ADDING SOME TEC-VARIETY

100+ Activities for Motivating and Retaining Learners Online

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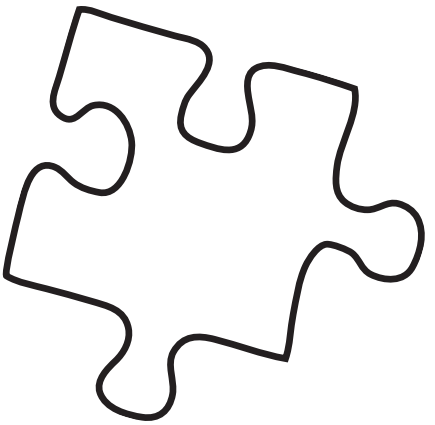
CHAPTER NINE

PRINCIPLE #6 RELEVANCE



(Includes Meaningful, Authentic, and Interesting)

Always desire to learn something useful.

—Sophocles

We have finally arrived. No, not simply to the start of the second half of this book; rather, we are now located in what many consider to be the crux of any plans for motivating and retaining online learners. We have arrived in the land of learning relevance. The lack of relevance in educational tasks and tests has been an issue for centuries. Reflecting on his scientific training, Albert Einstein once remarked, "One had to cram all this stuff into one's mind for the examinations, whether one liked it or not. This coercion had such a deterring effect on me that, after I had passed the final examination, I found the consideration of any scientific problems distasteful to me for an entire year" (Goodreads, 2013).

Shoving content into his head in order to pass an exam did not sit well for Einstein, nor does it for savvy technology learners of this digital age. Without relevance and its associates —meaningfulness, authentic learning, and personally interesting content and tasks—there will be perpetual distractions that keep learners occupied in alternative activities, including games, texting their friends, and updating their social networking accounts. Suffice it to say, learners will fail to tune in. Make learning interesting and personally meaningful, however, and you will dig into a rich vein of online learning success.

Principle #6 of the TEC-VARIETY framework reminds the course developer or deliverer that, whenever possible, tasks should be relevant and meaningful. In his highly popular treatise on the "First Principles of Instruction," eminent instructional technologist David Merrill (2002), supports the primacy of relevance. He argues that student motivation increases when the activity entails some sense of solving real-world problems or engagement in authentic tasks of some type. When learners can incorporate the new knowledge of a course into their personal or professional lives, they will be more motivated to master that material (Keller, 1983). In some ways, this sixth principle of TEC-VARIETY is strongly linked to the final one related to designing or producing products, given that creating authentic or meaningful tasks often entails building, designing, or crafting something for a wider audience than the instructor. In fact, derivatives of several activities mentioned in this chapter are detailed in Chapter Thirteen on yielding products.

As might be expected, scholars have found that contextually rich cases and scenarios are highly empowering (Williams, 1992). Research from Singer, Marx, Krajcik, and Chambers (2000) at the University of Michigan reveals the importance of tasks that are meaningful and problem-based. Such consistent findings in this area in many ways signal the obvious: learners are drawn to activities which they believe are meaningful, authentic, and relevant (Blumenfeld, Soloway, Marx, Krajcik, Guzdial, & Palincsar, 1991). Much of this research, however, has occurred in physical classroom spaces, not virtual ones. In such places, students can be corralled into an activity or event without much difficulty. In online spaces, however, the degree of task meaningfulness appears to play a more vital role.

As we have discussed, one commonly employed online technique is the use of real-world cases and scenarios. Rich multimedia components (text, audio, animations, graphics, videos, and so forth) can enhance the user experience. Learners can discuss their perspectives and experiences relative to these various scenarios. In addition to cases, learners can respond to a set of reflection questions related to their job, internship, or field placement. Alternatively, they could write case problems and questions for their peers to solve based on their current job situation or field placement (Bonk, Daytner, Daytner, Dennen, & Malikowski, 2001). In such activities, students are practicing their newly learned skills and can compare their answers with peers who might be located anywhere on the planet.

Creating authentic and personally relevant tasks is often not easy. How realistic should your tasks be? Will learners be satisfied with a case presented in text with still images or prefer a more rich and engaging video scenario packed with interesting context variables and cues? In their book, *A Guide to Authentic e-Learning,* Jan Herrington, Tom Reeves, and Ron Oliver (2010) summarize a series of studies that indicate that a high degree of physical reality is typically not that important to the creation of an effective and engaging online learning environment. What is more critical is the development of realistic and engaging ideas within the task or activity, or what they term "cognitive realism." The real question is whether the task fosters the type of problem-solving processes that you want, not whether the activity is presented at the highest level of fidelity. Just like going to the movies, a key part of that success depends on the willingness of the participants, at least temporarily, to suspend their disbelief. If the context of the situation or scenario

is acceptable to the learner, the quality of the surrounding graphics and images are far less of a concern.

Herrington et al. (2010), nevertheless, caution that learner sense of authenticity comprises many components. For instance, there must be an authentic context that approximates or reflects the type of knowledge or skills used in the real world. Does it capture the scene or situation well enough? Second, the task selected must be authentic. Does it seem genuine or realistic given the audience, future uses of that skill or competency, and later expectations of assessment? Third, are the resources and guidelines provided to enrich or supplement the task meaningful for the learners to reflect upon and use as they deem necessary? Workplace materials or examples, websites, open access journals and articles, and other primary resources may be appropriate for one audience or point in time, but knowledge in most domains is rapidly changing today. As a result, what is authentic or relevant one year may not be in the next.

Another factor affecting perceived authenticity involves the levels and types of learning supports. Such supports may entail interactive timelines and knowledge maps, guidelines and templates for producing high-quality products, and feedback mechanisms built into the course. Other examples include instructor interventions, peer interaction, and opportunities for reflection and discussion.

Adding to this research base, Kyong-Jee Kim (2009) found that when self-directed online courses offered more interaction and authenticity, often in the form of simulations and animations, they were deemed more motivational by the study participants. A couple of years later, Kim and Frick (2011) reanalyzed this data and discovered that the more students believe that the learning goals are personally relevant, the more likely it is that they will achieve the stated goals embedded within the course learning objectives. It is clear, then, that relevant, meaningful, and authentic e-learning is vital to overall course and program success.

A final motivation-related component of this chapter is "interest." Whereas curiosity may be fleeting and highly situational and then disappear as rapidly as it arose, when learners develop an interest in something, it tends to be more enduring (Reeve, 1996). As might be expected, when a person is interested in a topic, he or she will devote more cognitive resources and attention to the task at hand, which in turn will determine overall comprehension and later recall (Hidi, 1990). Stated another way, if learners are interested in the topic or task, they will make a consistent personal investment in the task. There will be deeper processing of the content with elaboration and organizational strategies, instead of simple reliance on surface-level forms of repetition and rehearsal of content in their heads (Pintrich & DeGroot, 1990). Over time, as we gather rich and meaningful life experiences in an area, we refine and develop our skills, and from this work a unique set of expertise often emerges. As this happens, the value we place on a particular topic or activity increases as well as our prior knowledge or competence about it.

Of course, what is highly valuable for one or a few of your students may not be of importance to everyone in the class. Hence, as noted in the previous chapter, personal choice or selection remains vital.

Technologies for Principle #6: Relevance

For decades there has been talk that some types of educational technologies and activities can foster learning environments where students construct and negotiate knowledge. Seymour Papert (1980, 1993), the father of constructionism, was among the most persuasive advocates of making learning relevant and granting the learner as much control over the activity as possible. From his perspective, such environments would spawn intensely engaged and active learners because they would be creating something new while being immersed in heavy doses of relevancy. As the technologies for the Web have evolved during the past few decades since Papert's (1980) momentous book, *Mindstorms: Children, Computers, and Powerful Ideas*, opportunities for learners to generate knowledge with technology have vastly increased.

