# Fostering Creativity and Empathy of Social Studies Content Using Web 2.0 Applications

Cynthia M. Brown

## Part I

Today's students are technologically savvy; they learn and think differently. To succeed in a global context, these students need to flourish into 21st century learners with the skills needed to be creative problem solvers in a team setting. In his book, *Five Minds for the Future*, Howard Gardner discusses cognitive abilities necessary for personal and professional success in a changing global landscape. The cultivation of the creating mind is one of the most significant cognitive skills needed in the future. According to Gardner, "the question arises about whether ideas about creativity need to be refashioned to take into account the increasing number of projects and realms where the individual contribution seems critical, the group mind more crucial" (Gardner, 2007, p. 93). How can our students develop the crucial skills needed to be successful in the 21st century if we are not creating authentic opportunities for them to develop these skills in our classrooms? How can we expect students to be successful in a team setting *outside* the classroom if we ask them to continually learn, discuss and reflect individually while *inside* the classroom? How can we meet standardized learning goals in the classroom when it is evident that every adolescent brain is different? To help all students learn, pedagogical experts can foster creativity and empathy of social studies content using Web 2.0 tools that promote meaningful and interactive collaboration and communication.

The goal of teaching is not to persuade a class of teenagers to form similar opinions; the goal is for them to construct their own meaning through the decision-making process. They must learn through research, analysis, synthesis, and evaluation of multiple sources. In the process, every student will construct meaning in a unique way based on personal experience. Brain based research has shown that *what you see* has multiple meanings including a phenomenal sense and a relational sense. In a phenomenal sense, what you see can have multiple meanings including; the

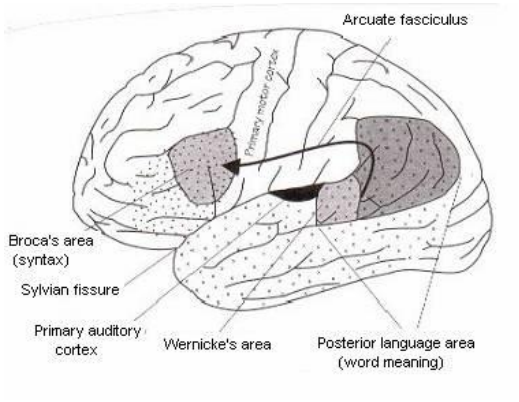
way things look to you, the way they visually appear to you, and the way you visually experience them (Hoffman, 1998, p. 86). In a relational sense, what you see can also mean what you interact with when you look (Hoffman, 1998, p. 86). This notion that we construct our own experiences illustrates the need to hone in on the big picture in the classroom. We cannot expect all of our students to construct the same meaning from a classroom experience (Hoffman, 1998, p. 98). Instead, students should be given thought-provoking questions, guidance, and feedback as they embark on a journey to develop conclusions based on individual perceptions. By recognizing that all students learn and think differently, we can structure the focus of social studies content around big ideas; encouraging students to use problem solving techniques to formulate data-drive, evidence-based conclusions. For students to become self-directed learners and informed digital citizens, they should be encouraged to take their foundational knowledge of social studies content and apply it in new ways through the "provision of multiple examples, exposure to multiple role models, and the construction of multiple representations of the same general topic" (Gardner, 2007, p. 98). This will allow for the extension of knowledge in new, unpredictable ways.

As we execute learning experiences that seamlessly integrate Web 2.0 technology to foster creativity and empathy in social studies content, we must be mindful of the complex abilities apparent in individual children (Rubenstein, 2009, para. 2). In any classroom, every student is "...a mosaic of things that they're exceptional at and things that they struggle with" (Rubenstein, 2009, para. 3). These cognitive differences confirm that all students will respond to challenges in different ways, even when presented with the same essential question or problem. Even though students have neurological advantages in various cognitive skill sets, new research has shown that "by helping a child hone her abilities, you can actually change her brain"

(Rubenstein, 2009, para. 2). The development of functional magnetic resonance imaging (fMRI) has provided evidence that there are differences in the brain between people who learn differently (Rubenstein, 2009, para. 6). Not only does this mean that the act of learning can change the brain, but it also means that we can use students' strengths to introduce new knowledge. Even more compelling is the idea that we can then challenge the student "…to use a different, weaker skill set for another part of the lesson, helping him [or her] develop those parts of [the] brain" (Rubenstein, 2009, para. 14).

