1

Create to Learn

KEY IDEAS

People learn best when they create. Creating media is a powerful way to demonstrate your learning. But it's also a way to generate ideas and transform static information into dynamic understanding. Today, the availability of free and low-cost digital production tools are contributing to a participatory culture where people are not just consuming media but also sharing, remixing, and creating. Although a college course can still rely on the exclusive expertise of one faculty member and one textbook, it's better when a course becomes a type of learning community where everybody learns from everybody. A learning community more closely models the kind of learning that happens in the workplace and contemporary society. To participate in a learning community, you can't just be a passive receiver of information. By creating and sharing media as a way to represent what you are learning, you can activate your intellectual curiosity in ways that naturally make learning more engaging and relevant.

You've grown up using the Internet. You may be comfortable with a variety of social media platforms that you access through your mobile phone, tablet, or laptop. You probably have a favorite way of using YouTube to support your interests in music and entertainment and you may participate in interest groups using Snapchat, Instagram, Reddit, Tumblr, or other platforms. Perhaps you're a gamer and engage in online social play with people from around the world.

But how skilled are you at using digital tools, texts, and technologies in the workplace or to advance your career? Most Americans admit that they're not as skilled as they need to be. More than 200 million US workers use digital skills on the job, but researchers have found that fewer than 1 in 10 feel proficient in the use of the digital tools and technologies they're required to use.[1] That's because, on average, the digital tools that we use change every two to three years. As digital products and platforms are rapidly proliferating, many people are challenged by the need to be lifelong learners when it comes to digital media and technology.

Today there is a *digital skills gap* as more and more people graduate from college without having had sufficient opportunity to develop competencies and habits of mind that are at the core of every job in a knowledge economy. According to management consultants, these core competencies include:

- **Attention management.** The ability to identify, prioritize, and manage in an increasingly dense information landscape involves strategic decision making about how and when to focus one's attention.
- **Communication.** The ability to use effective strategies for interacting and sharing information and ideas with others requires continual awareness of how, when, why, and what to communicate. This includes creating digital and multimedia documents, using language, image, sound, and interactive media effectively to express and share ideas.
- **Digital etiquette.** Awareness of privacy, legal, and security issues is essential to be effective in the workplace. The ability to use appropriate codes and conventions for communicating via e-mail, video conference, text message, and telephone also requires sensitivity to the ethical dimensions of social relationships in a networked age.
- **Search and research.** The ability to gather information and sift through it to identify what's relevant, trustworthy, and reliable demands a strong understanding of how information and authority is constructed in particular contexts. Tenacity and intellectual curiosity are a must in the search and research process.
- **Collaboration and leadership.** When people work together, they do many different things all working at the same time towards a shared and common goal. Skills of coordinating projects and organizing group activity are vital competencies for both workplace and citizenship in a democratic society.[2]

Knowledge Matters

Today, knowledge is not fixed and static. Knowledge is widely networked and distributed. As David Weinberger notes in his book, *Too Big to Know*, the smartest person in the room is the room. That is, in an era where anyone can access information, entertainment, and propaganda all at the touch of a fingertip, knowledge is less and less tied to expertise, authority, credentials, or public reputation. Indeed, anyone can start a cooking blog, not only someone trained at Le Cordon Bleu. Weinberger reminds us that before the Enlightenment, knowledge was understood as coming from God. Later, we placed our trust in the scientific method.[3] Today, we've grown up experts who disagree with each other about every topic imaginable. The explosion of new knowledge made possible by the Internet, with the disappearance of gatekeepers and filters, has contributed to the rise of niche communities or *echo chambers*, where a small

group of people find comfort in their shared beliefs and attitudes. Indeed, it seems that the growing ease of access to information and entertainment is leading to both increased levels of apathy and political polarization.

Literacy Matters

When you hear the word literacy, you may think of the practice of reading and writing. But for a growing number of scholars and researchers, the concept of literacy is expanding as a result of changes in media, technology and the nature of knowledge. Today we define *literacy* as the sharing of meaning through symbols.[4] Everyone – from all walks of life – needs to be able to create and share meaning through language, images, sounds, and other media forms.

The concept of literacy has been expanding for over 2,000 years. In Ancient Greece, a literate man was skilled in the art of rhetoric, possessing the ability to use public speaking to move the hearts and minds of other men in the Forum. All over the world, in medieval times, to be literate meant to be able to read from the holy books, and only a very few scholars and scribes were specially trained to be writers. Then the printing press changed the definition of writing as more and more people were able to read – and then write – as publishers found there to be a marketplace for romantic and adventure novels, personal essays, and scientific books. During the twentieth century, literacy expanded again with the rise of popular photography and people began using photographs for self-expression and communication. The terms visual literacy, information literacy, and media literacy developed as educators, scholars, artists, and librarians all recognized the need for new skills that mapped onto the changes in society that are reshaping the business, communication, and information landscape.

