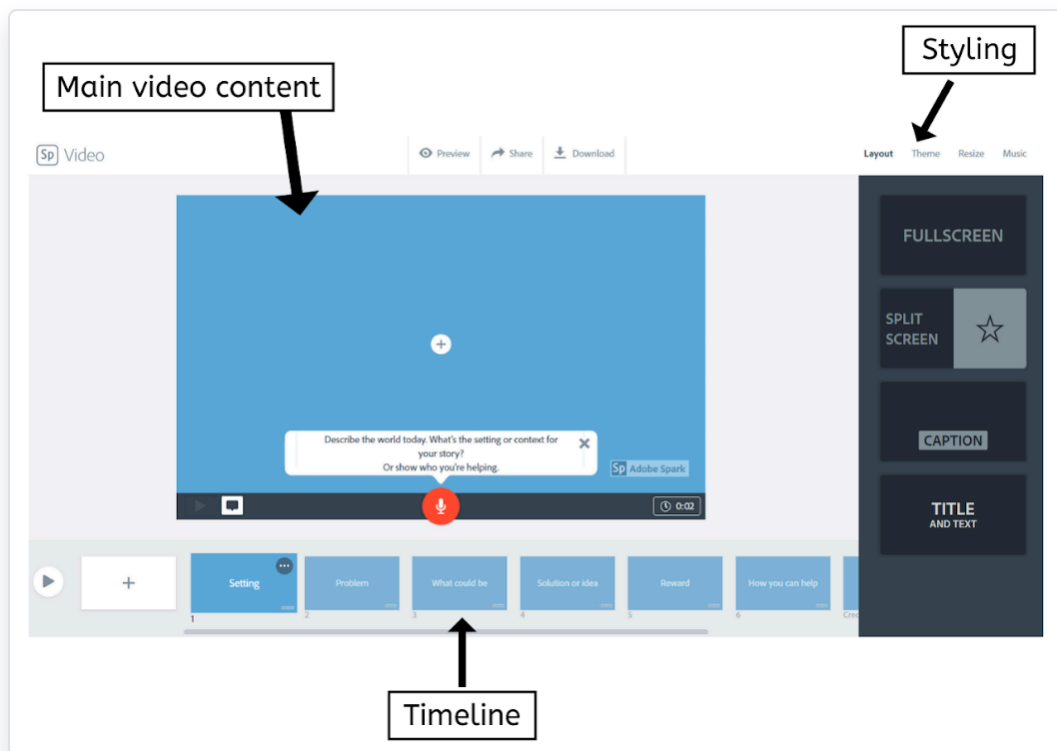
Add new slides to the video by clicking the "+" icon in the timeline area.

Change the layout of each slide from the styling panel and control how long each slide plays from the timeline panel.

Add Creative Commons music, images, and videos to your movie from the styling area.

You can also upload your own images (jpeg and png), videos (mp4 and mov), and background audio (mp3). When your video is complete, you can download the video in mp4 format or share it via a URL. Any time you'd like to make

modifications to your video, you can login to Adobe Spark on a computer or smart device and make changes and download the new video instantly.

Tool #2: Screencastify

Screencastify is a screen recording extension for Google Chrome. It is a light-weight, powerful, and easy-to-use screen recorder. However, it has a **time limit of 10 minutes** per recording with the free account. To get started, you must download and install the Screencastify extension on your Chrome Browser. Click on the Screencastify icon in the top right corner of your web browser and sign in with your Google account.
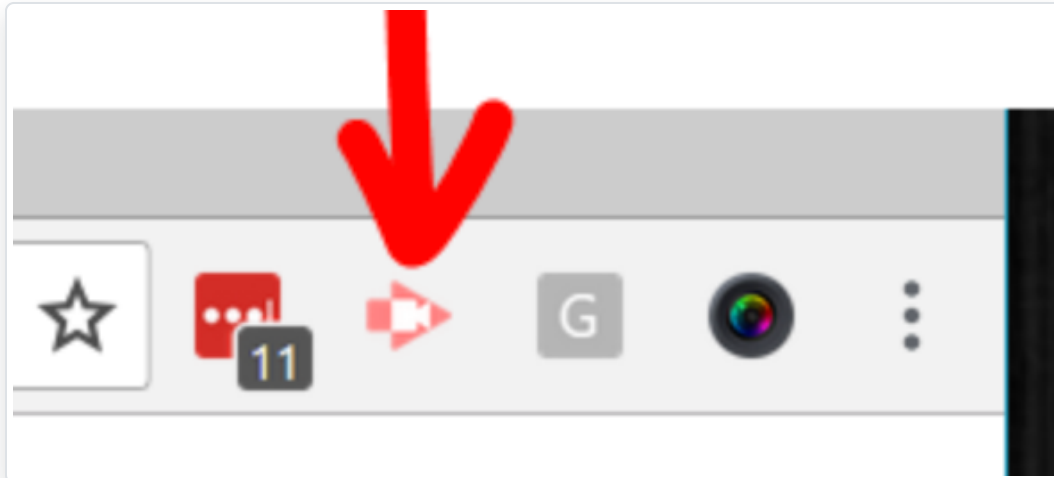
This will let you save all of your screen capture footage to your Google Drive. Now, click the icon again and you can start recording the action.
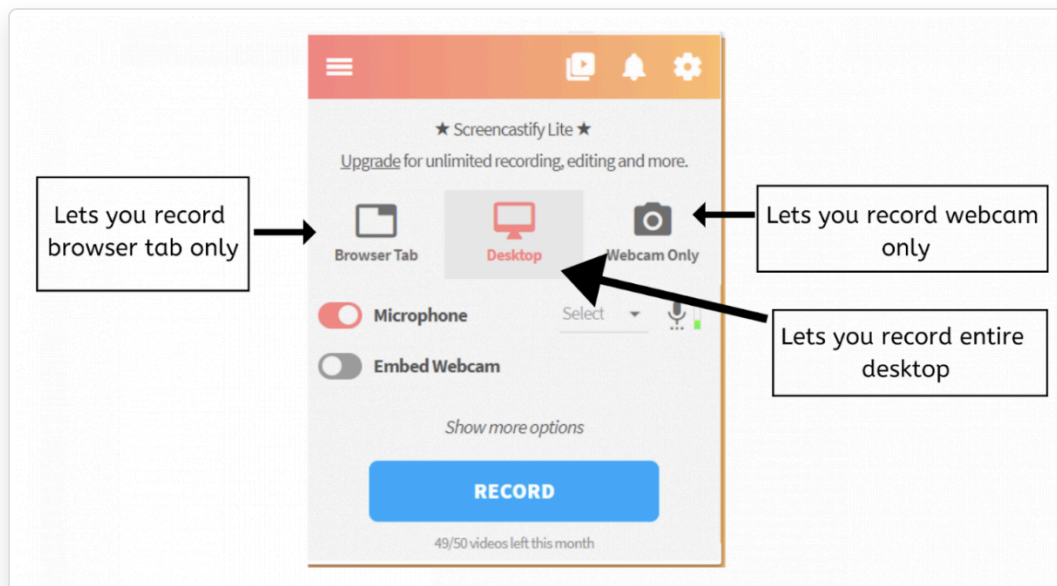
All your recording sessions will automatically be saved on your Google Drive account.

- Keep your videos short (e.g., 3-5 minutes).
- Use the design principles discussed earlier in this chapter to capture and maintain the attention of your learners as they watch your videos.
- Don't use any copyrighted images or visuals in your video. Search for Creative Commons resources from Pixabay, Videezy, Unsplash, and more (e.g., Guide to Finding Media for Classroom Projects). Make sure to give proper attribution when using any Creative Commons licensed materials (review Chapter 3).
- Use the YouTube Audio Library or Unminus to find Creative Commons background music. Give attribution as needed.
- If you include background music, make sure it's not too loud, otherwise, it'll distract the viewer.

Designing Images For Your Website

Research has shown that **images are more powerful and memorable than text** (see: Pictures Move People More than Words Emotional images can change people's behavior, while similarly charged words do not).

Every page on your website should have at least one image to complement and enrich the text (if you need help figuring out how to select or design an image that complements the text, visit Chapter 3).

Before exploring this section, read **What Makes Good Design? Basic Elements and Principles** to learn basic visual design techniques. In the following section, you will learn about 3 digital tools for creating images: Pablo, Canva, and Adobe Spark.

Tool #1: Pablo

Pablo is a commonly used tool for creating quick web banners with custom text.

To get started:

1. Visit the Pablo website.
2. Select an image.
3. Double click on the image to add text.
4. When you are done, click on **Share & Download** button at the bottom of the screen to download the picture in a jpeg format.
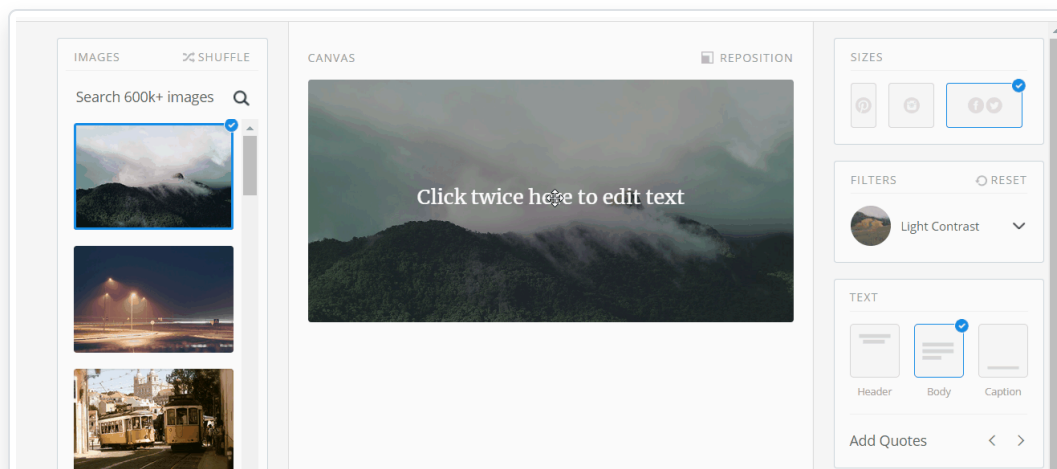
Tool #2: Canva

Canva is a free website for designing professional quality images and graphics. Canva offers pre-made templates that you can customize, such as posters, social media graphics, infographics, and flyers. When you get to the website it will ask you to sign up with your email. Once you sign in, it will ask you invite friends to see your work but you can skip over that part and get started with the process of creating custom images and graphics. Click on any template, then double-click on any text/image to **edit.** When you are done creating your masterpiece, you can download it as a jpg, png, or pdf.
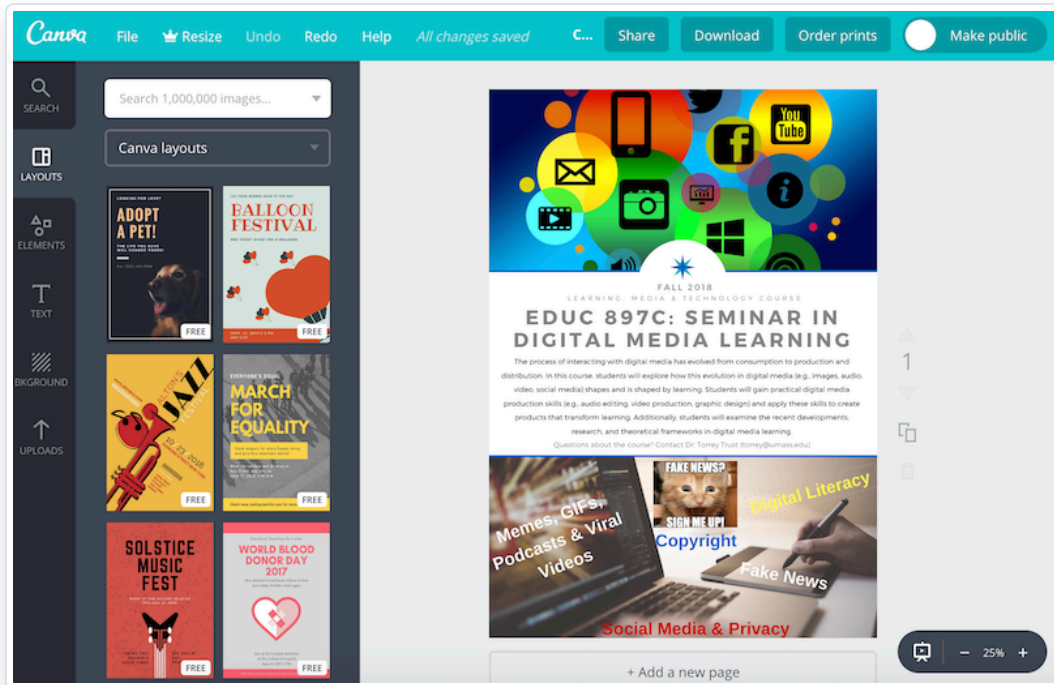
Tool #3: Adobe Spark