In the beginning of his book, *A Whole New Mind,* Daniel Pink emphasizes the need for humans to use the whole mind in the future. He proceeds to characterize the left hemisphere as the region that handles logic, sequence, literalness, and analysis while the right hemisphere takes care of synthesis, emotional expression, context and the big picture. Since both sides of the brain play a role in nearly everything we do, Pink has identified six high concept, high touch aptitudes that will allow for life-long success and satisfaction in the future (Pink, 2006). In many social studies classrooms around the world, students are asked to learn facts. These facts are frequently *learned* for the test; quickly becoming invaluable and forgotten. To help facilitate creativity and empathy of social studies content, story can be used as a means to take facts and place them in a meaningful context delivered with an emotional impact (Pink, 2006, p. 103). On one hand, story helps sharpen our understanding of one thing by showing it in the context of something else. On the other hand, the emotional impression most stories endure help with the encoding, storage, and retrieval of knowledge across time. Generally, long term memory is strengthened by these instances when an emotional arousal prevails (Palomar College, 2008). Using story in the classroom also helps with language development. Research has shown that language is primarily a function of our left hemisphere. Specifically, there are two main areas of the brain that focus

on language; Broca's Area and Wernicke's Area. "These specialized brain regions are used when you interpret written or spoken language as well as when you produce written or spoken language" (Topic A, 2010, para. 4). These brain regions are connected by a bundle of nerve fibers, and damage to either of these regions can significantly affect language ability. To simplify, Eric Kandel has defined the Broca's Area of the left brain as the part that *produces* words, where as Wernicke's Area is used to *recognize* words (Research Channel, 2009). Blending cognitive science with the importance of story to facilitate learning, we can see how critical social interaction is to the learning process. Research has shown that social interaction plays a considerable role in the development of language skills. As students are introduced to new social studies curricula, the use of story will not only promote language development and social interaction, but it will also provide "…context enriched by emotion, a deeper understanding of how we fit in, and why that matters" (Pink, 2006, p. 115).




The diagram above highlights the two regions of the left brain that facilitate language development; Broca's Area and Wernicke's Area. As shown above, these two regions of the left hemisphere are connected by a bundle of nerve fibers called the arcuate fasciculus, and damage to these regions significantly affects language ability.

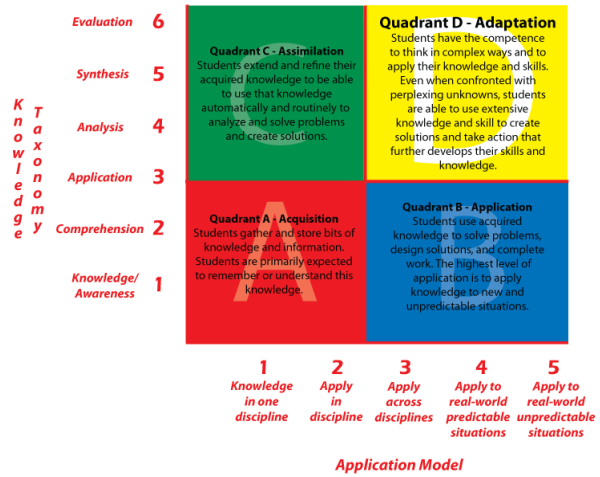
**Source:** http://www.educ.utas.edu.au/users/tle/JOURNAL/ARTICLES/2006/clip_image006.jpg

Storytelling can help us to imagine new perspectives and new worlds, and when it is effectively executed, it is a pathway to empathy (Pink, 2006). "Empathy is the ability to imagine yourself in someone else's position and to intuit what that person is feeling. It is the ability to stand in others' shoes, to see with their eyes, and to feel with their hearts" (Pink, 2006, p. 159). From a teaching standpoint, empathy is a way for teachers to feel what his/her students are feeling; a way to build rapport and experience education from the lenses of a student. For all

humans, including students, the ability to see the other side of an argument or issue allows us to better communicate and collaborate, and it makes us more self-aware and respectful of others. In learning, the sharing of stories and personal experiences can be a pathway to empathy; it builds context and provides a means for experiencing life from an alternate frame. The evolution of digital storytelling has been a gateway to the development of empathy in a global context as we can now use story to interactively share knowledge with diverse cultures. From a scientific perspective, the development of emotion promotes better thinking and strengthens individual aptitudes related to empathy (Goldin, 2008). Empathy is also related to symphony because symphony is the ability to put together the pieces and to see relationships between seemingly unrelated fiends" (Pink, 2006, p. 130). If we want our students to succeed in the Conceptual Age, we cannot teach them several unconnected facts. Instead, we need to take advantages of the digital resources at our disposable to help students see the big picture. We need to create system thinkers; people who have a passion for understanding context and for seeing things whole (Pink, 2006, p. 142). We can do this by promoting autonomy, helping students develop disciplined minds, and providing opportunities for them to see purpose and relevance in learning (Csikszentmihalyi, 1990).