An educational technology historian might discuss the levels of authenticity rising from simple games of *Pong* in the early days of personal computing to systems with much higher levels of fidelity (e.g., *World of Warcraft*) in this age of augmented reality, virtual worlds, and haptic or touch-based systems. Now, learners can be fully immersed in the learning process. Though questions remain about whether learning is enhanced as fidelity goes up, there is little doubt that learning feels more realistic. Realism, however, does not necessarily result in perceived relevance of the learning materials or context.

There are numerous ways to enhance the sense of authenticity and relevance of the learning environment. For instance, being up close with guest experts or a group of peers from another country, school, or university via videoconferencing will typically elicit an immediate sense of relevancy. Expert podcasts, such as online interviews of researchers about their latest findings, books, or other publications, lend an air of authenticity to the learning situation. In addition to podcasts, the Web is a storehouse for countless on-demand maps of the weather, travel destinations, census records, and so on. There is a never-ending cascade of data and information that includes business financials for a cost accounting course, survey reports on the latest in teenager technology-use patterns for a course in marketing, voting records for courses in politics or sociology, and current news reports for any course or topic. And the available data may change on a day-to-day or even minute-to-minute basis and require extensive student monitoring, analysis, distillation, report generation, and communication skills.

The Web is filled with opportunities to arouse student interest with authentic tasks. Herrington et al. (2010) list a wide assortment of such activities, including the use of virtual microscopes in biology classes, conducting research on different military battles or on a particular soldier, and exploring the Web for resources related to one or more key issues facing a local government. They also point out that there is a mass of data now available on the Web, including online newspapers going back more than 150 years, online census records for decades in the United States alone, millions of digital videos and open access text documents, and countless pictures and biographies of famous people of past centuries. With this vast array of documents and image files, courses on research methods, history, and social studies as well as any course with an inquiry component lend themselves to innumerable online possibilities. Such resources can be employed

to create contextually rich cases and scenarios that foster deep reflection and extended discussions (Williams, 1992).

Of course, the technological resources for data gathering and analysis will only become richer in the coming decades. Some of these ideas will become clearer after reading the various activities detailed in the next section of this chapter.

Ten Online Activities in Principle #6: Relevance

As in the five previous chapters, there are 10 activities for Principle #6. Keep in mind, however, that aspects of personal relevancy are probably embedded in most of the 100 activities described in this book. The extensive possibilities for relevant, meaningful, authentic, and personally interesting activities in this age of the Internet made the selection of the 10 activities outlined in this chapter a particularly difficult task. Note also that these 10 activities do not appear in any particular order of importance or pragmatic use; there is no one task or activity that we deem to be any more meaningful or authentic than any other. Ideally, several of them can serve as a base for your personal thinking about this topic.

Activity 51. Multimedia Case Vignettes and Decision Making

Description and Purpose of Activity. Students enjoy being close to the content that they are expected to master. Case vignettes and scenarios are one such opportunity. Since the times of Socrates and Plato in ancient Athens, cases have been used to foster student analysis, discrimination, and evaluation skills. The cases and scenarios insightfully employed in the days of Plato's Academy, however, were orally delivered. Today, as Internet bandwidth rises, storage capacities expand, costs of such storage drop, and software becomes simpler to use and deploy, it is relatively easy to add a multimedia component to such cases in the form of animations, simulations, graphics, pictures, videos, and sound. Each layer of context can help offer the learner a distinct learning cue (Mayer, 2001). At the same time, too many forms of media can be distractive and present a heavy cognitive burden on the learner (Moreno & Mayer, 1999). The amount and types of media you use, therefore, need to be thoughtfully selected and integrated.

Rich multimedia cases have wide acceptability and applicability in higher education settings, especially as the average age of a college student rises and the type of student shifts from full-time young adults to middle-aged adult learners in the workplace. With their years of practical experience, those more seasoned learners can often relate to contextually rich stories as well as offer personal cases of their own.

Not surprisingly, many professional schools are known for their use of case situations. Education cases may be embedded in a school context with video interviews of teach-

ers, principals, and parents as well as the interview transcripts, classroom and student pictures, and detailed problematic situations. Business law cases can show plaintiffs, defendants, juries, judges, witnesses, and the various complex issues that they are dealing with, and possibly include a simulation of key court proceedings. Business management and cost accounting cases, on the other hand, could include graphs detailing days of inventory items, links to financial statements over a period of time, animations depicting particular problems or situations, and descriptions of prior accounting or business management practices.

Skills and Objectives. Includes critical thinking skills such as inferring, analyzing details, deductive and inductive reasoning, comparing and contrasting, evaluation or judgment, breaking down case situations or problems into component parts, and the application of concepts and terminology to real-world situations. Multimedia cases also foster the ability to sift through extensive content and prioritize masses of information, and, accordingly, include reflection skills as well as learning in a context.

Advice and Ideas. One of our colleagues, Mark Braun, a pathology professor at Indiana University, has designed a series of modules for second-year medical students engaged in a year-long general and systemic pathology course. In the 25 units that students complete during the year, each one has clinical vignettes that represent a common medical condition (e.g., an elderly man with chest pain, a woman with morning stiffness, a man with abdominal pain, a young woman with blindness, and the like). The modules typically are sequenced at the beginning of each unit, thereby allowing students to learn the content at their own pace. Along with each module there is an online graded component. According to Dr. Braun, these cases foster clinical application of the course content.

There are many forms of media used in these cases. For instance, most are patient-interview driven. As students work through them, additional information is offered such as medical history, lab tests, and X-rays. Students can access the results of chest X-rays, blood counts, chemistry profiles (e.g., calcium glucose, cholesterol, protein, uric acid, and so on). Different slides offer images and descriptions of various diseases (e.g., pulmonary, cardiovascular, liver, and infectious diseases). Opportunities for content review dovetail with the progression of each case. Naturally, every case concludes with students making a list of plausible diagnoses, before the correct diagnosis is provided. Braun uses a set of 10 to 15 nongraded and self-paced online quiz questions that cover the main points of each module. After students learn their scores, they can revisit and complete each module as many times as they wish. Questions on their graded exams are drawn from these self-paced clinical cases.

Braun's case-based learning approach is a splendid example of how to use Web resources to enable more authentic and meaningful forms of learning. His surveys and evaluations of the cases confirm that students find them very relevant to the course because they closely mimic their real-world encounters in later clinical experiences. Professor Braun cautions, however, that the creation of these modules has been a multiyear process. Depending on their complexity, each module can take up to several weeks or even a month to develop fully and deploy. On average, case creation time is roughly 40 to 60 hours. And though they are already quite well received by his students, Braun hopes to embed even greater interactivity in the future, including the use of more animations and multimedia components.

The previous example is but one kind of multimedia case. You might explore Braun's cases and others and reflect on your own discipline or content area. Not everyone has the time, technology skills, and interests of Professor Braun. Fortunately, nearly every field likely has a rich array of cases or scenarios that exist online in places like MERLOT, Connexions, and the Open CourseWare Consortium. Those in K–12 settings might explore Curriki, Share My Lesson, and HippoCampus.

Each country around the world probably has similar specific content available at a government, nonprofit, or university site. For example, in terms of science-based curricula resources in New Zealand, where Khoo is employed, there is the Science Learning Hub and the New Zealand Biotechnology Learning Hub. Both provide freely available contextualized multimedia resources rich with teaching strategies, interactive content, and timelines for teachers to promote student interest and engagement in science. These websites also contain contacts and links to real-life scientists as well as scientific organizations. When accessing these experts and organizations, teachers and their students can communicate, ask questions, and pursue personal interests and ideas so that they can better understand the connections and relevance of scientific research to their everyday lives.