Spark (covered in the video section) is similar to Canva in regards to the creation of images. It offers pre-made templates that you can adjust and customize yourself. You can easily integrate Creative Commons and Public Domain images into your graphic. To get started, click the "+" sign and select Graphic. Select a template to use or start from scratch. When you are done, you can download the image to your desktop or share it via a URL.
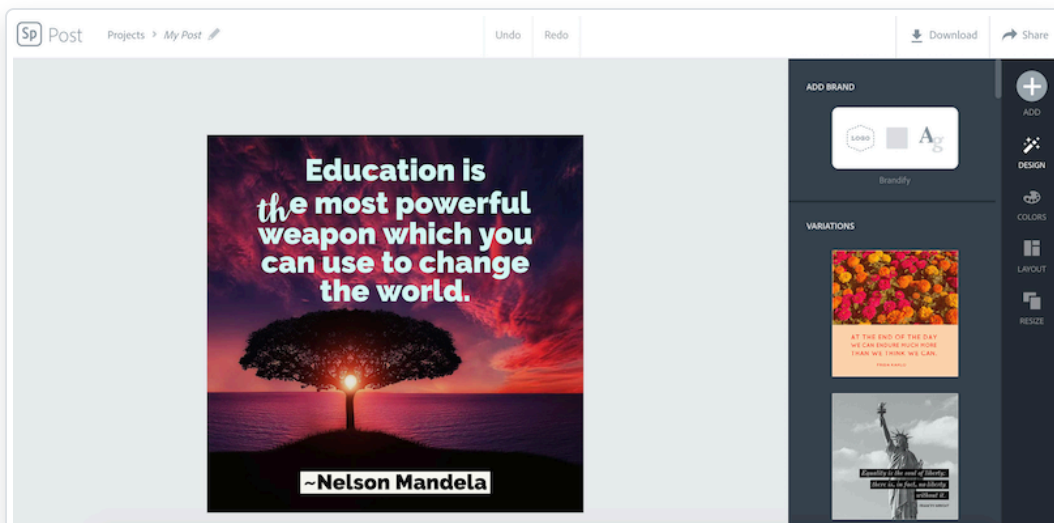
> ### Image Design Tips and Tricks
>
> - Use copyright-free pictures or Creative Commons images with attribution (review the [Guide to Finding Media for Classroom Projects](#)).
> - Don't include visuals on your website just for the sake of mixing things up. Select visuals that complement and enrich your text (see [Chapter 3: Finding Images that Complement Your Text](#)).
> - Limit how many words you put on an image. The power of images comes from the visual appeal.

Chapter Overview Video
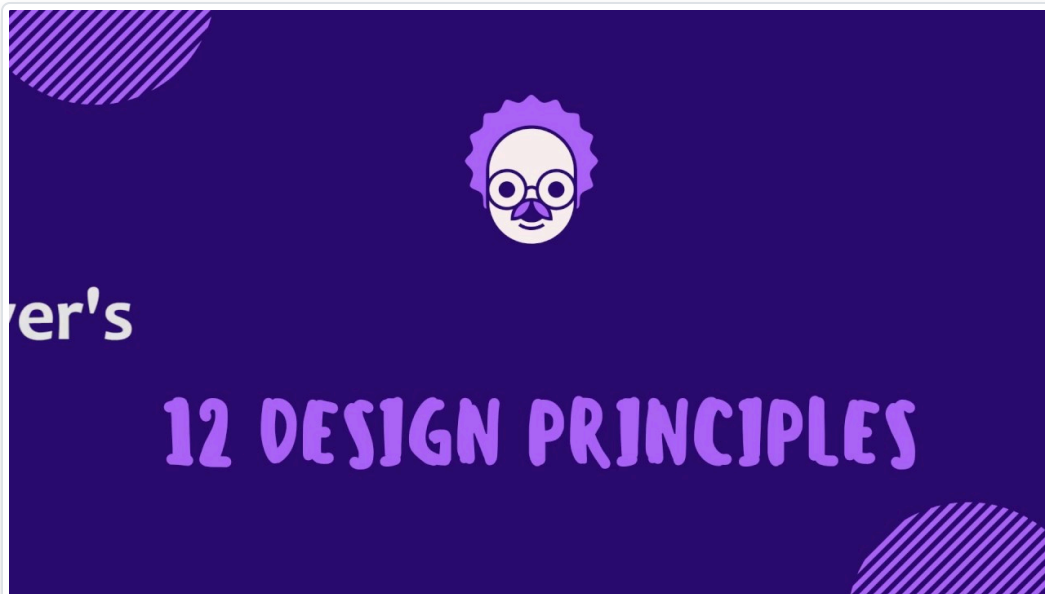
Additional Design Tools and Resources

- **Creative Commons & Royalty Free Media**
  - [How to Give Attribution - Creative Commons](#)
  - [The Educator's Guide to Copyright, Fair Use, and Creative Commons](#)
  - [Guide to Finding Media for Classroom Projects](#)
  - [Spreadsheet of OERs](#)
  - [Alternatives to Google Image Search - Chart](#)
  - [Sources of Free Sound Effects and Music for Multimedia Projects](#)
  - Audio: [YouTube Audio Library](#) & [Unminus](#) & [Dig CCMixer](#)
  - Video: [Videezy](#) & [Pixabay Videos](#) & [Pexels](#) & [Vimeo Creative Commons](#) & [Videvo](#)

- **Audio**
    - [Beautiful Audio Editor](#)
    - [Anchor](#) & [Synth](#) - podcasting
    - [Simple audio & video editing tools](#)
    - [Sound Trap - music making](#)
    - [Twisted Wave - audio editor](#)
    - [Clyp.it (audio recording & sharing)](#)
    - [Record MP3 Online](#)
    - [How to Podcast for Free](#)

- **Video**
    - [Powtoon animation tool](#)
    - [Wevideo](#)
    - [Clips](#) (for Apple) & [Quik](#) (for Android)
    - [Headliner](#)
    - [Shotcut](#) - free open source video editor
    - [11 Mobile Video Creation Apps](#)
    - [Video Creation & Editing Apps](#)
    - [Tips for Shooting and Editing Videos](#)
    - [The Best Free Video Editors for Windows](#)
    - [iPad/iPhone Video Editors & Tools](#)
    - [Screenrecording Tools](#)
    - [Stop Motion Studio](#) - capture a series of photos and turn them into an animated video
    - [Snapchat](#) - capture photos and videos and embed Bitmojis, text, and other icons

- **Images**
    - [KQED Design Courses](#) (designing infographics, memes, etc...)
    - [Visualize Learning with Photo Challenges](#)
    - [Pixlr](#) & [Sumo Paint](#) (similar to Photoshop)
    - [Inkscape](#) (professional vector editor)
    - [Tuxpi](#)
    - [Comic Strip Creators](#)
    - [Make a Meme](#)
    - [Imgflip](#) - GIFs and Memes
    - [Visme](#) - graphic design
    - [9 Web Tools for Creating Infographics](#)
    - [Cycloramic](#) & [Google Street View app](#) - capture 360 degree photos
    - [Thinglink](#) & [Google Drawings](#) - interactive images

References

Berger, J., & Milkman, K. L. (2012). What makes online content viral?. Journal of Marketing Research, 49(2), 192-205.

CAST, Inc. (2019). CAST: About universal design for learning. Retrieved from https://edtechbooks.org/-uTp.

Common Sense Media. (2018). The common sense census: Media use by tweens and teens. Retrieved from https://edtechbooks.org/-qHL.

Heath, C., & Heath, D. (2007). *Made to stick: Why some ideas survive and others die.* Random House.

Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). Cambridge, England: Cambridge University Press.

Nielsen. (2018). Time flies: U.S. adults now spend nearly half a day interacting with media. Retrieved from
https://edtechbooks.org/-SBR

Previous Citation(s)

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Basic Features

Anchor Links

Book Covers

Callouts

Dictionary

Equations with LaTeX

Footnotes

Generative AI Images

Glossaries

Grammarly

Icons

Images

Microsoft Word Conversion

PDF Conversion

Public Submissions

Styles

Videos

This content is provided to you freely by EdTech Books.

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Anchor Links

Anchor Links   Inline Editor

Anchor links may be included to jump to any content in the page. The simplest way to do this is to first create some headings in the page, such as H2, H3, H4, as below.

Once done, you can select the text you would like to use as a link, right-click, and choose `Insert > Anchor Link` in the inline editor. Then, choose the desired heading from the drop-down list.

An example H2

An example H3

An example H4

Book Covers

Textbooks　　EdTech Books　　Book Covers　　Book Cover Tutorial　　Google Slides Template　　Vector Graphics

The Book Cover Tutorial and Template can be used to create book covers for textbooks. Alternatively, if you want to create your own book cover from scratch, the image should have dimensions equivalent to 5.5 x 8.5 and be less than 1MB in size.

To create a book cover using our template, begin by opening the Google Slides template. Upon clicking the link, you will open (and copy to your own Google Drive) a document that has been preconfigured to the correct book cover dimensions.

Follow the steps in the tutorial, which are also articulated below:

1. Add text
2. Change fonts
3. Choose a color scheme
4. Select images
5. Select vector graphics
6. Select icons
7. Put it all together
8. Save your cover

The final step is to save the book cover design as a JPEG image. After saving the image to your computer, navigate within EdTech Books to the textbook that you want to add the book cover to. Select the Settings option in the top-right drop-down menu.

Scroll down and upload your new image in the provided area. Your new book cover is now automatically applied to the textbook!

Callouts

CSS   learning objectives   Inline Editor   Css Override   Callout Box   Color Classes   Custom Formats

Callout Classes   Callout Styles   Vignette

Callouts are emphasized boxes of content that you can insert into your chapter to accentuate small blocks of information, such as learning objectives, key takeaways, or a vignette.

To insert a callout using the inline editor, place your cursor where you would like it placed, right-click, and choose `Insert > Callout` . The default style will look like this:

Callout Box

This is what the default style looks like.

If you would like to change the style of your callout box after it has been inserted, select the DIV layer of the Callout Box and choose a style.

Alternate Styles

There are a number of alternate callout styles built into the system. You can apply a custom callout style while inserting the callout by selecting the name of the alternate style in the "Custom Class" box. A formatted example of each follows.

Alternate Style "Positive"

Select *Positive* as the custom class.

Alternate Style "Negative"

Select *Negative* as the custom class.

Alternate Style "Objectives"

Select *Objectives* as the custom class.

Alternate Style "Exercises"

Select *Exercises* as the custom class.

Alternate Style "Information"

Select *Information* as the custom class.

Color Classes

Alternatively, you can also use color classes to modify the callout or any other heading with the Text Color and Background Color options in the Inline Editor. Here's an example:

Heading with the "Light" Text Color and "Primary" Background Color

The DIV layer here uses the "Light" text color and the "Dark" background color.

