

## **Interactive Tools and Online Communities that support Media Literacy**

Discussions about online media often neglect the engagement and interpretation of these technologies. The Internet has become a primary resource for learning, but schools are often not prepared to train students to understand online content. Outside of the classroom teenagers are active online. Conversely, many schools rely solely on analog tools to teach this already digital generation. This disconnect may result in teenagers who are not prepared to be critical digital citizens.

According to research by the Massachusetts Institute of Technology and Stanford University, teenagers tend to rely on the look of online information to determine credibility. As design software and image manipulation tools have become more available, average users can create content that looks professional and therefore trustworthy. Online content facilitates public discourse, but positions amateurs and experts at the same level. This flattening of source credibility is problematic for teenagers with limited cognitive abilities and life experiences to make judgements.

As online participation is inevitable we must determine ways for students to practice communication and collaboration in activities that are facilitated by an educational framework. We cannot simply ignore participatory communities and reject interactive tools as learning strategies. Educators have an opportunity to encourage new media literacy by leveraging existing social participation into teachable moments.

Based on literature, field interviews, persona development and research, we have identified five main challenges that merit pedagogical shifts to address media literacy. We propose two speculative case studies to address these five challenges.

### **What is Media Literacy?**

Media Literacy has become a buzzword, much like design thinking, resulting in a need to clearly articulate our interpretation. We follow Marshall McLuhan's definition of media as any extension of our selves through technology. (McLuhan, 19) Media or (Mediums) include, but are not limited to, television, newspapers, books, articles, blogs, web sites, portable devices, games, computers, cell phones, digital videos, photographs, illustrations, text messages, e-mail and the printed word.

Literacy refers to the ability to read and write and the thinking that goes into that work. It is a social, cultural and historical activity. (Finders, 8) School literacy is associated with the reading and writing in education, determined by a set curriculum, with specific outcomes and objectives. (Kelly, 8) Activities related to literacy evolve and are altered by media. We see media literacy as addressing the need to educate teens and adults about the interpretation and understanding of media they confront everyday.

As participatory communities like Facebook, Flickr, and YouTube have grown in popularity more attention has been given to media literacy. In a white paper authored under The John D. and Catherine T. MacArthur Foundation, "Confronting the Challenges of Participatory Culture: Media Education in the 21st Century;" the concept of new media literacies was explored:

*"We call the new media literacies: a set of cultural competencies and social skills that young people need in the new media landscape. Participatory culture shifts the focus of literacy from one of individual expression to community involvement. The new literacies almost all involve social skills developed through collaboration and networking. These skills build on the foundation of traditional literacy, research skills, technical skills, and critical analysis skills taught in the classroom" (Jenkins, 4).*

These new media skills include play, performance, simulation, appropriation, multitasking, distributed cognition, collective intelligence, judgment, transmedia navigation, networking, negotiation. (Jenkins, 4)

### **Digital Natives**

Urs Gasser and John Palfrey, authors of *Born Digital: Understanding the First Generation of Digital Natives*, explain that this unique generation has had lifelong exposure to online technologies, which has led them to view digital information as malleable. Teens do not view technology simply as a tool or a means to an end, they sometimes view the technology as the end in itself. As technology, tools, and online spaces are embedded in a teen's day to day life, educators must assess if they are comprehending and critically engaging with media.

Many young people are members of online communities and their participation is increasing. Social networking sites like MySpace and Facebook are "virtual malls," where today's tweens and teens can commune together, without the annoyance of observing teachers and parents. A study conducted in 2006 by The Pew Internet & American Life project found 55% of online teens (ranging in age from 12 to 17) had profiles on social networking sites. (Boyd 119 -121) Not only are teens participating, they are immersed in media engagement.

Accessing these communities has become increasingly fluid with the introduction of smart phones and other portable digital devices. "Without question, this generation truly is the media generation, devoting more than a quarter of each day to media. As media devices become increasingly portable, and as they spread even further through young people's environments — from their schools, to their cars, to their pockets — media messages will become an even more ubiquitous presence in an already media-saturated world" (Roberts 60). A Kaiser Family Foundation study released just this January showed dramatic growth in young people's use of media.