Providing students with relevant learning experiences is not new. In the early 1990s, Dr. Williard R. Daggett developed the Rigor/Relevance Framework. According to this framework, "…learning is optimized when students are involved in activities that require both complex thinking…as well as the application of knowledge to real-world situations" (Daggett, Nussabum, 2007, p. 5). Mental stimulation of the brain is maximized in Quadrant D because it is here that students have the strongest understanding of concepts (Daggett, Nussabum, 2007, p. 5). By making learning relevant, students can mentally connect to the content, and their learning

potential is optimized (Daggett, Nussabum, 2007, p. 5). Rigorous and relevant learning,




The Rigor/Relevance Framework is a tool developed by staff of the International Center for Leadership in Education to examine curriculum, instruction, and assessment. The Rigor/Relevance Framework is based on two dimensions of higher standards and student achievement. The Knowledge Taxonomy is a continuum based on the six levels of Bloom's Taxonomy. As we move up the continuum, individuals begin to use knowledge in more complex and creative ways. The second continuum is an Application Model that describes how to put knowledge into action. Educators need to develop learning experiences that fall into each quadrant of the framework, but emphasis is placed on Quadrant D learning where knowledge is used to solve complex real-world problems and to create unique projects, designs, and other works for use in real-world situations.

**Source**: http://www.leadered.com/rrr.html

supported by positive classroom rapport, creates a classroom environment where students are actively engaged. To help all students want to learn, we need to step outside the educational box. We cannot be concerned with teaching to the test or teaching one way. As Alvin Toffler put it, "the illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn." The human brain has plasticity, and it continues to be shaped throughout life (Daggett, Nussabum, 2007, p. 2). As a result of this, socialization remains a critical component of student learning. It is critical in language development, in the ability to emphasize, and in fostering creativity (Daggett, Nussabum, 2007, p. 5). With the evolution of instructional technologies, we can now foster creative, empathic, whole-minded students using digital media to enhance social studies content in a meaningful way.

## Part II

"Today's students are no longer the people our educational system was designed to teach" (Prensky, 2001, p. 1). For today's students to cull the skills of the 21st century, they need to engage in interactive and challenging multi-media based learning experiences that promote higher-order thinking and collaboration. This will allow them to connect the academic content with 21st century learning skills aligned to the National Technology Education Standards for

Students. To meet this need, "…today's teachers have to learn to communicate in the language and style of their students" (Prensky, 2001, p. 4). Web 2.0 tools have become some of the latest buzzwords in education, and when implemented properly, they have the power to become relevant and authentic tools for teaching and learning. As a digital native and a pedagogical expert in social studies, I can foster creativity and empathy in social studies content using Web 2.0 applications. To do this effectively, Web 2.0 applications can be blended with social studies content in a way that considers the essential aptitudes on which "professional success and personal satisfaction increasingly will depend" (Pink, 2006, p. 2). In this section, I will take you on a journey that explores how Pink's senses and the related cognitive research presented in part one can produce specific learning outcomes.

In 12th grade social studies, we continually study complex topics plaguing our world in an effort to challenge students in multiple ways. In an increasingly digital, competitive, and globalized society, it is essential that students become informed citizens and self-directed learners. Instead of asking students to read about various court cases and complete reading questions, I want to make the study of the judicial branch interesting and relevant to students' lives. To effectively implement this technology-based assessment, sound pedagogy and thoughtful planning will be necessary. The project will be titled "A Historical Look at Landmark Supreme Court Cases." Students will be presented with the following big idea; the judicial branch interprets all government processes ensuring the protection of civil rights and civil liberties. Students will form Landmark Supreme Court Case Commissions, and each commission will be tasked with establishing the most important and influential Supreme Court case in recent history. As commissioners, each group will need to research, analyze, synthesize, and evaluate a nominated court case and prepare an interactive presentation that will effectively

persuade other members of the Landmark Supreme Court Case Commission to select their case as the most significant decision in recent times. This learning task will allow the brain to leverage its natural strengths because it involves "visualization, social learning… [and] doing something that is personally relevant" (Topic D, 2010, para. 1).

This technology-based assessment will facilitate a multi-disciplinary approach to learning while fostering mastery of social studies content. Not only will it integrate language skills, but it will help students develop 21st century skills including: creativity and innovation; critical thinking and problem solving; communication; collaboration; and ICT literacy. To help students successfully complete the project, it will be chunked into three phases. First, they will need to select a Supreme Court case from the provided list. This offers a degree of student choice, and it increases relevance because most of the court cases deal with students' rights in school. In phase one, students will collect content-specific requirements including: the constitutional issue; opposing viewpoints; key players; outcome; and the enduring legacy or relevance to society and life today. In the process, students will be required to use two communication and collaboration platforms; Google Docs and Diigo. Diigo, a social bookmarking platform, will be used to encourage exploratory and collaborative learning. Students will be asked to create Diigo groups to collect, evaluate and synthesize their research. This will allow them to share bookmarks with each other; annotating important sections. Students will use Google Docs to analyze and synthesize their research findings; framing the content around previously established project goals. The benefit of this collaboration platform is that students' documents can be accessed from any computer with internet connection. Additionally, it is a great way for the teacher to monitor student progress and provide constructive feedback.