Custom Formats via CSS

You can also modify the formatting of callout classes across your entire book. In the example below, an additional class was assigned to the callout of "callout-example," and then the following custom CSS was added to the book by going to Advanced > Custom CSS:

```
#chapter-container div.callout-example { background-color: white; }
#chapter-container div.callout-example h3 { background-color: pink; }
```

Custom Colors via CSS Override

Change the custom CSS for the book.

Alternatively, you can also override the look of all callouts in your book by applying a similar custom style to the entire callout class, such as the following:

```
#chapter-container div.callout { background-color: white; }
#chapter-container div.callout h3 { background-color: pink; }
```

Custom Formats via the Style Attribute

As with any element, you can apply custom formatting to a single callout by editing its "style" attribute in the HTML directly, but this will not propagate to other callouts. An example of doing this to increase the size of the callout's text would be as follows:

```
style="font-size: 1.4em;"
```

Example Style Editing

This callout's "style" tag was changed.

HTML Structure and Headings

Callouts are designed to start with the H3 class as the highest heading (do not use H1 or H2 tags in your callout).

If you include a H3 element as the first element inside the callout, it will be properly formatted as the callout's title (with the top borders rounded and with no spacing at the top). If you wish to include multiple H3 elements inside a single callout, you can fix the rounded corners of subsequent H3 elements by adding the "no-border-radius" class to them.

Example H3

Example content goes here.

Example of H3 with "no-border-radius" class

Example content goes here.

This content is provided to you freely by EdTech Books.

Access it online or download it at https://edtechbooks.org/userguide/callouts.

Dictionary

Automated Dictionary

Every book in the system has an automated dictionary. To define a term, a reader simply needs to highlight a word.

Highlight some of these examples with your mouse to see the dictionary in action:

- accrue
- plethora
- wax and wane
- Procrustean
- obfuscation
- exhortation
- charity
- woe
- exuberance

Popups

Definition popups disappear after 10 seconds. However, if you hover on the definition it will remain until you close it.

Learning New Words

In addition, the dictionary is a living, learning dictionary. So, if you highlight a term and do not see a result, the system will use artificial intelligence to try to figure out what it means behind the scenes.

If you try again in a few minutes, it should have a definition for you!
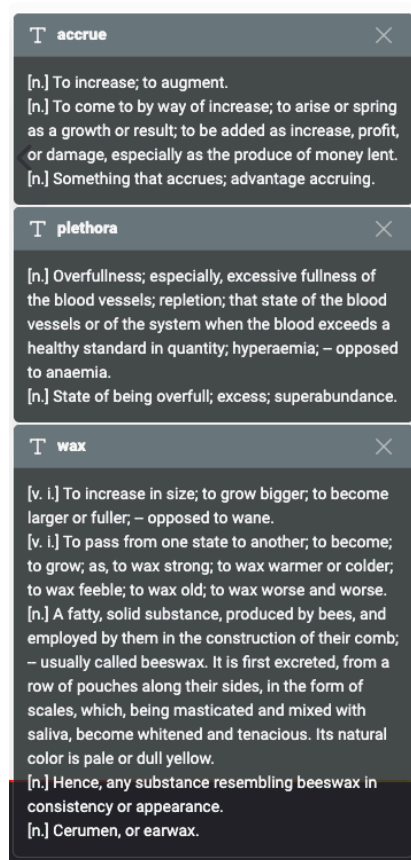
Equations with LaTeX

Dogs   Inline Equations   Jax   Mathematical Equations   Online Tools   Rendering

Mathematical equations may be created using [LaTeX notation](#).

While editing a chapter, select `Insert > LaTeX Equation (Block)`. In the resulting box, type your equation between the double-dollar signs.

```
Equation: $$E=mc^2$$
```

You can continue to edit the formula in the editor (provided that you do not remove the double-$ symbols). When saved, the example equation will render like this:

$$E = mc^2$$

Here is a more sophisticated example:

```
Equation: $$S (\omega)=1.466\, H_s^2 \, \frac{\omega_0^5}{\omega^6 } \, e^[-3^ { \omega/(\omega_0 )]^2}$$
```

Which will render like this:

$$S(\omega) = 1.466\, H_s^2\, \frac{\omega_0^5}{\omega^6}\, e^{[}-3^{\omega/(\omega_0)]^2}$$

Inline Equations

Equations may be typed directly into text, such as $E = mc^2$, by placing them within slash parentheses. You can also insert an inline equation by right-clicking and choosing `Insert > LaTeX Equation (Inline)`.

Equations may be typed directly into text, such as \(E=mc^2\) by placing them within slash parentheses.

Example of an inline text input

Multi-Line Equations

For multi-line equations, you must encapsulate your equation in a \displaylines{} function and separate each line with a double-slash:

```
Equation: $$ \displaylines{f(x) = x^2 \\ g(x) = \frac{1}{x} \\ F(x) = \int^a_b \frac{1}{3}x^3}$$
```

$$f(x) = x^2$$

$$g(x) = \frac{1}{x}$$

$$F(x) = \int_b^a \frac{1}{3} x^3$$

If you need assistance writing LaTeX equations, there are many online tools that can help you do this such as the Online LaTeX Equation Editor.

All rendering is performed courtesy of MathJax and CodeDogs.

Footnotes

Footnote Numbers   Footnotes   Footnote List

Footnotes may be created in the editor by placing the cursor where you would like the footnote link, right-clicking, and choosing `Insert > Footnote`. This will create a linked number to the footnote item, like the one following this sentence.[1]

You may edit the visible text of the footnote either in the Ribbon or by editing the element directly.[2]

When you add or remove footnotes, the footnote list should be updated appropriately. If not, simply click on an existing footnote, and it will update the numbers appropriately. Footnote numbers will also be updated when the page saves.[3]

Note: If you delete the footnote link / reference, then the footnote text will also be removed when the list is updated.

If you would like to manually style a block of text as a footnote, you can also right-click on a paragraph and choose `Formatting > Footnote`.

Footnotes

1. Here's a first example.
2. Here's a second example.
3. Third example.

Generative AI Images

Fanny Eliza Bondah

Music   Artificial Intelligence   Renderings   Generative   Deep Neural Networks   Image Generation   Paid

Privacy Concerns   Privacy Issues   Visual Feedback Loop   Visually Rich

Generative AI has revolutionized the field of image creation, enabling computers to autonomously generate realistic and visually appealing images. Generated AI images eliminate the need for copyright and privacy concerns as they are solely produced by the AI system. Explore user-friendly platforms like Leonardo.ai , Craiyon, DALL-E that offer tools for creating images with generative AI.

In a world where technology continually pushes the boundaries of what we thought possible, the realm of artificial intelligence (AI) stands at the forefront of innovation. Among the fascinating branches of AI, generative AI holds particular allure, offering us the ability to create, imagine, and dream alongside our technological counterparts. Generative AI refers to the use of artificial intelligence algorithms to create various outputs, such as text, images, videos, music, code, data, and 3D renderings, based on the training data they have been provided with (Ortiz, 2023).

Generative AI has revolutionized the field of image creation, enabling computers to autonomously generate realistic and visually appealing images. These AI models can learn patterns from vast datasets and produce new, unique images that demonstrate remarkable creativity. Generated AI images eliminate the need for copyright and privacy concerns as they are solely produced by the AI system. These images are created autonomously, without reliance on external sources, ensuring they are free from copyright infringement. Consequently, privacy issues concerning the subjects in these generated images are also nonexistent.

Generative AI Platforms

1. Leonardo.ai

- Leonardo.ai is an advanced and versatile generative AI platform that excels in producing high-quality and realistic images across a wide range of styles and genres.
- Its flexibility and ability to cater to the needs of artists and designers make it a standout choice in the field of image generation.

2. Craiyon

- Craiyon is a user-friendly generative AI software that focuses on simplifying the process of image creation for nonexperts.
- Craiyon stands out for its focus on image generation from text, continuous improvement, user-friendliness, and commitment to accessibility and free usage.

3. [DALL·E](#)

- Well-suited for tasks requiring the translation of textual prompts into visually rich images.
- DALL·E's unique ability to bridge the gap between language and visual content enables it to produce novel and imaginative visuals based on specific prompts, making it ideal for tasks that require visually rich translations of textual descriptions.

4. [Deep Dream](#)

- Deep Dream is a paid image generation developed by Google that utilizes deep neural networks.
- It applies a visual feedback loop to existing images, enhancing patterns and features to create surreal and dream-like visual.
- Deep Dream gained popularity for its unique and trippy outputs, making it a favorite among artists seeking unconventional and psychedelic imagery.

5. [Artbreeder](#)

- Artbreeder create excellent crafts arts and explore artistic variations.
- It allows users to remix and crossbreed existing images, producing new and unique visual compositions.
- Focuses on user engagement and interactivity, Is best for artists and enthusiasts looking to generate diverse and personalized artwork.

These are just a few examples of generative AI tools for image creation, each offering its own unique features and advantages. The best choice ultimately depends on the user's specific needs, technical expertise, and desired artistic outcomes.

Remember

Each platform have its unique features and workflow. Free access is available for the basic features on these platforms, but some may offer paid options for advanced functionality. It's essential to review the platform's terms and guidelines provided by the platform itself.

General Guide: Creating Images using Generative AI

1. Find a Generative AI Platform: Explore user-friendly platforms like [Leonardo.ai](#) , [Craiyon](#), [DALL-E](#) that offer tools for creating images with generative AI. These platforms provide a simplified interface to work with.
2. Choose or Upload Images: Select the images you want to work with. You have the option to use your own images, explore the pre-existing image collections on the platform, or simply type in a search suggestion or idea of what you want to create and begin the creation process.
3. Select a Style: Depending on the platform, choose a specific artistic style, algorithm, or model that suits your creative vision. You can experiment with different options available within the platform.
4. Adjust Parameters: Explore the settings or sliders provided to fine-tune the output. You may have options to control factors like style intensity, color palette, or image resolution.
5. Generate and Iterate: Click the "Generate" or "Create" button to generate an image based on your selected style and parameters. If the result is not satisfying, go back and tweak the settings to create the desired output.
6. Save, Copy, Download or Share the Image: Once you're happy with the generated image, save, copy or download it to your device or share it directly on social media platforms, if supported.
7. Experiment and Explore: Don't be afraid to experiment and try different styles, algorithms, or combinations. The more you explore, the more you'll discover the creative possibilities that generative AI offers.
8. Learn and Adapt: As you gain experience, keep learning about new techniques and approaches in generative AI. Stay updated with online tutorials, forums, and communities to expand your skills and creativity.