*"Over the past five years, young people have increased the amount of time they spend consuming media by an hour and seventeen minutes daily, from 6:21 to 7:38—almost the amount of time most adults spend at work each day, except that young people use media seven days a week instead of five.*

*Moreover, given the amount of time they spend using more than one medium at a time, today's youth pack a total of 10 hours and 45 minutes worth of media content into those daily 7½ hours—an increase of almost 2¼ hours of media exposure per day over the past five years" (Rodgers, 2).*

Teenagers today are not digital observers, but are full participants of the digital landscape growing up in what Lawrence Lessig calls a "read-write culture." Unlike previous generations that existed during the 20th century, they not only consume media, they author it. (Lessig, TED 2007 Conference) "Some 57% of online teens create content for the internet. That amounts to half of all teens ages 12-17, or about 12 million youth. These content creators report having done one or more of the following activities: create a blog; create or work on a personal webpage; create or work on a webpage for school, a friend, or an organization; share original content such as artwork, photos, stories, or videos online; or remix content found online into a new creation" (Lenhardt & Madden).

As more teens become online media authors and participants in their social lives, we must ask how these activities can, and should, be employed within the classroom? Educational instruction that incorporates online resources may provide teens a broader spectrum of information on a subject. Textbooks go out of date quickly and provide one point of view, that of an author, editor or publishing company. Educators now have a challenging opportunity to teach subjects such as history from current, multi-faceted points of view.

As new media is integrated into classrooms, textbooks and other old media do not disappear. The most successful technological integration in classrooms support a convergence of old and new media. For example, in Ken Ellis's video, *Media Smarts: Kids Learn How to Navigate the Multimedia World*, teachers use a variety of old and new media resources, including textbooks, newspapers, posters, film and online tools to teach about media literacy.

This media convergence helps students make a bridge between real-world problems and those created in the classroom. In addition to brick and mortar schools, what if teaching about media could take place in the very environment in which teens encounter new media?

Online environments offer teens a space to converse with their peers without being scrutinized by adults. Despite the lack of direct supervision by teachers, there is no doubt that these spaces can result in learning. Independently, teens transform social spaces and interactions into learning situations. A recent article in *The New York Times* interviewed several teens and found that many preferred reading and researching online because they “crave the ability to quickly find different points of view on a subject and converse with others online” (Rich). According to a study done in 2005 by the US Department of Education, roughly 94% of instructional classrooms have internet access compared to only 3% connected in 1994. (US Department of Education) Online access is not only used for instructional support. 71% of online teens used the Internet as the primary source for major school projects or reports. (Lenhart, 44) This rapid growth in usage results in great shifts in our social and cultural behaviors. It is important to address how online resources are used and understood by students.

### Online Challenges

Teens and adults face many challenges online and teens are particularly at risk. We see five main challenges that merit pedagogical shifts to address media literacy. First, teens engage with media on their own, often without the involvement of their parents or teachers. When teens use technology in the privacy of their own bedrooms, parents lose the ability to supervise activities. Wireless handheld devices bring the challenges of independence to the forefront. In 2007, 84% of teens owned at least one mobile device; a laptop, cell phone or PDA (personal digital assistant). (Lenhart, 30)

Second, online environments offer multiple perspectives and diverse narratives, but not all content goes through an editorial process. The web has changed the terms by which we judge sources. With print media, a source may be viewed as single and authoritative, such as an editor or author, and is often spotlighted. Online content often has multiple sources and the original sources are often buried under trails of hyperlinks and commentary. Contextual relationships between things such as hyperlinks and supporting articles become important online due to users’ reliance on more than one source. This lack of editorial vetting and clarity of source is a challenge for teens when they are trying to determine who and what to trust online.

Third, technology allows amateurs to create content that looks and feels as trustworthy as content created by experts. A traditional diagram of the message cycle places the audience only in the perception and consumption phases (figure 1). Historically and sometimes currently, design is limited to the creation and reproduction phases. Digital media, online access and current trends invite participatory audiences to operate in every step of the message cycle. Free online tools are readily available, for instance Picnik.com allows users to create and share visual information that may look very professional and therefore credible to teens.