It's obvious how much images, sound, and interactivity combine with language as essential dimensions of the way people share and communicate ideas. It's simply not fair to put written language at the top of the pyramid and consider multimedia forms to be lesser than or inferior. As the National Council of Teachers of English stated in 2005, "All modes of communication are codependent. Each affects the nature of the content of the other and the overall rhetorical impact of the communication event itself."[5] As a result, today the practice of acquiring, organizing, evaluating, and creatively using multimodal information is a fundamental competence for people in all fields of study and professions. Television programming, movies, and online videos are major sources of information and entertainment for people of all ages. Today, we see the integration of multiple modes of communication and expression in every part of life. Our social relationships with family and friends, leisure time, the workplace, and civic and cultural spaces all depend on the use of messages that skillfully combine image, language, sound, and interactivity.

> **What is Digital Literacy?**
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> *Digital literacy* is the constellation of knowledge, skills, and competencies necessary for thriving in a technology-saturated culture. As information, entertainment, and persuasion are now shared digitally and personal, social and professional relationships are developed through interaction with social media as well as mass media and popular culture, people of all ages need the ability to *access, analyze, create, reflect,* and *take action* using a wide variety of digital tools, forms of expression and communication strategies.

Learning Matters

Learning is generally defined as the acquisition of skills and knowledge through experience, study, or teaching. When you think of learning, you may conjure up the routine practices of sitting in class, taking tests, and doing homework. If you were lucky, there was a teacher or two who recognized and appreciated your unique interests and talents. Perhaps you got to make a speech in class or compose essays on topics of your choice. If you were even more lucky, you got to create things – in art class, as a member of a robotics team, in the drama club, or even as a regular part of your coursework.

Learning happens through formal and informal means. During childhood and throughout life, *play* is a form of learning. Children learn by exploring their world, by using their imaginations, and by creating and building – using words, clay, paper and crayons, old blankets, and much more. During adolescence, we continue to play, learning by experimenting and taking risks as we discover ourselves (and the world around us) by doing things we have never done before. As we move into adulthood, we continue to learn on the job, by gaining experience through informal forms of *apprenticeship*. Throughout life, at every age, informal mentors and coaches help us learn as part of work and social life.

Today, people learn how to use digital technologies as an essential part of life. Digital media technologies are so much a part of our lives – for connecting to friends and family, for entertainment, and for learning. Just as the air, water, earth, nature, and architecture of the city are part of our physical environments, television, the Internet, music, celebrities, video games, and social media are part of our *cultural environment*. This term, developed by George Gerbner, refers to the set of beliefs, practices, customs, traditions, and behaviors that are common to everyone living in a certain population.[6] Today, forms of digital and mass media are so much a part of our lives that many people would find it difficult to go a day without YouTube. As Mimi Ito and her

colleagues write, "The media and communication system underpins the spheres of work, education and commerce in ways that we increasingly take for granted."[7] If we think about digital media as a whole system, not as individual pieces of technology, then we see how vital they are to the lifelong learning process.

In higher education, there is a 1,000-year-old tradition of learning by lecture and memorization. Thus, educators have long relied on an approach to learning that depends on transmitting content knowledge verbally. Lectures and textbooks are primary tools in the college classroom. To be successful in many fields of study, students must gain knowledge through listening and reading.

But more and more, creating to learn is becoming an important part of higher education. At the University of Rhode Island first-year writing composition students worked in groups to brainstorm and create a public service announcement about the H1N1 virus.[8] At the University of Massachusetts-Boston, in the Gateway Seminar Video Project, environmental science students worked in pairs to develop 16 videos that highlighted aspects of their learning, demonstrating how the issues impact their home city of Boston. Students developed videos with topics ranging from bleaching of coral reefs to shipwrecks to climate change and erosion.[9]

At Dartmouth College, teams of students taking a geography class created short video *mash-ups*, remixing bits of video and audio material from a range of sources, to introduce and explain a key concept related to a case study of ecology and development in Africa. In a course on political communication, students created ads to demonstrate their understanding of political communication strategy. Although few students in the class had previously worked with video equipment or editing prior to this class, they were able to produce effective work that helped them build real-world communication competencies while learning to apply key theoretical concepts.[10]

Every discipline or field of study involves creative work of one kind or another. When we think about the word "create," we may think about concocting mixtures in chemistry lab or working in an art studio. In this book, you will be *creating to learn* by demonstrating knowledge and skills through creating a variety of forms of media – including web sites, infographics and data visualizations, vlogs animations, podcasts, memes, and more. But the idea of creating to learn goes deeper.