Step-by-Step Guide: Creating image with Leonardo.ai

1. Visit [Leonardo.ai](#): Go to the Leonardo.ai website and log in to your account. If you don't have an account, sign up and follow the instructions to create one.
2. Access the image generation feature: Navigate to the image generation feature of Leonardo.ai. This may be found in the platform's main menu or dashboard.
3. Compose a prompt: Create a prompt that clearly describes the task you want the generative AI model to accomplish. For example, you can use the prompt: "Generate images that visually represent feminisms in ED Tech. The images should reflect the empowerment of women in educational technology settings and showcase diverse perspectives."
4. Specify additional details: If there are specific attributes or details you want to include in the generated images, incorporate them into the prompt. For instance, you might want to mention the presence of women in leadership roles, the use of inclusive and diverse educational technologies, or any other relevant details that embody feminisms in ED Tech.
5. Generate images: Submit the prompt to the generative AI model through the interface. Wait for the model to process the prompt and generate the images accordingly. The processing time may vary depending on the complexity of the task and the platform's capabilities.
6. Evaluate the results: Once the model generates the images, carefully analyze the outputs. Consider the quality, accuracy, and relevance of the generated images to your specified task. Identify any areas that require improvement or adjustments.
7. Refine the prompt: Based on your evaluation, refine the prompt to improve the generated images. Consider making the prompt more specific, providing clearer instructions, or adjusting the language to obtain better results. Iteratively refine and modify the prompt as needed.
8. Iterate and iterate: Repeat steps 5 to 7, generating images with the refined prompts, evaluating the results, and refining the prompt further if necessary. Iterate through this process until you are satisfied with the generated images and their alignment with your desired output.
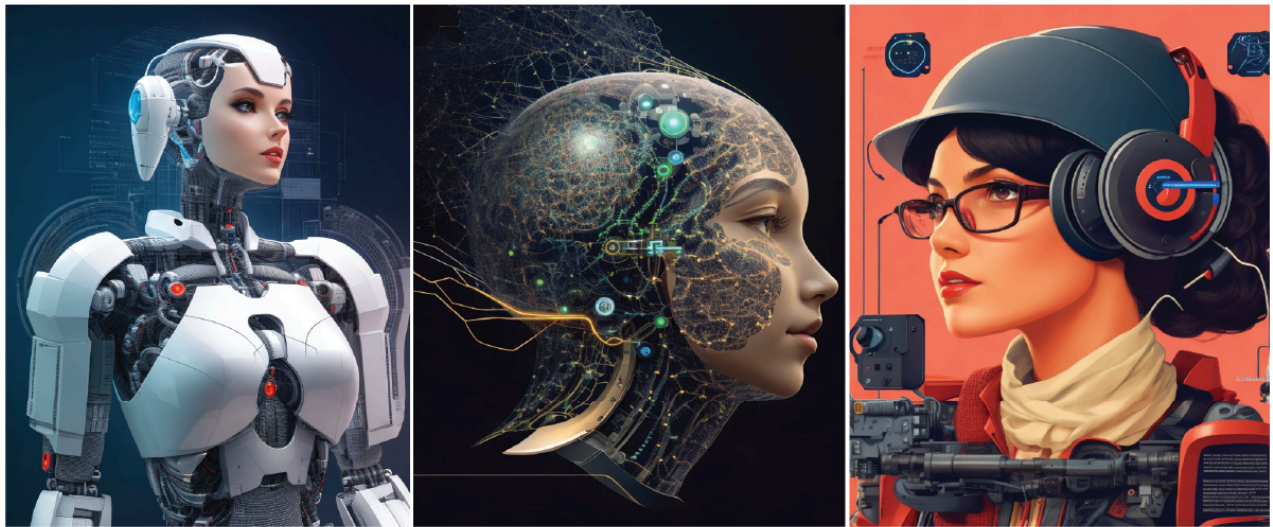
Leonardo.ai - Generated images that visually represent feminisms in ED Tech

Factors to Consider when Refining your Prompt

- Clarity and Specificity: Make sure your prompt clearly conveys the desired task with specific instructions. Avoid ambiguity or vague language.
- Details and Attributes: Include relevant details in your prompt, such as the setting, objects, people, or activities you want to see in the images. This helps guide the generative AI model to produce accurate and tailored outputs.
- Iterative Refinement: Prompt refinement is an iterative process. Continuously analyze the generated images, assess their quality, and adjust the prompt accordingly to achieve better results.
- Feedback and Evaluation: Regularly evaluate the generated images and provide feedback to Leonardo.ai. This helps improve the system's performance over time and contributes to the overall development of the generative AI model.

Remember

Prompt refinement may require multiple iterations and experimentation to achieve the desired output. It is a dynamic process that allows you to fine-tune and guide the generative AI model effectively.

The steps and features within Leonardo.ai may evolve over time. Always refer to the platform's documentation and guidelines for the most up-to-date instructions on utilizing their services.

Tutorials on how to Use some Generative AI Platforms

Leonardo.AI

Craiyon

DALL-E

Deep Dream
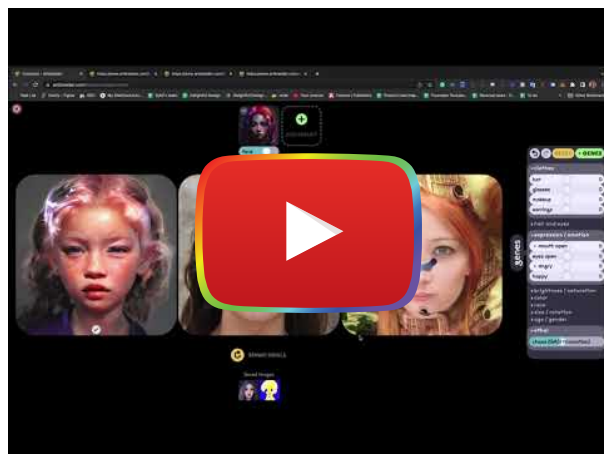
Artbreeder

Images created using Generative AI

Leonardo.ai

Prompt: 16:9 educational background
Resolution: 768 x 768px
Base Model: SD v2.1
Magic Prompt: On
High Contrast: On

Prompt: A detailed illustration of flowers, intricated details, seamless patterns, abstract design, rainbow colors, roses, variety of colorful flowers, 3D vector art, fantasy art, light background, modern art.
Resolution: 768 x 768px
Base Model: SD v2.1
Magic Prompt: On
High Contrast: Off

Prompt: Beautiful black girl in a library, bright colors
Resolution: 640 x 832px
Base Model: SD v1.5
Magic Prompt: On
High Contrast: On

Prompt: A photorealistic portrait of a stunningly beautiful woman extremely detailed light hazel eyes, detailed symmetric realistic face, natural skin texture, extremely detailed skin with skin pores, wearing shawl over her head.
Resolution: 640 x 832px
Base Model: SD v1.5
Magic Prompt: On
High Contrast: On

Craiyon

Prompt: Woman robotic in a Tech Lab
Resolution: 1024 x 1024 px
Upscale Prompt: 3x
High Contrast: On

Prompt: Beautiful green icon house, green lawns, high saturation,.
Resolution: 1024 x 1024 px
Upscale Prompt: 3x
High Contrast: On

Prompt: Sticker, cartoon cute Rottweiler, white background, Vermeer style, octane render, cinematic lighting
Resolution: 1024 x 1024 px
Upscale Prompt: 2 x
High Contrast: On

Prompt: Classroom for kids with alot of educational materials
Resolution: 1024 x 1024 px
Upscale Prompt: 3x
High Contrast: On

Artbreeder

Prompt: Remixed woman with robotic in a Tech Lab
Resolution: 1536 x 1536 px
Upscale Prompt: 3x
High Contrast: On

Prompt: Remixed woman with African ruler in her own terriotry.
Resolution: 1536 x 1536 px
Upscale Prompt: 2x
High Contrast: Off

Prompt: Remixed the bear with Abadon **g**reen house
Resolution: 1536 x 1536 px
Upscale Prompt: 2x
High Contrast: On

Prompt: Remixed man stucked in the mind of a sad woman
Resolution: 768 x 768px
Upscale Prompt: 2x
High Contrast: On

Enjoy the process of creating stunning and imaginative images using the power of generative AI for all your book covers and illustrations.

References

Ortiz, S., (2023, May 5). What is generative AI and why is it so popular? Here's everything you need to know. What is generative AI and why is it so popular? Here's everything you need to know | ZDNET

Glossaries

Glossary Terms   Glossary Tooltips   Cover Page

Each publication has a built-in glossary, which may be accessed from the top-right dropdown on the cover page and selecting Glossary.

These glossary terms may be accessed from any content in the publication.

Creating and Editing Glossary Terms

While on your glossary page, you can add new terms using the form at the top of the page. Once created, you can edit any terms directly on this page.

Creating Glossary Tooltips or Pop-ups

You can create glossary pop-up elements within your chapter by highlighting some text, right-clicking, and choosing `Insert > Glossary...` .

Here is an example glossary pop-up: **Example Term**

If you would like all glossary terms styled in the same way, you can edit the book's [custom CSS](#) and access the tooltips with `div#chapter-container [data-etb-glossary-term-id]` .

Grammarly

Grammarly Extension

We encourage all authors to install a Grammarly extension in their browser. This will allow you to receive feedback on content as you write and edit.

Icons

Icon Library   Image   Site Icons   Site Resources   Icon Urls

Books can tap into the site's icon library by including icon URLs as images. For a full list of site icons, see the Site Resources page.

Figure 1

Example Site Icons
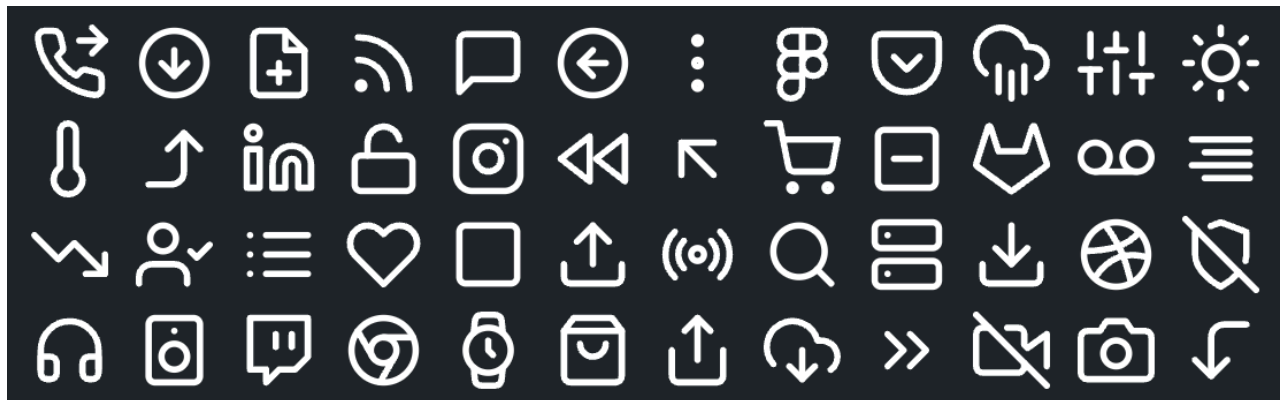
Example Usage

The site uses SVGs for icons, so you will likely need to include a style attribute in your image tag where you define the width to ensure that it looks the way you like. The nice thing about this is that it means you can scale icons as large as you would like without losing any quality.

This content is provided to you freely by EdTech Books.

Access it online or download it at .

Images

Uploading Images

There are many ways to include images in your work. Here are some of the more common ones.

1. Media Library

Each publication has its own media library that all content in the publication share. To upload images to the publication's media library, while editing content, click `Insert > Image...` and click Upload panel.

Once an image is in the media library, it can be embedded in any content by editing the content, selecting `Insert > Image...` and using the `Source` button to browse for it.

2. Paste the Link

If an image is already hosted on another website on the internet, a content author can hotlink to it by clicking `Insert > Image...` and pasting the image's URL directly into the URL field.

3. Paste into the Editor

Many images can be pasted directly into the editor from an internet source or your computer. Just try it!

Image Sizing

Image sizing on the internet can be a bit more complicated than authors initially think, because you want your work (a) to look good, (b) to download quickly, and (c) to adapt to different screen sizes. This means that images should be optimized for the web by making them the right size and format. Our editorial tools help you do some of this, but here are a few useful tips and guides.

1. Not too Big

Because your image will be shown on a website with fixed maximum dimensions, you should not upload any images that are wider than 1,200 pixels.

100px   200px   300px   400px   500px   600px   700px   800px
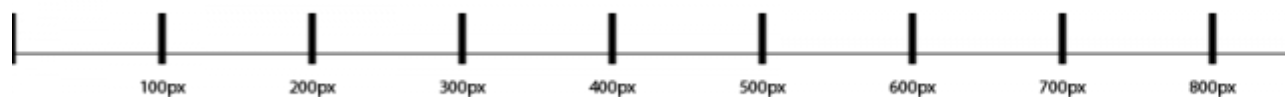
If you upload images larger than this, they will be scaled down to fit the screen, and the extra size will just make the page load slower for your readers.