Variations and Extensions. Consider creating a repository of case solutions from previous semesters or versions of the course. You could also record and post all-time high scores as a means of motivating students to take the cases seriously. Activities can be designed to critique, extend, and combine previous case solutions. In addition, consider designing a set of more difficult challenge cases, possibly enlisting former students who are now practicing in the field to serve as online mentors or tutors to offer advice to students when they get stuck or have a question.

Key Instructional Considerations

Risk index: Medium
Time index: Medium to High
(depending on whether usable case materials or resources exist)
Cost index: Medium to High
(depending on whether usable case materials or resources exist)
Learner-centered index: Medium
Duration of the learning activity: 1–4 weeks or throughout the course as needed

Activity 52. Job Connection and Strategic Planning Papers

Description and Purpose of Activity. One of the best ways to establish meaningful and authentic tasks is to link them to students' personal or professional lives outside the course or program of study. If there is an audience beyond the instructor, there is greater likelihood that student ideas or products will be shared, discussed, and potentially acknowledged and even celebrated. Such is the case of job connection and strategic planning papers. When learners can connect course content to their work lives and perhaps immediately apply it, they obtain professional recognition for their coursework and validation that what they have taken the time to study can have an impact in their work

lives on a daily basis. For instance, they may receive recognition in the form of praise, bonuses, assignments to interesting projects, and even new positions or job duties.

A job connection or application paper basically forces learners to think about how one or more course concepts could be applied in their particular job setting. Students who previously may have thought that they were going to be wasting time in a course often make a 180-degree mental shift and become excited when faced with work-related possibilities.

Skills and Objectives. Includes student choice, resource exploration and selection, sharing, presentation and communication skills, and learner interaction and feedback. This technique temporarily places students in the role of instructor.

Advice and Ideas. Give students some examples of job connection or application papers from previous semesters. If they are thinking about doing a strategic planning document, action research project, or some type of technical report for a particular organization or a department or unit within it, share relatively recent examples to scan through. Perhaps ask prior students of the course to offer suggestions on how to locate sample reports and insights on achieving success in this task. The paper might be modest in length (e.g., 2 to 3 single-spaced pages) or a much longer technical report or strategic plan. It is vital that students obtain approval for their initial idea before commencing—not only from the instructor, but possibly also from their work supervisor(s).

Be sure to post your evaluation criteria and grading rubrics ahead of time. Alternatively, you could have students work in small groups to create rubrics for final project evaluations. Consider also offering students the option of turning in drafts of their work for feedback from peers or the instructor. Any feedback given should be genuine, timely, and specific. Try to incorporate episodes of meaningful peer feedback and support whenever possible.

Variations and Extensions. There are a slew of variations for a job connection or application paper. For instance, the papers can be anonymously entered into a class competition in which peers or external experts vote on the best ones, with awards handed out for the highest-rated papers. As part of such a competition, top papers can be placed in an online gallery of papers for students to read through in the following years. Student papers can also be repackaged into an online course compendium, uploaded as a digital book to a website like BookRix, or made into a wikibook at Wikispaces, PBworks, or Wikibooks which can be modified and extended by students in future semesters of the course, or by peers around the world in similar courses.

Key Instructional Considerations

Risk index: Low
Time index: Medium to High
Cost index: Low
Learner-centered index: High
Duration of the learning activity: 1–2 weeks during the semester (if a brief paper); 4–5 weeks (if a final project or strategic planning document)

Activity 53. Wiki Editing Projects (including Wikipedia)

Description and Purpose of Activity. Some online tasks and activities have benefits inside as well as outside the class. Such is the case of student projects to edit, or more significantly, to improve a wiki resource of some type. For example, a class of students could edit and expand a wiki glossary or wikibook from previous semesters of the course. They could update a database of articles in a wiki, or add to editorial content and critique comments made in a wiki on one or more research articles. In the midst of such a project, they should begin to understand how knowledge, at least in some fields, is socially constructed and negotiated. They may also begin to grasp the fluidity and impermanency of text in a wiki, where anyone can edit, change, add, combine, remix, or delete ideas.

There are a series of initiatives today to improve the quality of Wikipedia pages. As an example, the Wikipedia Education program mobilized graduate students from around the world enrolled in public policy courses and programs to edit Wikipedia pages as a means to enhance the use of Wikipedia as a teaching tool or platform. Georgetown University, Indiana University, Harvard, and George Washington University were among those participating in the public policy project (Kolowich, 2010). Other organizations involved include the Moscow Institute of Physics and Technology and universities in Mexico and Macedonia (Wikipedia Education Program, 2012). To foster success, students in public policy courses were specially trained by Wikipedia Ambassadors to participate.

With such a project, individual students as well as student teams contribute to the growing knowledge base in a field. As an additional benefit, they have to be extremely meticulous because untold people will browse and read these open access articles. In many graduate courses, students conduct literature reviews and then synthesize and summarize what they have found. Such a project vastly extends the potential audience and purpose of student coursework.

Skills and Objectives. Includes paying attention to detail, Web searching and filtering, synthesis skills, the ability to digest and condense extensive amounts of knowledge, write for a generalized audience, handle feedback, collaborate in a team, and negotiate knowledge.

Advice and Ideas. Consider assigning students to edit Wikipedia pages in your discipline. Alternatively, you could become part of an education project sponsored by the Wikimedia Foundation to improve Wikipedia. Perhaps assign students specific pages or topics to read and edit in Wikipedia or have them sign up in a wiki for the pages that they would prefer to work on.

The role of the instructor is crucial in such an activity. First of all, the instructor should set clear expectations including the type and amount of edits expected, the respective due dates and timelines for the project, and the associated assessment or grading criteria. Second, if possible, examples of work from previous semesters should also be made available. Third, the instructor should also be involved in the project as a role model. Fourth, online scaffolds or job aids should be created to help guide the learner. At the end of the module or semester, student progress on different Wikipedia pages should be shared with the class.

Variations and Extensions. Wikipedia editing could take place across sections of the course or in collaboration with other schools or universities. You could create a competition for best improvements made to a Wikipedia page, possibly offering awards for different categories of achievement.

Key Instructional Considerations

Risk index: Medium
Time index: High
Cost index: Low
Learner-centered index: High
Duration of the learning activity: Throughout the course or as needed

Activity 54. Language Learning Conversations and Mentoring

Description and Purpose of Activity. The tools and resources for learning a language have proliferated during the past decade. Lesson guides, podcasts, word lists, exercises, dictionaries, thesauruses, and other referenceware are found in many of them. But that's just a start! Some provide interactive flashcards, pronunciation labs, grammar lessons, voice games, quizzes, and progress reports. Relevant language learning tools can be found at About.com (e.g., ESL, French, German, Italian, Japanese, Mandarin, Spanish), BBC Languages, ChinesePod, Coffee Break Spanish, Duolingo, Learn-Korean.net, LoMasTV, Mango Languages, and Japanese Online.

Increasingly, language learning tools and systems extend beyond such technologies and resources to the human side of learning. A conversational partner or set of partners may assist in an online chat, peer-to-peer conversation class, and general online tutoring and mentoring sessions. Systems that foster such interaction include Babbel, italki, Livemocha, The Mixxer, Palabea, PalTalk, and Voxopop. Livemocha, which started in 2007 and reached over 14 million users from 195 countries by 2012, was recently acquired by Rosetta Stone. With Livemocha, you can sign up to take or teach pretty much any language. The next generation of Web-based language learning is found at English Central where you can compare your speech delivery to those given by famous people like Steve Jobs, Lady Gaga, and Angelina Jolie.