When we create media, we internalize knowledge deeply – we own it. *Internalization* is the process of consolidating and accepting ideas, behaviors, and attitudes into our own particular worldview. After all, if we can represent knowledge, information, and ideas in a format that makes sense to others, that's a form of mastery. Actually, the time-honored practice of writing academic research papers is rooted in this idea. When students write a report or term paper or research paper, it's based on the premise that you move through a complex process of identifying a question, gathering information and ideas,

and evaluating them from the light of your own experience and values. You find a way to summarize and analyze information, organizing it into a linear sequence within the confines of specific rules and conventions for how to express your ideas. As you communicate ideas to a reader, your writing can be used to assess your understanding of the subject matter. Truly, this is a great way to learn.

Creating Media as a Way to Learn

Writing is an important way to represent knowledge – but it is not the only way. In fact, for most of human history, we used *oral language* to share ideas and information through the spoken word. You have grown up in a world surrounded with images, sound, music, and memes from mass media, popular culture, and digital media, which offer an endless array of new forms of expression and communication. While formal academic language is the dominant form of expression and communication among scholars, in the workplace, you need to be an effective communicator using *all* the tools at your disposal.

Too many people graduate from college without having had experience composing memos, building a web site, writing a blog post, or creating a compelling photo. They stumble when asked to create an infographic, deliver a speech, create a podcast, share a compelling story, or create a YouTube video. They have not had sufficient experience in creating to learn.

Fortunately, multimedia production is not just for specialists who work in the fields of journalism, television, the Internet, and social media. We live in a *participatory culture* where all of us are increasingly expected to share and contribute our knowledge with others.[11] And the results of this sharing have been tremendous! Type the phrase "how to" into the YouTube search engine and you'll see many examples of people from all walks of life who are sharing what they know with the world, whether that be how to cook Indian cuisine, analyze a poem, create an architectural masterpiece in Minecraft, or solve a complex quadratic equation. In a world of global interconnection and rapid change, you can expect to be a learner for the rest of your life. In participatory culture, we share what we learn through creative expression as part of leisure, work, and citizenship.

Many students like yourself are creating media as a direct and central part of your learning. Perhaps you will create a video about the causes of the French Revolution or post multimedia content about urban gardening to a class blog. Perhaps you will develop a short documentary about a contemporary author, or write original song lyrics to express the unique mathematical characteristics of pi (sung to the melody "Bye, Bye Miss American Pie"). You may interview a local politician and create a podcast about his vision for

improving the community. Having a variety of different experiences in expressing ideas in different formats will strengthen your overall skills as a communicator and lifelong learner.

Perhaps you think of yourself as an author or creative person already. Review the Authorship Checklist below to reflect on your own identity as an author. You may be eager to express what you have learned in class by using video or digital media. You may have already collaborated with peers and shared your work online via Facebook, YouTube, or Blogger.

As you demonstrate your learning by creating media, others may learn from you. This is a key point because for millennia, learning and teaching were understood in relationship to strict hierarchies of control, power, and knowledge. Only certain elders were permitted to mentor youth. Later, advanced training and formal education was a requirement to become a teacher or professor. But today, the hierarchies have flattened as *networked learning* makes it possible to create a situation in which everybody learns from everybody. In this book, you'll learn how to create to learn using images, language, sound, music, multimedia, and interactivity with the goal of deepening your learning experience and contributing to the learning of others by composing messages using many different forms of media to represent your developing knowledge and skills. Creating to learn has many benefits: in addition to the learning experience itself, your completed work may have value to others.

Learning in College and Beyond

In college, the learning communities you participate in are often defined by the courses you enroll in. Classes are simply organized groups of learners, guided by someone who helps structure activities that promote learning.

But learning communities can't be defined merely by what happens in school. They happen outside of formal education all the time. Perhaps you have at times wondered how to use a wok to make Chinese food, fix some plumbing, change a tire on a car, or install a shelf on a wall. When you Google these terms, you find lots of people who have shared their insights on these topics. If you are highly resourceful, the Internet is a treasure trove – for both play and learning.