2. Not too Small

Having said that, any images smaller than the maximum will look fuzzy if you try to show them at full-screen width. So, if you upload anything smaller than 1,200 pixels wide, you should scale it down on your page to avoid fuzziness.

3. Use the Sizing Tools

Select the image and click `Insert > Image...` In the classes dropdown, you can select common image sizes. Most images should be set to `Full` .

4. Use the Alignment Tool

You can use the left-align and right-align buttons in the editor to float smaller images around your text.

Microsoft Word Conversion

By default, all content is available for download as Microsoft Word documents from the `Downloads` tab.

PDF Conversion

Content Pdfs   Pdfs   Server Load

By default, all content and publications are converted to PDFs.

PDFs must be built by the server in the background and may not be instantly available. Content PDFs generally take several minutes to build (depending on server load), and publication PDFs may take a few hours. This process can be expedited by the administrator upon request if needed.

Public Submissions

YouTube | Cover Page | Authorship Page | Public Submissions | Call Proposals | Conference Proceedings

Email Campaign

In some cases, you may want to solicit contributions to your publication from the public, such as if you are creating a collection of conference proceedings or creating a journal volume. You can temporarily allow public submissions to your publication by adjusting the Public Submissions setting on your publication's Authorship page.

Once you turn on Public Submissions, navigate back to the cover page of your publication. There you will see a persistent reminder that public submissions are allowed, and it will also provide a link to the publication's public submission page.
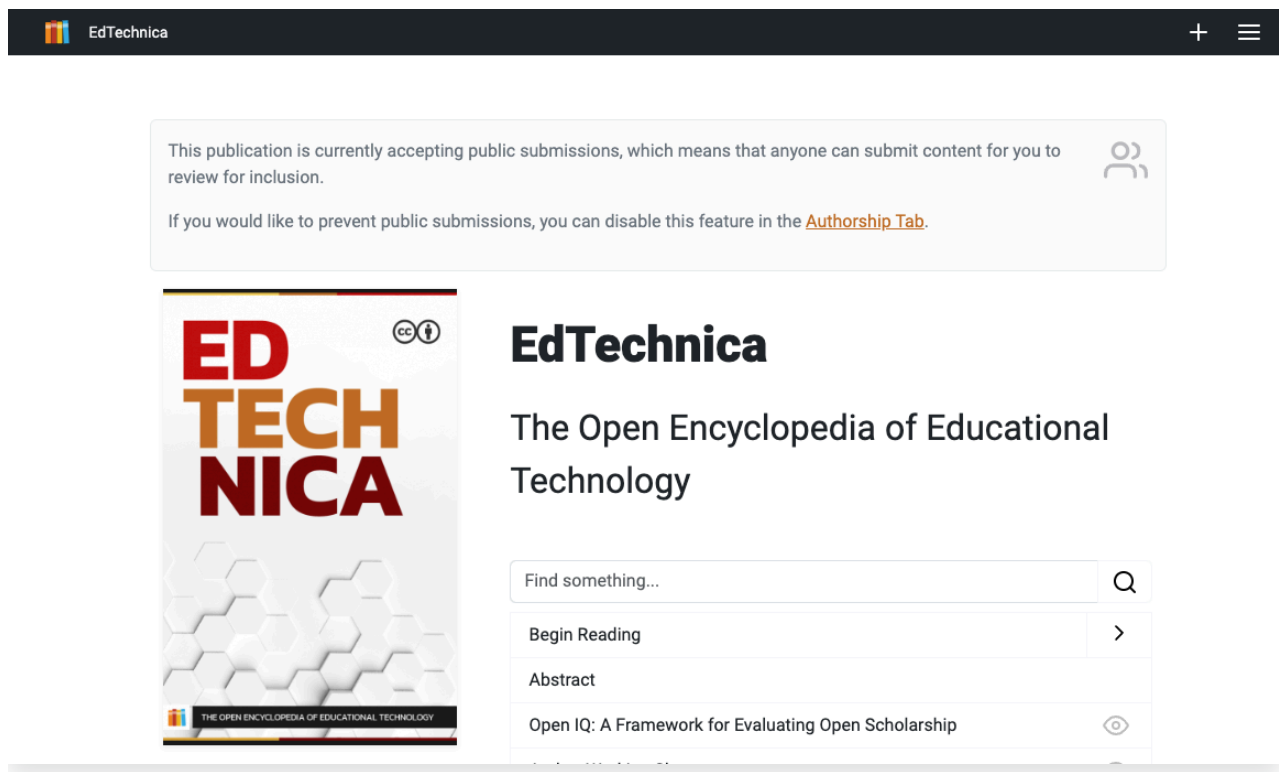
With this feature on, anyone can click the menu button and choose the Submit tab. You can also share this tab as a direct link in a call for proposals, email campaign, etc.
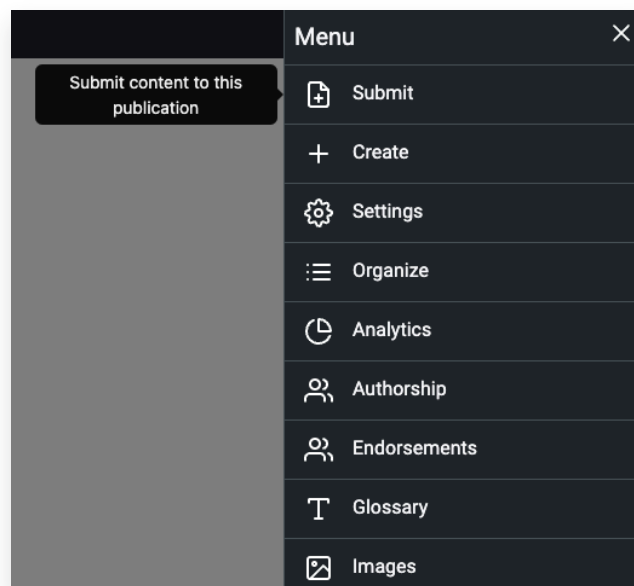
Once anyone clicks on the link, they will be prompted to login or to create an account and will then be able to fill out the submission form.
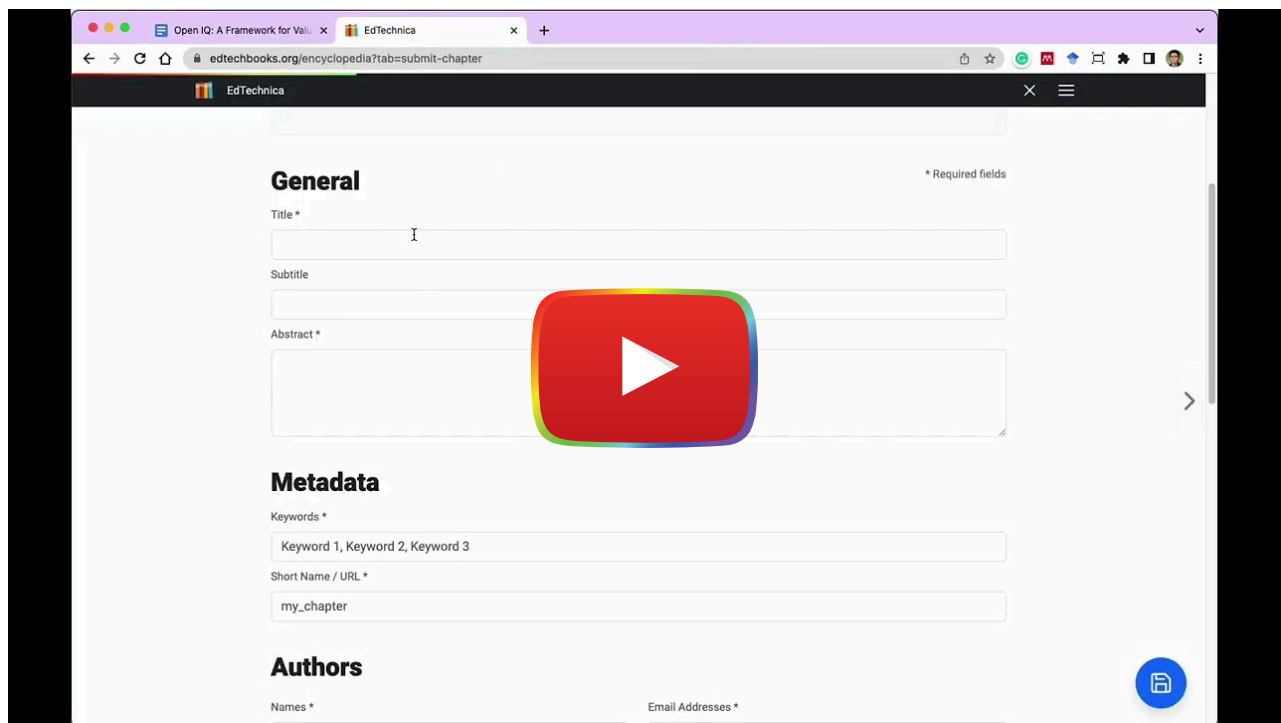
Once you are done collecting submissions, you should turn off public submissions on the Authorship page in order to prevent unwanted submissions. The reminder on your publication's cover page will remain visible to editors until this has been done.

Watch on YouTube

This content is provided to you freely by EdTech Books.

Access it online or download it at https://edtechbooks.org/userguide/public_submissions.

Styles

Google Docs   EdTech Books   Headings   Automatic Formatting   Heading Styles   Ings   Sidebar Navigation

Text Styles

EdTech Books generally follows APA's recommendations for paper elements and format. Authors should use headings to create hierarchy and structure in the text of their chapters. The editor has automatic formatting for headings and other text styles that makes chapters simple and easy to read.

Google Docs

If you create your chapter in Google Docs before you import it into EdTech Books, you can apply styles in the Google document that will transfer into EdTech Books. Watch the video below to see how to use styles in Google Docs.
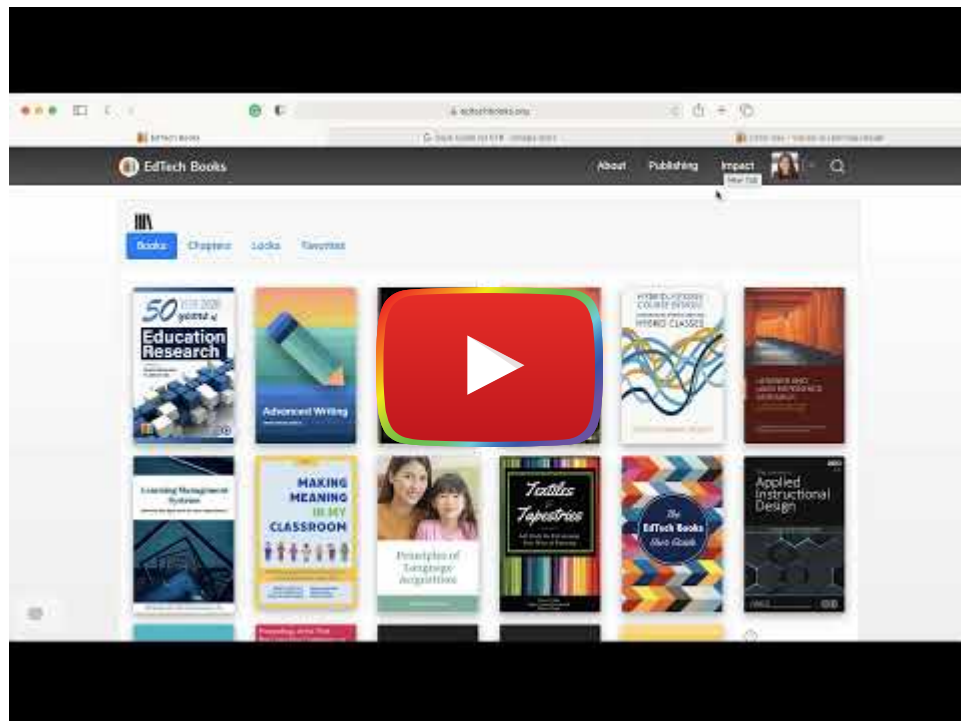
[Watch on YouTube](#)

Side Navigation

EdTech Books provides sidebar navigation for the headings in each chapter. Apply heading styles in the editor. Follow the instructions in the video above to see how to apply styles in EdTech Books. The headings will appear in the sidebar

navigation, and readers can click on the headings to directly navigate to the heading of their choice.