These systems can be used to supplement student learning while extending the resources available in a class. Each resource adds something unique; however, the ones that help situate student learning in a context are likely the most powerful. As a result, tools to practice language skills with human or computer feedback can accelerate and elevate student mastery of a language. No longer must a language instructor rely solely on notes, lectures, and selected text materials.

Skills and Objectives. Includes choice, engagement, feedback, interactivity, flexibility, language comprehension and communication skills, speaking in a context, skill discrimination, and goal setting. Such tools and resources can foster basic language learning skills and competencies as well as more advanced language competencies.

Advice and Ideas. Instructors and instructional designers should review the online language learning tools, programs, and systems mentioned here and listed in the Web

resources associated with this chapter. As you do, make note of the features and ease of use of each system. In particular, explore the systems that have online conversation options. After finding one or more online language learning tools that are appropriate for your course, ask your students to become members of one and acquire a language learning partner. Alternatively, if none of the language exchange resources you review are appropriate for your learners or content area, find and contact one or more scholars or experts from your language area to talk to your students via Skype or Google Hangouts.

Variations and Extensions. Assign students to language partners within the class to practice their conversational skills using Skype, Google Hangouts, or some other technology. Try pairing students by interest, location, language competence, confidence (less confident with more confident), or some other dimension. When their conversations are done, have students write a reflection paper or create a term glossary based on their experiences.

Another idea is to contact instructors from other countries who might be interested in a cross-institutional partnership between their students and yours; for example, the students can engage in a joint project across regions of the world that requires them to practice their language skills in context-sensitive ways. Once again, a reflection paper or creation of a term glossary might be assigned as the capstone experience.

Key Instructional Considerations

Risk index: Medium
Time index: High
Cost index: Low
Learner-centered index: High
Duration of the learning activity: Weekly or as needed

Activity 55. Online Current News Feeds and Streaming Data

Description and Purpose of Activity. Similar to Activity #21, "Online Events in the News" (Chapter Six), this activity builds from emerging news stories and live data. Each day, there are unique and context-rich events that occur and are quickly reported. When they do, the data, videos, reports, interviews, animations, reactions, and so forth pour in. Such immediate news feeds are now an expected part of our daily lives; as events unfold, different pieces of data emerge and are offered in ways to arouse people's interest. Hence, they link to Principle #3 on curiosity.

Savvy instructors, however, can do more with such reports than simply grab the attention of learners. Effective online and blended learning instructors find ways to push student thinking about that data or report. How does it relate to the topics or concepts of a course or perhaps extend these subject areas in new directions? How might such data change commonly held scientific views of some phenomena? What analyses and special reports could the class make with such data?

This particular activity focuses on the live and fast-changing data as it is shared. Static news reports and press releases have existed for eons. Today, however, we can access and subscribe to live news feeds. There are videostreams of weather maps related to tropical

storms and hurricanes as they form and later expand to cause havoc. There are pitch-by-pitch baseball games on display in ESPN.com as well as many other live sporting events. Rock concerts, stock market ticker tapes, political convention polls and speeches, and religious gatherings are streamed live each day on the BBC, CNN Live, CNN International, MSNBC, Fox News, and Yahoo! News. Science experiments and research findings are also instantaneously streamed for all to witness on Discovery News or Explor.TV. And many institutions of higher learning and other organizations are using Livestream and Ustream to broadcast their unique news and events. With such connections, you can get live feeds of sharks and turtles from the Monterey Bay Aquarium, daily events at NASA, and speeches from politicians like Hillary Clinton (USA), Park Geun-hye (South Korea), Jean-Marc Ayrault (France), Julia Gillard (Australia), or David Cameron (UK).

Remember the explosion aboard the Deepwater Horizon oil rig on April 20, 2010? An underwater Webcam at the site of the famous BP oil spill during the spring and summer of 2010 offered live shots of the 53,000 barrels (2.2 million gallons) of oil leaking each day until it was repaired (Hoch, 2010). Fortunately, with pressure from the US Congress, the vast majority of the time BP kept open the live video feed of the ruptured pipe that was gushing oil into the Gulf of Mexico. CNN, PBS, and other news agencies broadcasted the flow as BP attempted to seal the well with "top kill" and other procedures (CNN, 2010).

Now, imagine teaching a petroleum engineering course or one on safety management during that time. How could you use such live data feeds to teach issues of safety, ethics, leadership, teamwork, or management? Perhaps students in a mathematics course could run comprehensive calculations on how much marshland was being affected by this oil disaster. Alternatively, they might contact scientists, engineers, BP officials, community leaders, and reporters for updates on the data and their impact.

A similar explosion of media was received when a tsunami struck the northeast coast of Japan on March 11, 2011, killing over 15,000 people and injuring more than 6,000 others (Harris, 2012). There were live video feeds, twitter and blog posts, news reports, pictures, and a barrage of news-related announcements (e.g., CNN, 2011; Young, 2011). The pool of data was being updated every few seconds. These types of live streaming events will become increasingly commonplace in the coming decades. Students will expect course content to be supplemented with such materials; thus, it is vital to begin to design innovative forms of instruction to incorporate this new technology.

Skills and Objectives. Includes linking new content knowledge to current and fast-changing events in the news, encoding news information both verbally and visually, learner curiosity in course content, observational skills, and concept application. This technique extends the course to the real world, including facts, trends, ideas, and opinions that may not have been addressed otherwise. It forces students to analyze such data in rapid sequences.

Advice and Ideas. Students can write articles or reports and design presentations based on the live data, possibly linking together information from two or more related news sources. In mathematics or statistics classes, they could perform specific calculations or analyses based on the data that have been provided. Teams, in fact, could compete in making meaningful predictions or forecasts related to the data.

There is a never-ending supply of such data available each day. Keep searching for relevant news and reports that can augment or enhance what is known in your field or subject area. Perhaps assign your students to find such data on a weekly or monthly basis.

Variations and Extensions. An instructor could have students search for the latest news data and reports related to the class and post them to a wiki or course discussion forum. Consider offering bonus points for finding and sharing high-quality content that is relevant to your courses. Perhaps have students take two of more of these resources and write compare and contrast papers or peer critiques of each website or resource.

Key Instructional Considerations

Risk index: Medium
Time index: Medium
Cost index: Low
Learner-centered index: High
Duration of the learning activity: Throughout the course or as needed

Activity 56. Cross-Cultural Web Conferencing and Interactions

Description and Purpose of Activity. As Merry Merryfield (2007) states, "By introducing students to diverse people within a country, a teacher can help students learn to appreciate complexity within cultures and the dynamics of how cultures change" (p. 270). She further argues that new technologies for globalization flatten the educational world but simultaneously challenge us to develop curricula that help introduce students to the diverse people and cultures of the world. Given this, some may suggest that this activity is the most vital idea described in this book.

Interactive videoconferencing technology and simple laptop Webcams provide convenient ways to connect learners with experts and speakers from remote locations (Lee & Bonk, 2013). From primary grades to MBA classrooms to military training units, interactive and collaborative technologies offer unique opportunities for increased global awareness and understanding through engaging presentations, discussions, and debates (Lee & Hutton, 2007; Schrage, 1990). During such events, learners from young to old can better understand the life experiences, struggles, and daily life patterns of those in vastly different environments. For decades, educators have argued for the importance of global understanding, social perspective taking (Selman, 1980), and curricula that promote cross-cultural understanding and world peace (Longview, 2008; Merryfield, 2007, 2008; Merryfield & Kasai, 2009; Riel, 1993; Schrum, 1991).