During the research process, the goal will be for students to construct their own meaning through the decision-making process. Along the way, students will be challenged to draw conclusions based on personal experience. This notion that we construct meaning based on our own experiences illustrates the need to hone in on the big picture. Since we cannot expect all of our students to construct the same meaning from a classroom experience (Hoffman, 1998, p. 98), it will be important to emphasize the big idea and watch our students grow as they use problem solving techniques to formulate evidence-based conclusions that consider diverging opinions.

Once students have collected their research, they will move on to phase two of the project. In phase two, students will collaborate to articulate their thoughts and ideas clearly and effectively using audio and text-based digital technology. In this phase, students will use digital storytelling platforms including: Photo Story; Movie Maker; and VoiceThread to create an artistic interpretation of the court case and its enduring legacy to education and students' rights in school. Since "most of our experiences, our knowledge and our thinking is organized as stories" (Pink, 2006, p. 101), the use of digital storytelling will capture the attention of the audience and begin to persuade them that the nominated court case is the most significant. For this project, the use of digital storytelling is meant to foster creativity and enable "…us to imagine new perspectives and new worlds [because] …abstract analysis is easier to understand when seen through the lens of a well-chosen story" (Pink, 2006, p. 108). In part one, I also discussed that story can be a pathway to empathy because "empathy allows us to see the other side of an argument" (Pink, 2006, p. 168). In his talk, *The Neuroscience of Emotion*, Philippe Goldin (2008) identified roles of emotion including: directing our attention; enhancing our memory; developing our moral and ethical minds; and helping us adapt to our social environment. From a cognitive perspective, using digital storytelling as an entrée activity will

help foster the development of empathy by enhancing the way we encode and consolidate information and possibly adjusting our orientation towards others (Goldin, 2008).

"The internet is becoming a platform for unparalleled creativity…Web 2.0 is a two-way medium, based on contribution, creation, and collaboration" (Hargadon, 2008). For this reason, the project I plan to implement utilizes a variety of interactive technology because of the nuances that make each component of the project more or less meaningful for diverse learners. Once students have researched their court case and developed their digital story, they will be asked to develop an interactive presentation using Glogster, PowerPoint, xTimeline, or another relevant Web 2.0 tool of their choice. The challenge will foster whole-minded connections by pulling together research, making connections between different sources, considering opposing viewpoints, and demonstrating understanding during the final exhibition. With Web 2.0 applications, looking at social studies content from multiple vantage points becomes more meaningful and engaging. Throughout the process, students are developing learning dispositions including: creativity; self-reflection; risk-tasking; empathy; collaboration; and self-directed learning. They will be given a voice, and they will learn how to effectively participate in a larger community. They will learn the importance of reviewing diverse resources and formulating individual conclusions. They will learn the significance of the judicial branch, and how they can take action to protect civil rights and civil liberties. In the end, blending technology with social studies pedagogy will allow my students to see transparency between what was learned in class, and what goes on in the world around them.

The vision of students today is different. They "think and process information fundamentally differently… [their] brains have physically changed – and are different from ours" (Prensky, 2001, p. 1). With all of this change, creative aptitudes are necessary for success in the

Conceptual Age. School is one of the greatest places to foster these abilities. As educators, we have a wealth of *free* Web 2.0 tools at our disposable. If we want to help students learn, we need to promote autonomy, help students develop disciplined minds, and provide opportunities for them to see purpose and relevance in learning. To do this, we need to be willing to facilitate challenging activities that encourage skills development and promote enjoyment so students are intrinsically motivated to learn and succeed (Csikszentmihalyi, 1990). The Landmark Supreme Court Case assessment described above uses various Web 2.0 applications and strategies to help students build empathy and display creativity while interacting with social studies content. While we have learned that each brain is unique with its own special strengths and weaknesses, and that all students do not have the ability to fully predict what others are thinking (Ted, 2009), the Landmark Supreme Court Case project uses instructional technologies to help reach all students. It frames learning and scaffolds content to maximize understanding and transfer. This is the type of authentic learning experience that breaks down barriers and aims to give every student what he or she needs during the learning process.

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