Videos

YouTube   Embed Media Tool   Html Snipp   Html Snippet   Snipp   Vimeo   Embed Code

Embed Script

Videos may be embedded from YouTube, Vimeo, or other sources. There are a few different methods to embed videos.

[Watch on YouTube](#)

Method 1: Use the Embed Media Tool

While editing the content, choose `Insert > Embed Media`. Paste the link into the resulting window and embed as desired. When using this tool, be sure that you are using the basic link to the video, not the embed script.

When possible, it is important to use this method instead of the embed script provided by YouTube to ensure accessibility.

Method 2: Insert a HTML Snippet

For other video types, you can paste the embed code as an HTML snippet by clicking `Insert > HTML Snippet`.

> However, when possible, please use the first method.

Advanced Features

API
Artifacts
Canvas Embedding
Checking Grammar and Spelling
Code Snippets
CSS Customization
Google Analytics
H5P Element Embedding
Javascript Customization
Languages
LilxAPI
Practice Quizzes
Reading Time
Synchronization
URL Shortening

API

The API may be used to display content in your own site or app provided that you include proper attribution for the content and the hosting site. This can easily be done by displaying the suggested citation for the book or chapter.

POST and GET

You may use either POST or GET requests. A POST request is prioritized, but if it is not provided, then the GET request will be interpreted as a POST.

Data Structure

The API uses three main data object entity types: `Author`, `Book`, `Chapter`, and `Keyword`. Other objects are also sometimes used, such as glossary terms.

Endpoints

There are two main endpoints for accessing content: `search` and `get_entity`.

Search

The `search` endpoint allows you to retrieve a list of objects that match a keyword term.

https://edtechbooks.org/api.v2.php?action=search

Variables

Variable	Type	Status	Default	Description
term	string	required	-	Specify a url-encoded search term or phrase.
entity_type	string	required	-	Specify the entity type.
limit	integer	optional	10	Specify a limit. Maximum: 200
offset	integer	optional	0	Specify an offset for pagination purposes.
api_key	string	optional	-	Some functions require an API key, while others do not.

Examples

Return all books that match the term "technology:"

`https://edtechbooks.org/api.v2.php?action=search&entity_type=Book&term=technology`

Return all authors with the name "Royce:"

`https://edtechbooks.org/api.v2.php?action=search&entity_type=Author&term=Royce`

Get Entity

The `get_entity` endpoint allows you to retrieve a structured object for the entity.

`https://edtechbooks.org/api.v2.php?action=get_entity`

Variables

Variable	Type	Status	Default	Description
term	string	required	-	Specify a url-encoded search term or phrase.
entity_type	string	required	-	Specify the entity type.
id	integer	required	-	Specify the unique identifier of the entity.
key	string	optional	-	Some functions require an API key, while others do not.

Examples

Return the book with the identifier 3:

`https://edtechbooks.org/api.v2.php?action=get_entity&entity_type=Book&id=3`

Return a chapter with the identifier 155:

`https://edtechbooks.org/api.v2.php?action=get_entity&entity_type=Chapter&id=155`

Get a glossary term either from its unique identifier or a text string.

`https://edtechbooks.org/api.v2.php?action=get_entity&entity_type=GlossaryTerm&entity_id=Behaviorism`

Push Check

The `push_check` endpoint allows you to test if your API key is working for future calls. Note that an API key is required, which may be found in your user settings.

`https://edtechbooks.org/api.v2.php?action=push_check&api_key=YOURAPIKEYHERE`

Variables

Variable	Type	Status	Default	Description
key	string	required	-	Pushing data requires an API key.

Authentication anad API Keys

You can create an ETB API key for your project by logging in and going to the `Developer` dashboard in the top-right menu. This requires developer access, which you can request by contacting a [site administrator](#).

Artifacts

Google	Google Drive	Youtube Video	Embedded Video	External Resources	File	Public Video

Public Zip File	Slideshow	Vertical Bar Key	Word Processing Document

Open in Google Slides

Artifacts are external resources (links) that you can embed within a chapter. You can access the "Artifact Links" field in the chapter "Settings." Enter a new link on each line of the "Artifact Links" field, and the chapter will attempt to embed the resource.

Access Requirements

To be properly embedded, any linked resources must be made available to the public on their original site and must also allow for embedding.

Headings

You can include headings between artifacts by including a line of plain text before or after links. Here's an example that would place a heading that says "Video" before an embedded video:

```
Video
https://youtube.com...
```

Forced Embedding

Most links will be properly embedded automatically. However, you can also force a link to be embedded a particular way by including the desired type code in the link line, separated by a vertical bar character. (The vertical bar key is found below the backspace key on most keyboards.) Table 1 provides a list of available artifact types. Here's an example that would force a zip file in Google Drive to be embedded as an Articulate Storyline element:

```
storyline|http://...
```

Table 1

Available Embeddable Artifact Types

Type	Code	Description
Articulate Storyline	storyline	A public zip file of a storyline hosted in Google Drive.
Box Folder	box	A public folder hosted in Box.

Type	Code	Description
Google Doc	gdoc	A public Google word processing document.
Google Drive File	gdrive	A public file hosted in Google Drive (e.g., PDF).
Google Drive Folder	gdrive-folder	A public folder hosted in Google Drive.
Google Sheet	gsheet	A public Google spreadsheet.
Google Slide	gslide	A public Google slideshow.
Vimeo Video	vimeo	A public video on Vimeo.
YouTube Video	youtube	A public video on YouTube.
Web Link	link	A simple link to an external resource. (This is the default.)

Link Text

Each embedded resource will also have a link to view the resource in a new window. To adjust the visible text of this link, simply add your text to the artifact line separated by a vertical bar character.

```
Click here to see it | https://youtube.com...
storyline | Open the Storyline | https://drive.google.com...
```

Placement

By default, artifacts are shown before the chapter contents. You can change this in the chapter's settings by adjusting the Artifact Placement setting.

This content is provided to you freely by EdTech Books.

Access it online or download it at https://edtechbooks.org/userguide/artifacts.

Canvas Embedding

Canvas

The following video explains how to embed your textbook into Canvas so that your students can access its contents within the context of your course from the main course navigation.

Essentially, you simply use the LTI-enabled Redirect App within the Canvas interface to create a course navigation link to your book's cover page.
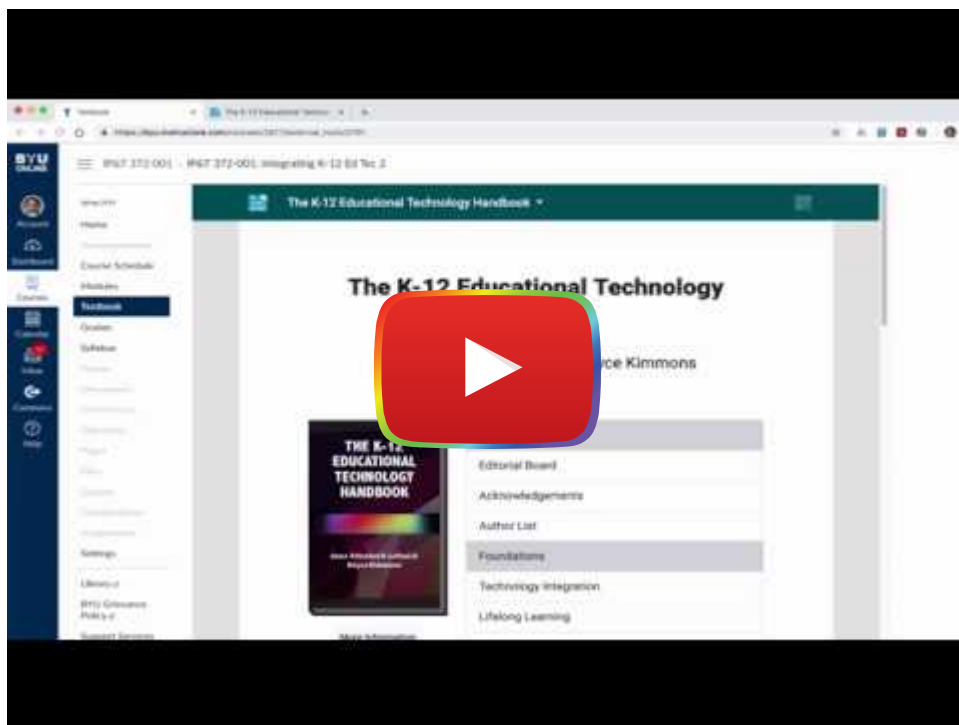
[Watch on YouTube](#)

Alternatively, you can also use the Simplified View feature to embed a single chapter into a Canvas module.

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Access it online or download it at .

Checking Grammar and Spelling

Google Docs   EdTech Books   WYSIWYG Editor   Grammarly   Browser Extension   Inline Editing Function

EdTech Books does not have a built-in spell- or grammar-checker. Instead, you should either do most of this checking as you write your content on another platform before pasting it into the site (such as Microsoft Word or Google Docs) or use a browser extension such as Grammarly. If you encounter errors in your work after it has been uploaded to EdTech Books, you can use either the WYSIWYG Editor or the inline editing function in the top right corner of your screen. For more details on editing chapters, see Editing a Chapter.

Code Snippets

Code snippets can be displayed on any chapter page by using the "Code" option from the style dropdown.

```
# Here is an example block of code using the "Code" style.
var x = 1;
x++;
console.log(x);
```

To add new lines to the same block of code, hold down Shift while pressing enter to do a soft line break.

Currently, displaying HTML (or any language that uses brackets < >) is not fully supported.

Inline Code

Inline codes `like this` can also be used by choosing the "Code (Inline)" option from the style dropdown.

CSS Customization

CSS   Cover Page   Tooltips   Site Formatting

While editing the book's cover page, you can include custom CSS into the *Custom CSS* field, which will be applied to all chapters in the book.

This is powerful and can have undesired effects because the CSS is applied to the entire page (not just the chapter contents). To prevent CSS from changing site formatting unexpectedly, you should limit your adjustments to only apply to content within the `div#chapter-container` id as follows:

```
div#chapter-container h2 { color: pink; } // Makes all H2 headings pink
```

Snippets

These are some snippets that can be adjusted to add elements in a chapter or across an entire book.

Banner Image

This snippet places an image above the main heading.

```
div#chapter-container h1 {
    background-image: url("https://edtechbooks.org/images/logo.png");
    background-repeat: no-repeat;
    background-position: top right;
    padding-top: 140px;
    background-size: 100px;
}
```

CSS Customization

While editing the book's cover page, you can include custom CSS into the *Custom CSS* field, which will be applied to all chapters in the book.