Much research validates these arguments. For instance, Sugar and Bonk (1998) found that sharing perspectives with Internet technology can enhance perspective taking and the social cognitive abilities of young learners. Importantly, in this study, students asked higher levels of questions when engaging in collaborative role play online.

Intriguing ethnographic research from Mimi Lee at the University of Houston details how technology such as videoconferencing and Web conferencing can connect young learners in previously isolated or rural parts of the world to experts while fostering greater cross-cultural awareness and understanding (Lee & Hutton, 2007). As Lee astutely

argues, intercultural educational events can promote shared understanding, dignity, respect, and the exchange of current information as well as enhanced interpersonal skills (Lee 2007, 2010). More recently, she and Bonk recapped a series of Web conferencing and videoconferencing events that they have individually used with guest experts during the past decade or two to help apprenticeship learners into a specific field or topic (Lee & Bonk, 2013). What becomes clear is that the pedagogical possibilities for online apprenticeship and global education continue to expand in exciting directions.

At the K–12 level, there are many global education projects for instructors to select from, including the Flat Classrooms Project, ePals, iEARN, TakingITGlobal, RoundSquare, the World Class–World Vision Canada, and so on. In Seeds of Empowerment, for instance, Paul Kim and his colleagues at Stanford have used mobile storytelling among Palestinian and Israeli youth and with young people in Rwanda, Tanzania, and India to show how technology might lead to greater cross-cultural awareness as well as higher-order thinking skills (Buckner & Kim, 2012; Kim, Higashi, Gonzales, Carillo, Gàrate, & Lee, 2011). For those in higher education settings, programs such as Soliya can connect your students to those in the Middle East. Before and after such videoconferencing events, learners can rely on other learning technologies to gather data on and discuss a particular culture or topic. Researchers have noted that the benefits of collaborative technologies such as e-mail, chat, asynchronous conferencing, and videoconferencing include greater perspective taking, critical thinking, task engagement, and overall sensitivity to cultural differences (Bonk, Appelman, & Hay, 1996; Merryfield, 2003). These types of tasks, therefore, should be well planned for maximum impact and engagement.

Skills and Objectives. Includes the appreciation of multiple perspectives and diversity, interpersonal and intercultural skills, global and cultural awareness, critical thinking, feedback, interactivity, creative expression, student autonomy, exploration, knowledge construction and negotiation, student participatory learning, and active learning. Many additional benefits of global and cross-cultural interaction are likely but difficult to specify in advance.

Advice and Ideas. There are unlimited possibilities for cross-cultural Web conferencing today. World experts as well as students from other cultures can enter your course at any time and often without much planning or prior notice. Such an activity can be a singular course event or part of a series of meetings. Those who are more ambitious might consider arranging for students across different classes or locations to work on collaborative projects and share the final results during a videoconferencing session. As part of those efforts, students in crosscultural teams could jointly write books or proposals, create online news shows, or peer critique each other's work.

Following an interactive videoconference, students could create a digital story of what they have learned from the experience and post it on YouTube. Alternatively, you could have them reflect on their learning in a blog or podcast, including listing questions from the session for others to answer, or creating online photo albums or scrapbooks of objects and cultural artifacts of those with whom they have corresponded. At the macro level, the entire class could create and maintain a wiki with audio, video, and text-based Web resources of that culture. Whatever the topic (e.g., Hungarian Gypsy music, Japanese Zen gardens, music from Zimbabwe, or Mexico's Day of the Dead) (Lee & Hutton, 2007), there are new ways to communicate that open up avenues to mitigate the

stereotypes and misconceptions that are sometimes transmitted when the main source of information about people of other cultures is limited to mass media.

Variations and Extensions. The cross-cultural Web conference can be a weekly or monthly course event. Before each session, students could vote on the people or places around the world to meet or which events to engage in. Once you determine a set of destinations or cultural events, write to colleagues, Twitter followers, or friends on Facebook or LinkedIn for recommendations, or make new connections with those at the respective locations. Be clear about the level and type of participation you are asking of others.

Key Instructional Considerations

Risk index: Medium to High
Time index: Medium
Cost index: Low to High (depend on the system selected)
Learner-centered index: High
Duration of the learning activity: 1 week or session as needed

Activity 57. Instructor Online Video Demonstrations

Description and Purpose of Activity. For decades, video has been used to anchor instruction in a familiar and replayable event or episode sequence. John Bransford and his colleagues in the Cognition and Technology Group at Vanderbilt (CTGV) (1990, 1991) used short snippets from movies like *Raiders of the Lost Ark* to teach complex science and math concepts in a meaningful and interactive way. The rich video segments that they later produced in the "Jasper Woodbury" series could be used to situate learning in a story or context from which students will later discuss, problem solve, and reflect. As that happens, knowledge becomes more richly connected instead of inert.

A key to these video episodes was the macro context within each of them that provided a shared learning space that could be replayed and revisited as needed. Today, there are millions of shared online videos that have the potential to anchor student learning, including those found in TVLesson, TED, Academic Earth, BBC Videos, LinkTV, Big Think, and MIT World. Such portals of shared online video continue to expand. Bonk has created a portal of such websites and has published an article that describes 10 learner-centered uses of such video as well as 10 other activities that are instructor selected or coordinated (Bonk, 2011).

In addition to the work of John Bransford, many educational psychologists such as David Ausubel (1978) argue that knowledge is hierarchically organized. As a result, educators should find ways to help learners subsume new concepts and ideas within their prior experiences. Ausubel suggested that when you link new terms and concepts to learners' prior knowledge, that information is going to be richly and meaningfully anchored or attached to what they already know. Shared online videos like YouTube, YouTube EDU, SchoolTube, and MedTube, therefore, can foster such new conceptual ties.

The shared video clip can be an advance organizer for later instruction and discussion, providing the conceptual connections or glue among the learning concepts that are deemed vital for basic factual information and higher-order thinking skills. Video clips

guide learner attention to critical elements of the learning module or concept (Pan, Sen, Starett, Bonk, Rodgers, Tikoo, & Powell, 2012). When effectively employed, instructors and instructional designers can help learners organize the content and draw out the new relationships that are forming.

A third theoretical perspective comes from Allan Paivio from the psychology department at the University of Western Ontario in Canada. Paivio (1986) posited that visual information is stored separately from verbal information in long-term memory. His research demonstrated that when learners possess text or verbal components as well as images or visual components, that the learning will be more strongly encoded; what was once tip-of-the-tongue knowledge (i.e., available with sufficient prompting) is now more easily accessible and usable. He called this concept dual coding theory (Paivio, 1991). The use of shared online video in fully online and blended courses, as well as F2F ones, is an example of dual coding in action when students also have lecture and textbook materials. With short video clips from YouTube, TED Ed, or CNN to start a class or unit, there is immense learning power, and the class often explodes with energy and enthusiasm.

So much is now possible with the tens of millions of shared online videos available today that can be employed as concept anchors for instruction. Importantly, "anchoring instruction with online video content can happen at any moment—at the start of class, at the end, or whenever deemed necessary or advantageous" (Bonk, 2011, p. 20). It is now vital for instructors to begin to reflect on the power of such online video technology, to experiment with its use, and to share the results. With anchored instruction nearly any lesson can quickly come alive.

Skills and Objectives. Includes analysis and evaluation skills, reflection, grasping visual cues, forming conceptual linkages, and deeper understanding of course content. Another key goal is to extend student learning beyond prepackaged course materials or lectures developed and delivered by the instructor. You can update instruction with rich new video content that has yet to find its way into books. Such content will appeal to students who are visual learners as well as those who prefer multimodal learning activities to solely text-based ones.