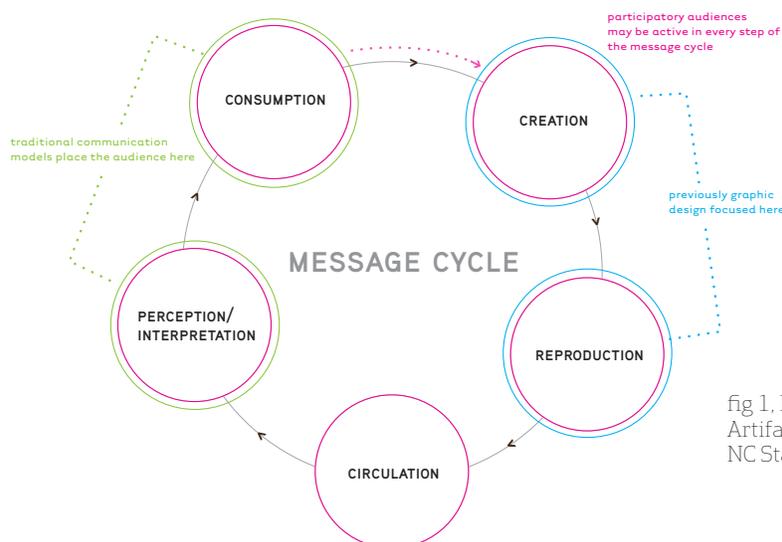


fig 1, Design as a Cognitive Artifact, Meredith Davis, NC State

Fourth, teens tend to rely on the look and feel of information to determine credibility. Researcher B.J. Fogg at Stanford University cites four types of credibility assessment that relate to human computer interaction: reputed, presumed, experienced and surface. While the internet gives us the ability to find multiple perspectives, it also requires more care when determining credibility. S. Shyam Sundar states that credibility assessment tools that leverage teens' desire to judge content by the look and feel may be more successful than tools that try to steer them away from these surface characteristics. (Sundar, 76)

Reputed credibility is "the extent to which a person believes someone or something because of what third parties — people, media, or institutions — have reported" (Fogg, 135). This type of assessment is common in online environments, and can be based on links from one website to another, user commentary and expert endorsements.

Presumed credibility is "the extent to which a person believes someone or something because of general assumptions in the person's mind" (Fogg, 132). Media based assumptions are common and some users trust online information without much thought. "Defaulting to a medium-based judgment is perhaps cognitively less demanding than other strategies ... Assessments at the level of medium are crude, and while they may be appropriate for government or industry related content such as that offered through television and newspapers, they may not be appropriate for online content that is freely offered, altered by anyone with technological access and skill, and subjected to no or very little governmental regulation" (Eastin, 39). Audiences often assume that what they are able to see is true and find photography and video to be mirrors of the truth rather than glimpses of perceived realities. Culturally based assumptions also influence presumed credibility assessment. New technology is often associated with credibility because users assume that the creator has a high level of skill.

Experienced credibility is based on user experience over time and is perhaps the strongest type of assessment as it depends on the development of a user's experience with one source. Experiences vary among audiences, but being aware of a person's individual experience can play a role in personal assessment.

Surface assessment refers to initial reactions to the look and feel of information and is the fastest and most common type of assessment. The study, "How Do Users Evaluate the Credibility of Web Sites? A study with over 2,500 participants" found that 74% of participants relied primarily on the design of the website to determine credibility. (Fogg, Soohoo, Danielson, Marable, Stanford, Tauber, 5) The participants stated that credibility was signaled by cues such as a "balanced composition of information" and "soothing color palettes."

Finally, there is a risk of information overload. How do teens cope with all of this digital information? Print media offers a beginning and an end, a front and back cover to mark the experience. The internet is infinite, but there are limits to what teens can absorb and comprehend. Most research on information anxiety focuses on adults, whereas affects on teens are just now beginning to be explored. Researchers have found that "One of the primary reasons to be concerned about too much information being accessible to young people is the possibility of negative effects on decision-making" (Gasser and Palfrey, 192). Balance needs to be struck between getting enough contextual information to make judgements and getting too much information that can overwhelm and paralyze a teen's ability to think critically.

Teens face more challenges online than adults because they are basing decisions and judgments on limited life experiences. Adults have the experience to make comparisons and informed decisions about who and what to trust online. Teens are often left to sort through the complex landscape without a guiding compass. As online environments become more complex, the cognitive challenges increase. Matthew Eastin, from The University of Texas at Austin, states that "Lacking a reference base can create confusion and lead to inaccurate interpretations"

(Eastin, 30). Teens lack the skills to manage and organize complex information that they confront online, as an average Google search returns millions of results, the challenge is knowing what information is credible, authentic and useful.

### **Evolving View of Media Literacy and Education**

“Media change is affecting every aspect of our contemporary experience, and as a consequence, every school discipline needs to take responsibility for helping students to master the skills and knowledge they need to function in a hypermediated environment” (Jenkins, 57). Often, if media literacy is taught at all, it is by librarians in isolated environments. A cross-curricular approach may provide a richer experience for students.

In schools, students are not taught how to be critical when engaging with visual language in the same way that they are taught to evaluate verbal and written language. The arts tend to focus on creativity while English-based classes focus primarily on the written word, rather than on text and imagery, motion or sound. As more and more people become visual communicators, new media literacies are required to analyze visual communication.