Perhaps you have created media with your friends just for fun, especially when you were growing up. Students often tend to underestimate the skills and knowledge they have learned through their playful use of video, graphic design, and multimedia. But researchers have demonstrated that many of the digital skills learned informally through play or exploration of personal interests – especially in a social context – represent a significant contribution to one's personal, social, and intellectual development.[12]

When you learn something just for school, to pass a test, or because it's expected of us, that knowledge is often flat and one-dimensional. What makes learning fun

is the feeling of being connected to other learners, being part of a community or group. When you are part of learning community, you are motivated to ask questions, find out information and ideas, debate issues of concern, and contribute your own ideas and opinions. Learning becomes both fun and relevant when we see ourselves, not as individual learners, but as part of a group or team. In the context of the workplace, lifelong learning occurs as we stay connected to social networks, develop relationships with colleagues, make institutional linkages, engage in shared activities, and participate in communication infrastructures.

Because lifelong learning involves sharing information and ideas, *multimedia composition* occurs everywhere. Accounting professionals create videos to demonstrate and share new practices. Young nurses document the delights, trials, and tribulations of the first year on the job and older and more experienced nurses offer advice on building a career using Google Hangouts On Air. The process of creating media embodies the learning process. There's simply no end to the creativity of students who are creating to learn:

- At Temple University, student journalists created video news segments about a living statue standing in a makeshift fountain in the middle of Broad Street, documenting an event from the Philadelphia International Festival of the Arts.
- At the University of Southern California, students in Professor Anne McKnight's course, Fantasy and Travel Across the Pacific, explored the literature on travel and fantasy by creating alternative book covers for classic works.
- In Professor Carolyn Cartier's course, China and the World, students worked with a partner to create digital essays that investigated China's relationships both within and beyond its traditional boundaries.
- At West Kentucky Community and Technical College, students in Professor Beverly Quimby's Visual Communication class created a historical documentary about the history of uranium enrichment at the Paducah Gaseous Diffusion Plant.
- At the University of Rhode Island, students in Professor Tom Mather's Infectious Diseases course created video public service announcements about diseases that are transmitted from animals to humans, including cat scratch fever and Lyme disease.

These projects enabled college students to demonstrate their learning of rich content while the developed communication, critical thinking, creativity, and collaboration skills.

You may think to yourself, "But I am not a creative media person." Not every student comes to college with the knowledge and skills of a young Tina Brown, George Lucas, Shepard Fairey, or Ken Burns. Expert media makers have spent upwards of 10,000 hours of creative work to acquire real knowledge and skills that enable them to produce works of art using media.

In fact, while you have probably created a PowerPoint slide deck, you may not have created a YouTube video, a podcast, or an animation. Certainly you have shared content with your friends using social media like Tumblr, Facebook, Twitter, or Instagram. Most young adults have uploaded photos to a social media web site or uploaded video from their cell phone to YouTube. Have you created an infographic, a documentary video, or a podcast? Have you built a simple web site? Perhaps you have not yet done these things.

Researchers who look at the use of digital media for learning distinguish between *friendship-driven* digital activities where students use online social media to maintain social relationships and *interest-driven* activities where they "find information, connect to people who share specialized and niche interests, including online gaming, creative writing, video editing or other artistic endeavors."[13] Part of the problem today is that even though many educators may believe their students to be so-called "digital natives," most students have not yet acquired the full range of knowledge and skills they need to be effective multimedia communicators.

Even though the digital tools are literally at our fingertips, most people are not routinely creating media as part of daily life. For example, while most young adults have grown up sending text messages, only about 30 percent have created a blog. And while the use of social media is ubiquitous, fewer than 5 percent create media as part of their leisure activities. We really don't know how many young people have created and uploaded videos today. Back in 2006, the Pew Research Center's Internet and American Life Project conducted a study of young content creators – students who have created or worked on a web page or a blog, shared original content or remixed content they found online. What they learned is that young content creators generally developed their multimedia composition skills *only when they had support and guidance from a learning community* – either formally (in school) or informally (through play and social interaction with peers).[14]

This book and the web site that accompanies it will support your work as you engage in the process of creating to learn. You will benefit from the structure, advice, and strategic guidance that can help you to express yourself using digital media to create slideshows, videos, web sites, podcasts, screencasts, video games, and more. This book offers a guide to the entire process of multimedia composition, with an emphasis on developing the critical thinking and communication skills that are foundational to creating informative, persuasive, and entertaining messages in a wide variety of genres and forms. If you are reading this book, you are part of a community of people who see digital and media literacy as a critical competence for college graduates in every discipline and field of study. Everyone needs to be able to access, analyze, evaluate, compose, reflect, and use multimedia tools and technologies to take action in the social world.