Advice and Ideas. As indicated, there are dozens of ways to use shared online video; some are more instructor-centered and some are more learner-centered (Bonk, 2011). Some instructors may employ them at the start of a class or unit as a conceptual anchor, whereas others may use them selectively to demonstrate key concepts as they lecture or as students are exposed to different portions of the course content. Preferably, the videos will be short. In fact, they might be extremely short. If you discover a relatively lengthy YouTube video that provides an excellent overview of a concept or idea, consider using a tool like TubeChop that enables you to quickly and easily select the precise clip of the video you want to show; in many cases, a mere 10 seconds may prove long enough to get the point across.

You can give students a handout or think sheet to reflect on the concepts embedded in each video listed or shown in class. There could also be an ending quiz, crossword puzzle activity, or general discussion about the different concepts explored in the videos shown. For his learning theories class, Bonk has developed a portal of shared online videos for each week or unit of the course. He has videos of famous psychologists and researchers

such as B. F. Skinner, Ivan Pavlov, Jean Piaget, John Watson, Lev Vygotsky, and Albert Bandura that explain different concepts from behavioral theory, cognitive theory, constructivism, social learning theory, and others. In the behavioral ones, for instance, there are demonstrations of positive and negative reinforcement, shaping, and fixed and variable schedules of reinforcement. In his live classes, he might spontaneously pause the video and ask students to yell out key concepts that they have observed. Of course, they must also explain the concepts that they have observed.

If you are teaching a fully online course, such video demonstrations could take place during weekly synchronous sessions, if applicable. Alternatively, students could watch selected shared online videos on their own and discuss the concepts learned in a discussion forum. That is the approach that we tend to use in our own online courses.

It is vital to keep updating the videos used for demonstrating course concepts. First of all, new concepts and associated videos might emerge. Second, archival video footage of famous researchers may be found and posted online. Third, movie and television show episodes might exemplify key course concepts. Be on the lookout for them.

We have found that the use of shared online video clips often elevates the class discussion and brings a class community to life. Concepts and ideas that were once difficult to explain or grasp now begin to make sense to students. Importantly, because many video segments are relatively short, instructors do not have to give up much class time. We recommend that you keep the video activity short. In fact, a video of two or three minutes typically suffices. As indicated earlier, it often just needs to be a few seconds. When effectively used, the learning payoff is potentially immense as the learner can now recall the information through both verbal and visual channels.

Variations and Extensions. Instead of the instructor of a blended learning course deciding when to pause the video and asking students to yell out concepts that they observe, the students could yell "Pause!" at any moment in the video sequence to make their observations. In addition, the instructor could replay a video one or two more times while prompting the class to reflect on additional concepts embedded in it that they forgot to mention in their initial viewings.

Other variations include students creating the shared online video demonstrations and anchors to illustrate key course concepts. For instance, each student could be assigned to find and bring one video to class and explain how the clip is related to course concepts. In a fully online course, students can post these videos to a specific discussion forum or course wiki. A coinciding handout of videos and concepts is recommended. Consider creating competitions for finding the most appealing or highest-rated clips. Students can also use shared online videos to illustrate pro and con sides of debates (Bonk, 2011).

Key Instructional Considerations

Risk index: Medium
Time index: Low to Medium
Cost index: Low
Learner-centered index: Medium
Duration of the learning activity: Anytime as needed

Activity 58. Video Study Guides, Tutorials, and Microlectures

Description and Purpose of Activity. Sometimes relevance and meaningfulness can be found in a brief recap or review of articles of key points in a lecture or book chapter. Today, video snippets might also be used in such an activity. Since the late 1950s, students have been using CliffsNotes as a means to learn a topic. Why? Students simply want more avenues to master the content that they know they will be tested on. In the past, supplemental course resources from CliffsNotes as well as all major book publishers were primarily text-based. Today, such resources are increasingly in video format. Just like movie trailers, many books, lab projects, and scholarly competitions come with video supplements and introductory aids. Thousands of video tutorials for mathematics, science, English, and technology now exist at Sophia, LearnZillion, Grovo, the Khan Academy, Lynda.com, and WatchKnowLearn.

CliffsNotes, in fact, recently announced that they will build a series of one- and five-minute short video study guides for major works of literature such as *Romeo and Juliet, The Scarlet Letter,* and *The Odyssey* (Collins, 2011). Students will not simply watch them but will be able to comment on them as well. Other websites like 60 Second Recap have been offering such recaps for several years now. The 60 Second Recap website includes most popular English literature such as *Fahrenheit 451, The Adventures of Huckleberry Finn, Macbeth, The Catcher in the Rye,* and *A Tale of Two Cities*. Each book recap has 10 one-minute videos including a teaser trailer, the overview, the plot, meet the cast, themes, in conclusion, and a few other video segments specific to that particular book.

Students can use such videos when they need to and as many times as they want. As described in the previous activity, the videos provide a context for their discussion and overall learning of each book (Brown, Collins, & Duguid, 1989). In addition, as Paivio (1986) indicated, such resources extend learning beyond text to visual or episodic memory, thereby increasing retention of that information. As in anchored instruction, such videos also provide a commonly shared experience for learners to discuss and reflect upon the concepts and ideas (The Cognition and Technology Group at Vanderbilt, 1990, 1991). The videos can also be used as an advance organizer for later class discussions, lectures, and other activities (Ausubel, 1978). Finally, as part of a participatory learning culture, these videos can be watched, shared, or commented on (Brown, 2006; Brown & Adler, 2008). There are countless ways that these kinds of video tutorials and study guides will play a role in teaching and learning in the coming years.

Skills and Objectives. Includes choice and selection of content; content review; reflection; grasping themes, plots, and main points; forming conceptual linkages; and deeper understanding of course content. Such material offers a chance to review content at a place and time that is most convenient; hence, the learning experience is more personalized.

Advice and Ideas. Inform students of the various video tutorial and study guide websites in your field, and discuss how students in previous semesters have used them. Many course activities can spin off from these sources. First, students might nominate the videos or study guides that offer the most conceptual linkages to your course. Those that garner the most votes are the winners. Second, online discussion forums could be established for each video tutorial and study guide site. Third, students could suggest test

questions based on the sites that they have observed. Fourth, students could recap each respective video in a text transcript or set of guidelines in a wiki.

Another adaptation of this idea is for the instructor to create his or her own series of one- to three-minute lectures. Such microlectures are used in places like San Juan College in New Mexico in courses on occupational safety, veterinary studies, reading, and tribal governance (Shieh, 2009). In these courses, instructors introduce key course concepts in video format to serve as a lesson overview or advance organizer for later learning. As such, they prime the learner to complete later tasks and assignments. Boiling lectures down to such key points forces the learner to reflect on the value and importance of different course concepts and to prioritize them. Alternatively, students could create these microlectures with the best ones posted to a student video gallery.

Variations and Extensions. Consider asking your students to draft critiques or reviews of the videos in one or more video tutorial, study guide, or microlecture sites. Student reviews could also be in a video format and perhaps placed in a YouTube channel. Alternatively, younger students can post their own video recaps of the respective books that they have read in ClubRecap, an online community of learners for 60 Second Recap.

Key Instructional Considerations

Risk index: Low
Time index: Medium
Cost index: Low
Learner-centered index: Medium
Duration of the learning activity: Anytime as needed

Activity 59. Pubcasts and Researcher Interviews

Description and Purpose of Activity. One way to help students connect with research that they are reading is to embed supplemental or blended content from the Web. Fortunately, opportunities for blended learning have exploded during the past decade. Prior to the emergence of the Internet as a learning tool, students were fortunate to hear from a book author or researcher via a letter, e-mail, or telephone call. The privileged few might interact with that person when at a conference or during a rare colloquium appearance on campus or in the local community.