This is powerful and can have undesired effects because the CSS is applied to the entire page (not just the chapter contents). To prevent CSS from changing site formatting unexpectedly, you should limit your adjustments to only apply to content within the `div#chapter-container` id as follows:

Tooltips Bolded

This snippet makes all [tooltips](#) (e.g., glossary pop-ups) bolded.

```
div#chapter-container [data-bs-toggle=tooltip] {
    font-weight: bold;
}
```

Google Analytics

tracking Google Analytics Documentation Tracking Code
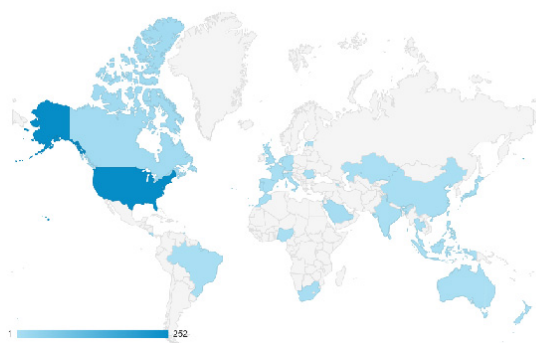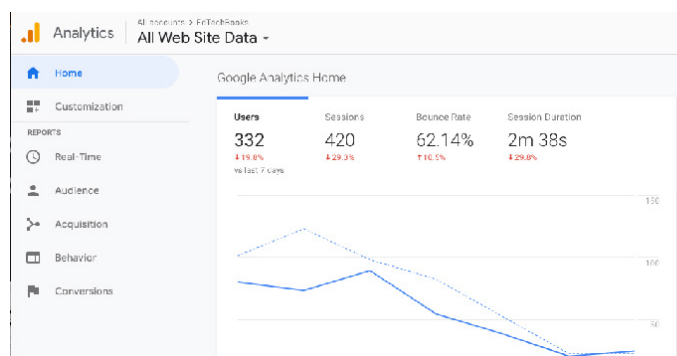
In addition to the default analytics provided for each chapter, each book author may also set up Google Analytics to track information about page visits and users of the book.

To do this, perform the following steps:

1. Create a free user account at Google Analytics;
2. Create an *Account* and *Property* for your book;
3. Assign the *Property* with the URL of your book (e.g., https://edtechbooks.org/lidtfoundations);
4. In your *Property* settings, find your *Tracking ID* in the tracking code (e.g., G-XXXXXXXX);
5. Copy this *Tracking ID*, and paste it into the *Google Analytics ID* field in your book's *Settings*.

After completing these steps, you should be able to access the Google Analytics dashboard for your book and see any active users.

For further help setting up and using Google Analytics (i.e., steps 1-4), please consult the Google Analytics documentation for developers.

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Access it online or download it at .

H5P Element Embedding

Websites   Online Tools   Pdfs   Book Chapters   Iframe   Interactive Elements   Platform Analytics

H5P allows you to create interactive elements that can be embedded in various websites or online tools. Like any HTML-based element that uses an iFrame, you can embed H5P elements into your book chapters, but there are a few limitations to be aware of beforehand.

Limitations of H5P

First, H5P elements may not be fully accessible and may not meet ADA or other requirements for accessible content. This means that if you embed them in your book, they will introduce accessibility problems for some readers.

Second, H5P elements do not convert well to PDFs or other formats. This means that any alternative formats of your book that are generated by the platform will lose functionality or may not show the element at all.

Third, H5P elements do not hook into platform analytics. This means that your analytics tab will not be able to show interaction-level data for H5P elements in the same way that it can show this for native surveys or questions.

H5P Element Embed Helper

To embed an H5P element into a chapter, click on the "Tools > H5P Element" option while editing a chapter. Each H5P element has a unique node number associated with it, which you can see by merely looking at its URL. Copy and paste this number into the H5P ID box.

Additionally, if you are using a subdomain with H5P (e.g., your institution has a license that directs you to something like myuniversity.h5p.org), enter your subdomain in the H5P subdomain field.

Click Submit and save your chapter to see your new embedded element.

Alternate Method

If you have difficulty using the helper, you can also directly embed H5P elements into the HTML of the chapter. To do this, copy the share code from H5P. Then, in your chapter go to "View > Source code" and paste the embed code where you would like.

Javascript Customization

CSS   jQuery   Form Elements   jQuery Library   Security Risk   Site Admin

Your account can be given access to include Javascript in publication and/or content headers. Because this poses a potential security risk to readers, you must request access from a site admin. Once access has been granted, you can add custom JS on the Settings tab of the publication or content.

Figure 1

Custom CSS and JS Form Elements
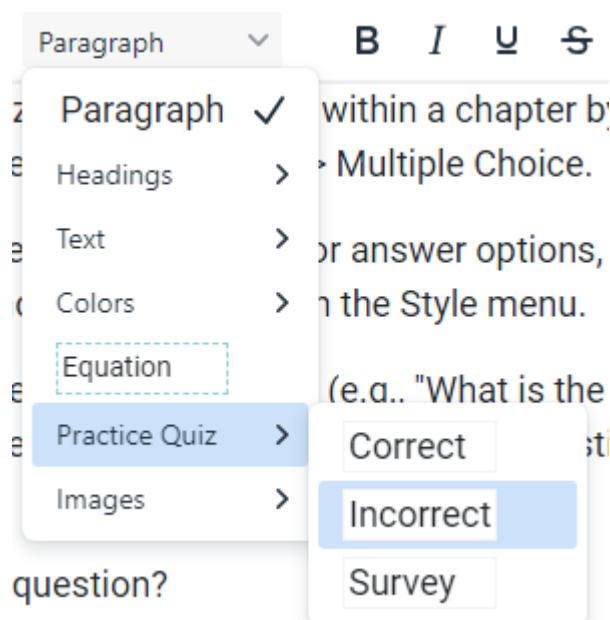
To get started, a simple script that you could test and view in the inspector might be the following:

```
console.log("Using custom JS.");
```

Or to create a simple popup message, try the following:

```
alert("Here is a custom popup message");
```

Additionally, the platform uses the jQuery library, which may be accessed after page load as follows:

```
$(document).ready(function() {
```

```
    console.log("Able to use jQuery functions.");

});
```

Languages

Dropdown Menu   Chaper

Each book and chaper can be identified according to its language by selecting the desired language from the *Language > Content Language* dropdown menu while editing.

LilxAPI

xAPI   LilxAPI   ISO 8601 Format   JSON Object   SQL Database   Array Keys   Finite Data Structure

LilxAPI is a simpler, flat version of xAPI. Each statement is required to have only three properties: actor, verb, and object. Each property is limited to a single value. Statements may be formed either as a JSON object with name-value pairs or as an array.

LilxAPI (or Lil' xAPI) is a simpler, flat version of an [xAPI](#) statement that allows it to be easily stored in a finite data structure, such as a spreadsheet or single table of a SQL database. In this simplified approach, each statement is required to have only three properties: actor, verb, and object. Each property is limited to a single value. Statements may be represented either as a JSON object with name-value pairs or as an array (using the array keys provided in Table 1).

Table 1

Overview of the LilxAPI structure

name	description	value format	default	example	array key
actor	The identity of the actor.	string	required	"janedoe@fake.com, Jane Doe" "janedoe@fake.com" "Jane Doe" or "janedoe1234" or "1234"	0
verb	The action performed by the actor.	human-readable term	required	"completed", "clicked", "interacted", "viewed", "answered", etc.	1
object	The target of the statement or what the actor interacted with.	url	required	"https://edtechbooks.org/education_research/research"	2
result	The outcome of the action.	float boolean string	null	.75 true "success"	3
context	Contextual information about the action.	string	null	"web" "app"	4
language_id	The language of the schema.	ISO 639-1 Format	en	"en" or "fr" or "sp"	5
timestamp	The time of the	ISO 8601	current	"2023-11-10T12:34:56Z"	6

name	description	value format	default	example		array key
	interaction.	format	time			
xapi	The fully rendered xAPI statement.	json	null	-		7

Example Statements

An Actor Viewed a Page

Object format

```
{
  "actor": "janedoe@fake.com",
  "verb": "viewed",
  "object": "https://edtechbooks.org/education_research/research"
}
```

Array format

```
["janedoe@fake.com", "viewed", "https://edtechbooks.org/education_research/research"]
```

An Actor Correctly Answered a Question

Object Format

```
{
  "actor": "janedoe@fake.com",
  "verb": "viewed",
  "object": "https://edtechbooks.org/education_research/research#question1",
  "result": true
}
```

Array Format

```
["janedoe@fake.com", "answered", "https://edtechbooks.org/education_research/research#question1",
true]
```

EdTech Books as LRS Example

Storing LilxAPI Statements

Retrieving LilxAPI Statements

You can retrieve all LilxAPI statements associated with your API key at this endpoint:

```
https://edtechbooks.org/api.v2.php?action=lilxapi_get&api_key=YOURAPIKEY
```

You can find your ETB API key by logging in and going to `Account > Settings`. You may then access the ETB LRS to access and download stored statements by going to `Account > Developer`.

‹› Developer

LilxAPI   xAPI

Stored LilxAPI Statements

actor	verb	object	result	context	language_id	timestamp
janedoe@fake.com	viewed	https://edtechbooks.org/education_research/research#question1	1		en	2023-11-10 19:36:50
janedoe@fake.com	viewed	https://edtechbooks.org/education_research/research#question1	1		en	2023-11-10 19:36:29
janedoe@fake.com	viewed	https://edtechbooks.org/education_research/research#question1	1		en	2023-11-10 19:36:04
janedoe@fake.com	viewed	https://edtechbooks.org/education_research/research#question1	1		en	0000-00-00 00:00:00
janedoe@fake.com	viewed	https://edtechbooks.org/education_research/research#question1	1		en	0000-00-00 00:00:00

Download as CSV

Google Sheets Automation

You can create dashboards or graphs in Google Sheets to display data and import the data directly from a website using the built-in `ImportData` function. Sheets does not currently have an import feature for JSON, but you can append `&format=csv` to a LilxAPI call to receive the results as a csv. Here is an example endpoint:

```
https://edtechbooks.org/api.v2.php?action=lilxapi_get&format=csv&api_key=YOURAPIKEY
```

Excel Automation

You can create dashboards and graphs in Excel to display data and use an automation script to retrieve or update data directly from the LRS. Here is an example automation script using the ETB LRS:

```
const apiKey = "YOURAPIKEYHERE";
interface ExcelRow {
statement_id: number;
author_id: number;
actor: string;
verb: string;
object: string;
result: string;
context: string;
language_id: string;
timestamp: string;
xapi: string
}
async function main(workbook: ExcelScript.Workbook) {
const data = await fetchData();
```

```
const newWorksheet = workbook.getActiveWorksheet();
newWorksheet.activate();
const headingRange = newWorksheet.getRangeByIndexes(
0,
0,
1,
Object.keys(json[0]).length);
headingRange.setValues([Object.keys(json[0])]);
const dataRange = newWorksheet.getRangeByIndexes(
1,
0,
json.length,
Object.keys(json[0]).length);
dataRange.setValues(json.map(row => Object.values(row)));
}
async function fetchData(): Promise<string[][]> {
const apiUrl = "https://edtechbooks.org/api.v2.php?action=lilxapi_get&api_key=" + apiKey;
const response = await fetch(apiUrl);
if (!response.ok) {
throw new Error(`Failed to fetch data. Status: ${response.status}`);
}
const jsonData: ExcelRow[] = await response.json();
return jsonData;
}
```

Practice Quizzes

Multiple Choice   Practice Quizzes   Style Menu   Answer Options

Practice quizzes can be created within a chapter by placing the cursor where you would like the quiz question and selecting `Insert > Practice Quiz > Multiple Choice`.

Update any text in the question or answer options, and then to choose which options are correct/incorrect, click on the option and change its style in the Style menu.
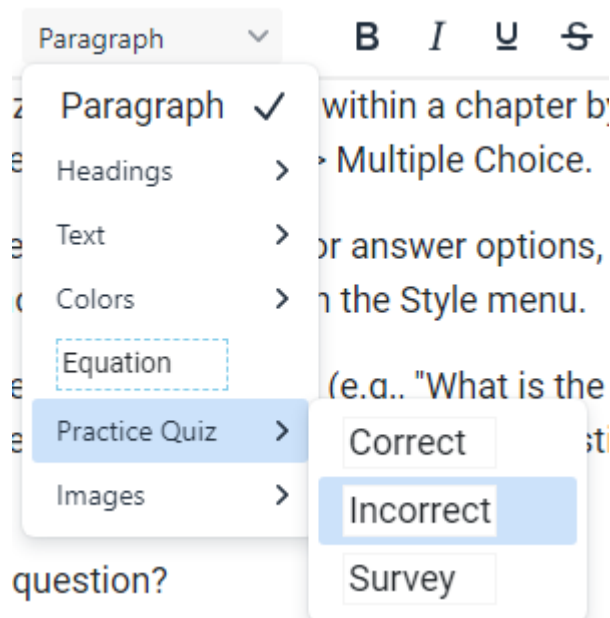
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Reading Time

Average Reading Speed   Textual Complexity

This value is intended to help readers and authors to understand how much time it will take a typical adult to read a piece of content.