The Ethics of Digital Authorship

Today people live with a continual flood of information, news and entertainment literally at our fingertips. You may encounter only a little of the staggering diversity of content that's available each day from the people in your social media networks who share it with you. But you also contribute to the pool of content that circulates online every time you share a photo, text a friend, post a comment or "like" something. Indeed, it's highly possible that you have accidentally shared misinformation or poor-quality content to people in your network. Researchers have found that 59% percent of Facebook users share news without actually reading it. According to Arnaud Legout, "This is typical of modern information consumption. People form an opinion based on a summary, or a summary of summaries, without making the effort to go deeper."[15] These communication practices are warping our shared political and cultural agenda and they contribute to ignorance and misinformation that works against the practice of democratic citizenship.

When someone is an irresponsible communicator, they can wreak havoc. When the term "fake news" started circulating in late 2016, it got people's attention and was used to describe political hoaxes, like the one claiming Pope Francis endorsed Donald Trump in the U.S. Presidential election. On Election Day, there was a flood of these hoaxes. For example, a website called the Denver Guardian claimed that an FBI agent connected to Hillary Clinton's hacked email had murdered himself and shot his wife. Another website stated that she promised amnesty to undocumented immigrants. On the campus of Bates College, fliers were posted to discourage college students from voting. The fliers falsely stated that if students wanted to vote in the college town, they would have to pay to change their driver's licenses and re-register any vehicle in the city.

The mayor of Mansfield, Georgia even posted a message on his Facebook page: "Remember the voting days: Republicans vote on Tuesday, 11/8 and Democrats vote on Wednesday, 11/9."[16] Although such fake news hoaxes can seem funny, they can have devastating consequences.

Almost immediately after President Donald Trump took office, and after questions began arising about Russia's disinformation campaign to influence the U.S. election, he began to use the term "fake news" in a way that shifted its meaning. Trump asserted that "any negative polls are fake news," blasting those who pointed out his inaccurate statements and calling the media "an enemy of the people." Some wondered if this were just a ploy to capture attention or a strategic campaign by an authoritarian leader to cultivate a sense of apathy and alienation towards the press and its efforts to report the truth.[17]

Intentional deception is abhorrent to a responsible communicator. As a digital author, you'll act in goodwill towards your audiences because you expect

that others will behave accordingly. Societies advance on the basis of trust. In any case, the term "fake news" should not be used to describe reporting errors. Of course, you'll make mistakes as part of the learning process. Such errors happen every day: reporters are only human and plus, they work under intense deadline pressure. For example, consider the *Time Magazine* reporter who, after the election, reported that a statue of Martin Luther King, Jr. had been removed from the Oval Office – when really it was just obscured behind a door.[18] Mistakes happen, but when they do, a responsible digital author makes corrections and informs audiences about the error.

The book is based on a simple premise: with the right kind of strategic guidance, learners can gain the power of digital authorship, working individually or collaboratively, and in the process, begin to engage deeply with disciplinary knowledge while developing communication competencies through creating real-world media messages for authentic audiences.

Digital Authorship: A Checklist

Which of these activities have you done? Check all that apply to you.

____I regularly search online for information on a topic of personal interest.
____I use my cell phone to search for information.
____I maintain a diary or journal to express my ideas.
____I select and share images, music, or other content nearly every day.
____I do creative writing – poetry, music lyrics, fiction, or short stories.
____I have interviewed a person to gather information from them.
____I have given a speech using PowerPoint slides I created.
____I have performed a spoken word poetry or storytelling presentation.
____I have performed in a play or helped behind the scenes with a dramatic production.
____I have participated in a video chat.
____I have live streamed video for people on the Internet to watch.
____I have performed in a music video, dance video, lipsync or lip dub video.
____I have taken photos that I intentionally design to be beautiful.
____I have composed a song or written song lyrics.
____I have produced a video.
____I have produced a video and uploaded it to YouTube, Vimeo, or other site.

Add up the numbers and see where you stand in relation to your peers:

1–5   Emerging Digital Author
6–10   Developing Digital Author
11–16   Experienced Digital Author

Activity: Reflect on Your Identity as a Digital Author

After you complete the Digital Authorship Checklist, reflect on your own identity as a digital author. In informal writing, describe some of your experiences in creating media, recalling experiences from your childhood and adolescence. Consider these questions in composing:

1) When were you a leader in creating a project? When were you a contributor or a collaborator in the creative productions of others?
2) Describe the product you created and the process you used to create it. What do you remember liking and disliking about the experience?
3) If you could create any kind of media product at all (with no limitations), what would you want to create? Why would you want to create it?
4) What scares you most about the idea of becoming a digital author?
5) Name three aspects of your personality and character that will be helpful as you engage in the process of creating to learn.
6) What's the best thing that could result for you personally in becoming a digital author?