Today the potential to enhance course content with the scholars, experts, researchers, or known authorities on a topic or trend have mushroomed well beyond what any sane person might have predicted a few decades ago. A short visit to the Web will yield you the slides that the researcher, whose article you have been assigned, used to explain a new discovery, research finding, or trend. In addition you will likely discover the papers and proceedings that he presented at a recent conference.

One particularly promising technique is to obtain a podcast or video interview of a researcher or scholar about her new findings or book. A video connected to or embedded within a research article is called a "pubcast." The pubcast can be enhanced when there is video timecode or an index that you can use to select snippets of the author interview that relate to certain sections of the published article.

The term "pubcast" was coined by Phil Boune, cofounder of SciVee, a Web 2.0 science-related website (Hane, 2007). SciVee, which was formed back in 2007, is a YouTube-like outlet for scientific research, which allows scientists to communicate their research findings and other works in an enriched multimedia format. SciVee journals include the *American Journal of Preventive Medicine, Bioscience, Computers & Geosciences,* the *Journal of Nutrition,* and many more. Another example of a journal with videos is the *Journal of Visualized Experiments* (JoVE) which is a PubMed-indexed video journal. Notably, JoVE includes rich animations of concepts and procedures with its articles.

For scientists, the pubcast is a monumental innovation. With this invention, seminal scientific research can be explained orally to the masses, not just in text or to those fortunate enough to attend the scientific conference where it was announced or to subscribe to the journal where it was later published. Using SciVee and JoVE, scientists and even ordinary people can see the experiments of researchers around the world, not simply read about them. In this way, the pubcast broadens and speeds up the dissemination and understanding of any breakthroughs and discoveries as well as significant modifications or extensions of existing scientific knowledge.

In SciVee, you will often find very sophisticated and narrowly focused studies with interviews of one or more authors. One such pubcast is titled, "Early participation in prenatal food supplementation program ameliorates the negative association of food insecurity with quality of maternal-infant interaction." In it, Amy Frith of Ithaca College reads her article while a set of slides or images parallel her talk (see Figure 9.1).

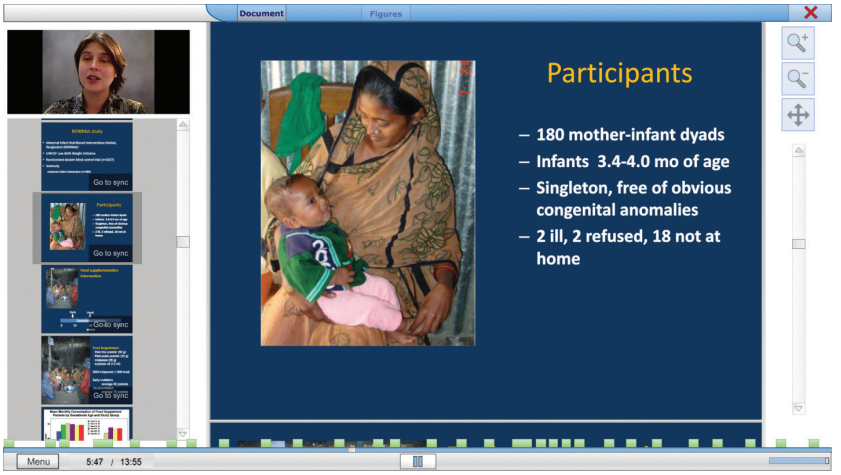
Others might explore important areas such as "The deceptive nature of UVA-tanning versus the modest protective effects of UVB-tanning on human skin." Imagine how effective video footage would be with that research paper and what an impact it could have on undergraduate college students just prior to spring break. Other topics found at SciVee are concerned with such diverse topics as drinking water in Africa, bionic legs, rocks in Antarctica, early cancer screening, the rising of marshes and sea levels, visualizing galaxies, bonobos and chimpanzees, skin-mounted electronics, and disappearing red shrimp.

SciVee is not just a place for one-way communication from researchers to readers. In fact, others can respond with pubcasts of their own or comment on a pubcast. For learners, a pubcast can help them see the relevancy of the research that they might not have grasped when reading a textbook or research article. Author insights can arouse learner interest in the topic. In general, there is an enhanced sense of learning authenticity when supplemental materials such as pubcasts are employed.

Skills and Objectives. Includes richer connections to course content (encoding both text and visual cues), enhanced course interactivity, excitement and enthusiasm for learning, and sense of research applicability. The method helps learners to focus on key course content instead of on peripheral issues.

Advice and Ideas. Find and embed pubcasts and other forms of supplemental author, scholar, and researcher information in the course. Your search may turn up conference or seminar interviews or keynote talks; alternatively, you may locate an open access interview that the researcher has granted to a particular organization or institution. If you are in a science-related field, browse through websites like SciVee to determine if there are pubcasts that you might assign to your students. As part of such tasks, you could

FIGURE 9.1: EXAMPLE OF A PUBCAST FROM SCIVEE (Amy Frith of Ithaca College).



assign reflection papers or online discussions of the course content, asking students to include information on how their learning was enhanced from the additional video content. Some students may even write to the author of the pubcast and ask for an update. Along these same lines, you could invite the researcher into the course for an intimate discussion session, in person or via a Web conference or videoconference.

Variations and Extensions. Students could be required to find one or more multimedia components that augment an assigned research paper, earning bonus points for finding actual author interviews or pubcasts. Alternatively, you could assign them to interview the author of a research paper using a tool like Skype or Adobe Connect Pro and make that pubcast or audio interview available for the class. Consider placing these interviews, pubcasts, and additional resources into a course portal that continually expands. As it grows, a community will begin to form among current and prior students of the course, and perhaps even extend to peers around the world in the same course areas.

Key Instructional Considerations

Risk index: Medium
Time index: Medium to High (depending on the type and format of existing resources and how easy they are to locate)
Cost index: Low to High (once again, depends on the resources available)
Learner-centered index: Medium to High
Duration of the learning activity: 1–2 weeks

Activity 60. Oral History or Situational Research

Description and Purpose of Activity. No matter your topic areas or the age of your learners, reading through historical archives, watching historically important video footage, and listening to interviews of experts, practitioners, and people who lived through a particular experience is a means to excite students and bring an air of authenticity to your course. Advice, insights, and wisdom exhibited in those interviews can foster learner enthusiasm for the content that they are learning.

Students can explore images and interviews of a particular time period. They can also compare and contrast perspectives related to different Supreme Court cases, controversies within a person's life, or issues surrounding particular battles within wars. For instance, they may listen to audiotapes used in the Nixon Watergate trials, watch speeches of significant political leaders during the Cold War, read interview transcripts of former slaves in America, and learn from comments of march leaders and activists prominent (and not so prominent) during the civil rights movement. They could also browse through documents from artists and thinkers involved in the early conservation movement in the United States, listen to stories of Native American culture, or gather data from a historical timeline of innovators and entrepreneurs of the dot-com era, as well as those who helped develop Silicon Valley to what it is today.

Fortunately, with Web-based search engines, it is much easier today to identify interview and oral history materials relevant to your course and particular student interests. One starting point might be the Oral History Association Wiki. Among those listed is the Louie B. Nunn Center for Oral History at the University of Kentucky, which has more than 8,000 oral interviews primarily about the political history of Kentucky as well as interviews related to Kentucky writers, Appalachia, agriculture, and education.