The platform uses a simple algorithm to predict reading time as follows:

$$Reading\ Time = Word\ Count/Words\ per\ Minute$$

In most calculations, `Words per Minute` is set to a default value of 300 to match the average reading speed of an adult.

However, in some calculations, the textual complexity of the content is also taken into consideration as follows:

$$Reading\ Time = Word\ Count/(Words\ per\ Minute - FleschKincaid\ Reading\ Ease\ Score)$$

This adjusts the `Words per Minute` to a range of 200 (for difficult content) to 300 (for easy content).

Synchronization

Boiler Plate Content   Child Chapter   Imported

If you imported a chapter from one book to another, you have the option of keeping the child chapter synchronized to its parent. This means that if the original author of the parent chapter updates it, any changes to the content will be synchronized to your imported chapter.

This is useful for boiler plate content or imported content that you do not plan to remix.

URL Shortening

Descriptive Text   Formatting   Small Screens

Many URLs are very long. This makes formatting difficult for small screens and also makes it difficult for readers to retype the URL if they are reading it from a PDF or printed book. To help improve accessibility in this way, the system automatically applies a URL shortener to any links that are longer than a certain number of characters.

In some cases, however, URL shortening may not be desirable. To prevent URL shortening, you can do one of the following:

1. **Change the displayed text in the link to descriptive text.** This is preferable from a usability perspective, because it explains to the reader where the link will take them rather than providing a meaningless text link.
2. **Disable URL shortening for the book.** In the book's settings, you can turn off the "URL Shortening" setting to prevent this feature from being used across the book.

Add-on Services

Authorship Tools

We have carefully designed our site to provide the fullest functionality possible to authors and readers without paying any fees. However, a few authorship tools are only available by signing up for an appropriate membership tier (coming soon).

| DOI Registration |
| Lifelike Text-to-Speech |
| Translation |

DOI Registration

DOI   Settings Page

If you already have a DOI for your content or publication, you can add it to the appropriate Settings page to have it appear in citations and views.

Site administrators can also register new DOIs for any published works. The cost of this service depends on the type of work and the number of DOIs to register.

To request DOI registration, please contact a site administrator.

Table 1

Cost of DOI Registration Services

Type	Cost
Book	$5
Book Chapter	$1
Journal Article	$5

Lifelike Text-to-Speech

Evaluation   Service   Amazon Translate   Amazon Voices   User Centered Design   Voices

Lifelike Recording

To improve accessibility and usability of content, we use Amazon's Polly neural network service to convert finished text to a lifelike recording, which may be embedded and listened to on any chapter or article page.
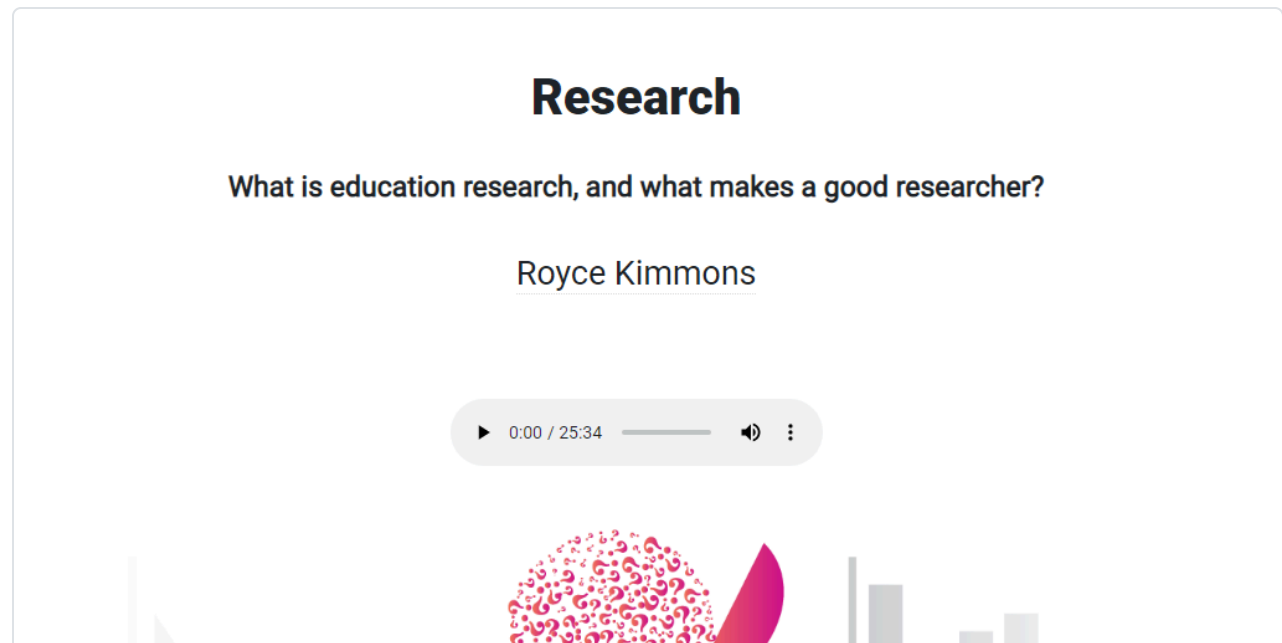
This is a one-time cost. However, if the content is updated, then the fee will need to be paid again to update the recording to match the new text.

Examples

- [Sampling](#)
- [Methods of User Centered Design and Evaluation for Learning Designers](#)

Figure 1

Example of a Page with Text-to-Speech

Cost

~$1 per chapter (per conversion); actual costs will be calculated based on the number of characters

Disabling Text-to-Speech

If you would like to remove the text-to-speech file or prevent it from showing on the chapter, delete the content of the "External Audio" field in the chapter Settings. You can also replace the content of this field with a link to another fully-qualified URL, if you have a different recording you would like to use.

Voices

We use the voices provided by Amazon Translate. Not all Amazon voices may be available at present. If you would like to request a particular language or voice, please let us know.

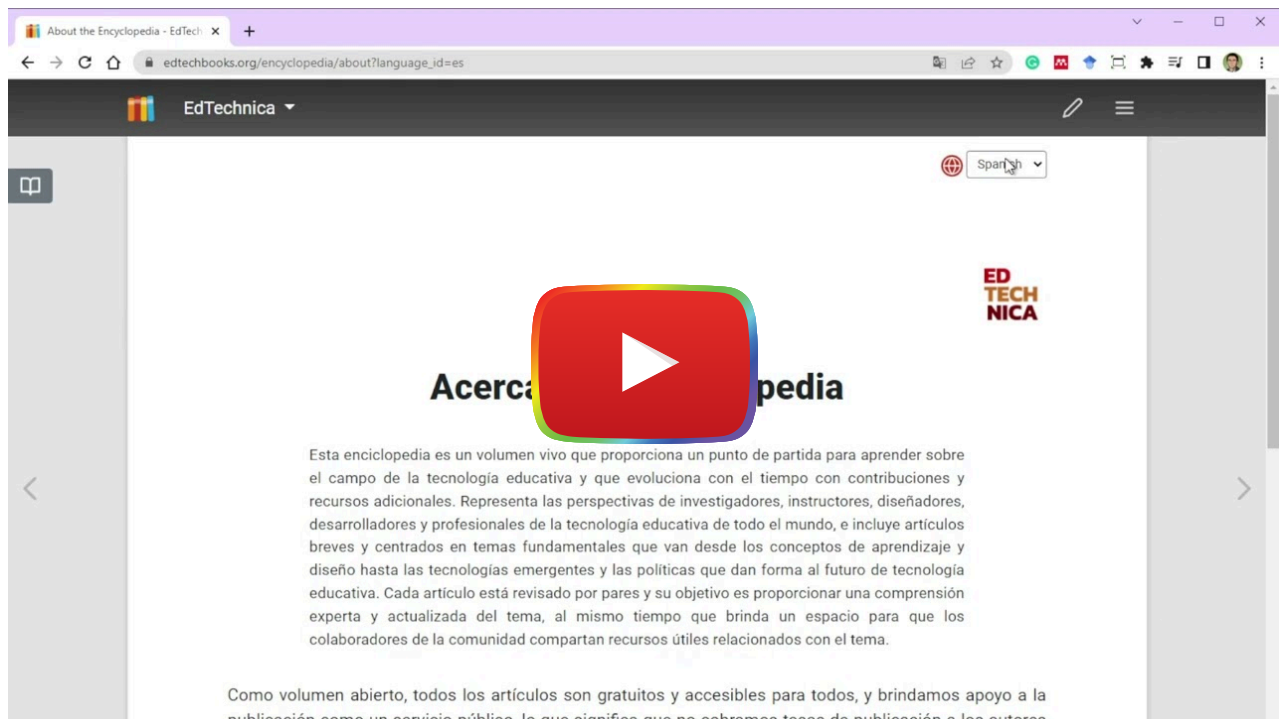# Translation

Amazon Service

Demo

Cost

Because this feature uses an Amazon service to create an automated translation of the text, we must pay a one-time fee for every initial translation conducted. This is roughly equivalent to $1 per chapter.

This content is provided to you freely by EdTech Books.

Access it online or download it at https://edtechbooks.org/userguide/translation.

Appendix

Feature List
Community Meeting 2021

Feature List

Data Analytics   Media   EdTech Books   Edtechbooks   Automatic Codes   Automatic Book Indices

Automatic Chapter Side Navigation   Css Overrides   Content Editing   Google Docs Imp   H5P Embedding

Html Source Editing   Word Downloads   Pdf Downloads   Wikipedia Article   Ysiwyg Editor   Generation

EdTech Books provides various features to authors and readers. This page provides an abbreviated list of all of these features.

[Watch on YouTube](#)

Content Editing

- [Google Docs importer](#)
- Wikipedia article importer
- [Easy WYSIWYG editor](#) (using TinyMCE)
- [Media library](#)
- [LaTeX Equations](#)
- [Easy image embedding](#)
- [Easy YouTube and Vimeo embedding](#)
- Easy H5P embedding
- HTML source editing
- [CSS overrides for books and chapters](#)
- Easy chapter importing
- Automatic citation generation
- [Multi-language support](#)
- [Chapter synchronization](#)

Formatting

- Mobile-first, flexible design
- Professional, minimalist aesthetic
- [PDF downloads of each book and chapter](#) (mobile- and print-friendly formats)
- [MS Word downloads of each chapter](#)
- [Simple view of any chapter](#)
- [Automatic URL shortening](#)

Navigation

- Clean (short) URLs (e.g., https://edtechbooks.org/ux)
- Automatic chapter side navigation of headings, images, and tables
- Item-level linking (e.g., each paragraph)
- Automatic QR codes
- Automatic book indices
- [Easy embedding into Canvas](#) (and other LMSs)

Analytics

- End-of-chapter quality surveys
- [Reading heat maps](#)

Advanced Features

- [A/B testing via Flights](#)
- [Interactive quizzes and surveys](#)
- Chapter narrations
- Cross-site embedding
- [Open Read API](#)
- [Data analytics on users](#)
- Multi-site, cloud-based hosting

Community Meeting 2021

Royce Kimmons

This presentation was delivered on December 9, 2021 as part of our inaugural EdTechBooks.org Strategic Planning Meeting. In this meeting, we explained the current state of the site and provided the community with opportunities to give feedback, ask questions, and shape priorities for the site's future.

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Deprecations