Other resources found at the Oral History Association Wiki include the United States Holocaust Memorial Museum, Archives of American Art from the Smithsonian Institution, and Densho: The Japanese American Legacy Project. The latter project is an award-winning website that documents the oral histories of Japanese Americans who were incarcerated in "internment camps" by order of President Roosevelt during World War II. Not only is this a comprehensive history of these times, but Densho resources can enhance students' exploration of issues surrounding democracy, intolerance, racism, civil rights, citizenship, and hysteria during times of war. Most important, students can engage in ethical decision-making and critical thinking activities around these resources.

For those interested in military history, there are many oral history and photomedia sites available. As an example, in the Rutgers Oral History Archives you can find stories of men and women from New Jersey who were involved in World War II, the Korean War, the Vietnam War, and the Cold War. Those interested in more recent conflicts could search the oral histories on the Gulf War. For instance, there is Frontline, a program from PBS that has provided insightful information from the decision makers at the time (e.g., Colin Powell, Chairman of the US Joint Chiefs of Staff; Margaret Thatcher, Prime Minister of England; analysts; military commanders, such as General Norman Schwarzkopf; and various Iraqi officials).

Before the Web, instructors (and students) had to weed through hours of tape or hundreds, if not thousands, of pages of transcripts for selections that were relevant. In contrast, today instructors can more easily locate specific quotes, sections of content, and themes to include in course materials. And, as seen with the previous pubcasts activity, e-publications of the authors or researchers restore the oral tradition to the level of importance that it had thousands of years ago in Ancient Greece and Rome.

Skills and Objectives. Includes the ability to sift through masses of data, interpret results, grasp possible audiences, filter information, synthesize various information sources, appreciate multiple points of view and diversity, and extend course connections, listening

skills, and various inquiry skills. Oral histories help situate student learning in specific events, people, and places for later class activities and events.

Advice and Ideas. The instructor can provide a list of oral history websites to select from. Alternatively, students could search as individuals or teams to find such resources and make recommendations for their inclusion to the instructor. Subsequently, they can write reviews, reports, or critiques on the interviews that they listened to or watched. In such papers and reports, students could be required to create a set number of course connections.

For those seeking support on how to locate and use oral history sites, the website History Matters: U.S. Survey Course on the Web from George Mason University has much advice on evaluating and using oral history websites. Among their tips for evaluation include the following questions that students might ask: Is the purpose clearly stated? How or why might others use this website? Who is the audience? Is the site well designed and easy to navigate? And are the materials current and relevant?

Still more questions can be asked. For instance, are the interviews presented in text, audio, or video format? Are these full interviews or selected excerpts? Did anyone summarize them? Is the quality of the sound adequate? Are there pictures or other resource linkages with each interview? Is additional context provided with each interview? Is there some background information on why each interview was selected and conducted? And are there references or citations for additional resources? Without a doubt, much learners will need much guidance using oral history websites.

Variations and Extensions. Consider having students compare and contrast findings at two or more oral history resources or sites on the same topic (e.g., Women in Journalism, the Civil Rights Movement, the Battle of the Bulge in World War II, or the Cuban Missile Crisis). Another idea would be for them to generate and record unique themes or topics across one or more oral history websites, possibly writing to the developer of the particular sites with questions, comments, and recommendations.

Key Instructional Considerations

Risk index: High
Time index: High
Cost index: Low to High (depending on the actual technologies and resources available and used)
Learner-centered index: High
Duration of the learning activity: 3–5 weeks at the end of the term

Final Reflections on Relevance

There is little doubt about the importance of relevance in learning. Educators hear about the lack of relevancy as the key reason that students drop out or disengage from the learning process. Finding relevance in your content area is just like finding relevance in life. As shown in this chapter, relevant and meaningful tasks shine through in many ways. Technology can bring real-world data and situations into the online or blended classroom. Students can juxtapose that data with previous information as well as review it, test it, analyze it, and extend it with data from other sources.

The case can be made that this sixth principle of the TEC-VARIETY model is the most important. Without felt relevance, students will most likely just be biding their time. Keep in mind that both the context and task should be as authentic as possible (Herrington et al., 2010). You must always be asking how the knowledge you are teaching will actually be used in real life. You might incorporate the job application paper activity as a means to generate an immediately relevant task. At the same time, online news and other Web reports can be incorporated to generate ample real-world context. Live news feeds find their way into a course at a moment's notice; no longer is there a span of three or four years to wait for such material to find its way into textbooks. And rich multimedia scenarios, cases, and pubcasts allow the learner to decide which aspects of the task will bring about a sense of authenticity and a personally meaningful situation. At the same time, students might be charged with finding the latest information resources and adding them to an existing article or course portal from a previous semester.

Authentic content could come not only from Web resources and technologies but from human experts, who can be invited into your class or task to offer their erudite opinions and reviews. Alternatively, one or more members of the class could interview historical figures or local experts for an interesting set of oral histories that might find extensive use outside your particular course. As shown in this chapter, the technologies of the Web make such a scenario increasingly possible. Whether you want to reach someone from the Royal Society or someone from the local rotary club, both are now possible to contact and interact with within seconds.

And so concludes what many believe is the most relevant and meaningful chapter of this book. We have come a long way already through six key principles of the TEC-VARIETY framework. You must be contemplating, "What comes after a chapter on relevant, meaningful, authentic, and personally interesting learning?" Well, oftentimes such relevant learning must be rooted in a context in which there are other participants. The task must also be interactive and engaging. Without interactivity and engagement, the most relevant and meaningful idea you can think of will quickly flounder. We push on, therefore, to the seventh principle, detailed in Chapter Ten on interactive, collaborative, and team-based learning. The chapter will also address aspects of community building. After that, you will find Chapter Eleven on the eighth principle of TEC-VARIETY, namely, engagement. The associated goals of such engagement are sustained effort, involvement, and excitement related to the task or activity.

We recommend that you read those two chapters consecutively and then reflect on some of your present instructional activities as well as your personal learning preferences. When you do, you will see that life as an online or blended instructor does not start and end with meaningful and authentic learning. There are a multitude of factors that have an impact on online motivation and retention. Fortunately, the tools and techniques for fostering interactivity and engagement are rapidly increasing and, at the same time, becoming less expensive. Read on.

Praise for *Adding Some TEC-VARIETY*

"There are books on theory and books on practice, however this is the best volume ever written for using learning theory to inform effective practice. This book is a tour de force for creating an environment where students not only succeed in online learning, but they achieve excellence as well."

—**Charles (Chuck) Dziuban,** Director, Research Initiative for Teaching Effectiveness (RITE), Professor Emeritus and Inaugural Pegasus Professor, University of Central Florida, and Sloan-C Fellow

"An excellent book from world leaders in the field that will be of great value for educators and designers. Presents concrete examples grounded in solid 'practical' theory."

—**Charalambos Vrasidas,** Executive Director of the Center for the Advancement of Research & Development in Educational Technology (CARDET), Associate Dean for elearning, University of Nicosia, Cyprus, and author of several information technology and distance learning books

Based on 10 theoretically driven and proven motivational principles, *Adding Some TEC-VARIETY* offers 100 practical yet innovative ideas to motivate online learners and increase learner retention.

What motivates?

1. **T**one/Climate: Psychological Safety, Comfort, Sense of Belonging
2. **E**ncouragement: Feedback, Responsiveness, Praise, Supports
3. **C**uriosity: Surprise, Intrigue, Unknowns
4. **V**ariety: Novelty, Fun, Fantasy
5. **A**utonomy: Choice, Control, Flexibility, Opportunities
6. **R**elevance: Meaningful, Authentic, Interesting
7. **I**nteractivity: Collaborative, Team-Based, Community
8. **E**ngagement: Effort, Involvement, Investment
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This is the book you need to grow your online teaching repertoire in innovative ways that will grab your students' attention and imagination. **Additional book resources as well as a free e-book are available for download at http://tec-variety.com.**

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