Participatory communities can act as “affinity spaces;” as they have the potential to motivate peer-to-peer teaching and learning. (Jenkins, 9) Affinity spaces are communities focused around a common endeavor, masters and amateurs share a common space, content organization shifts according to interaction among the users and participants, knowledge gathering and dissemination is encouraged and there are multiple facets to participation. (Gee, 85 – 87) Affinity spaces are successful as they actively engage participants through shared tasks, goals, objectives and ultimately successes.

These spaces allow experimentation, and open ended answers. The activity is only limited by the participants own motivation to use the system. In schools, teachers are required to keep a tight rein on student activity. Teachers are bound by school calendars, schedules, learning assessments, and government enforced testing, as we have seen with No Child Left Behind. The addition of digital tools and spaces would allow a traditional classroom to blossom, as the environment would expand, and be flexible to an individuals learning preferences.

While the research regarding young people and new media is flourishing, there are few models on how to successfully move forward and apply research findings. We propose two case studies that aid in critical media engagement and assessment, inspire participation, and prepare young audiences to become critical digital citizens.

### **Case Studies #1: Video Book.**

Video Book is a component-based, web application to be used by multiple users. A web application exists online and allows users to complete tasks together. Unlike traditional software applications, web applications usually do not require users to pay for access. They are open source, and do not require a site license to run. Examples include Yahoo Mail or Google Docs. The *Video Book* interface supports direct correspondence between students and educators. Student groups work together and share their findings as they complete class projects. All participants can save, share, and delete their work. Each study focuses on specific curriculum goals, as referenced in *The Content Knowledge: A Compendium of Standards and Benchmarks for K-12 Education, for Language Arts Level III, Grades 6-8*. This source served as a means to ground the design in practical, real-world educational objectives.

*Video Book* supports peer-to-peer learning as the space encourages collective intelligence and the transfer of ideas. Design studies were used to form a system of tools that together create a participatory community focused on objects and interactions in time. The community is named *Video Book*, as it integrates various types of media content into a digital video format. At the center of the interface is the time line and the stage. These are the previewing and performance spaces for content and student activity (see figure 2, next page.)

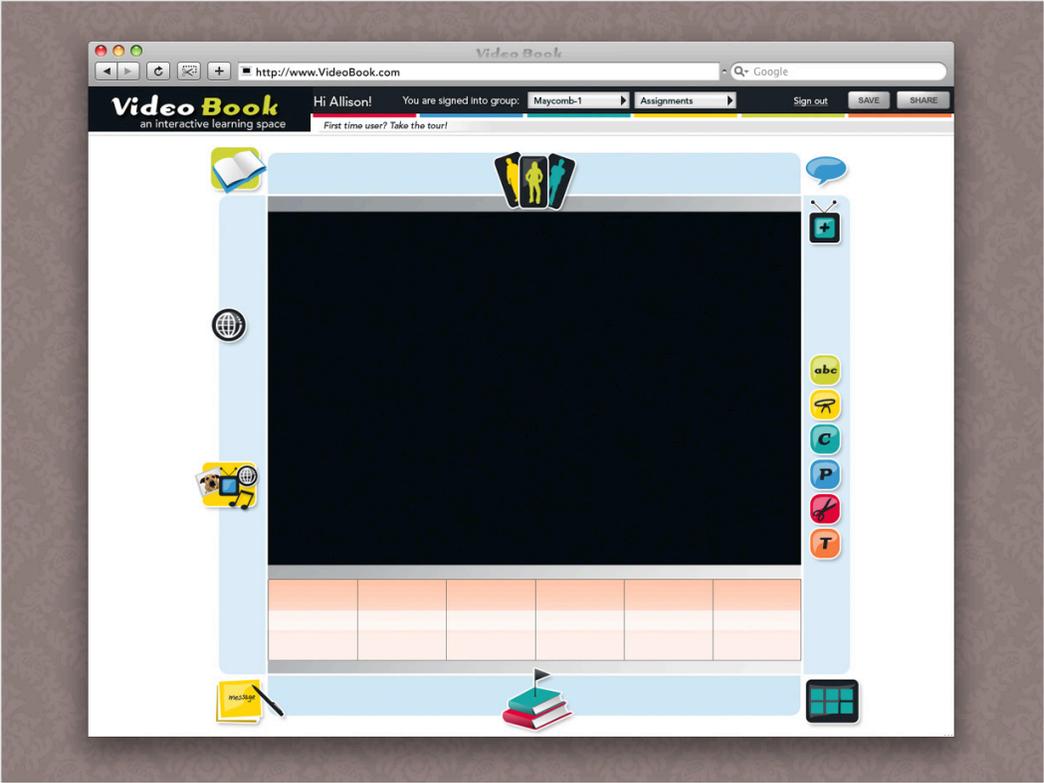


fig 2, the Video Book interface

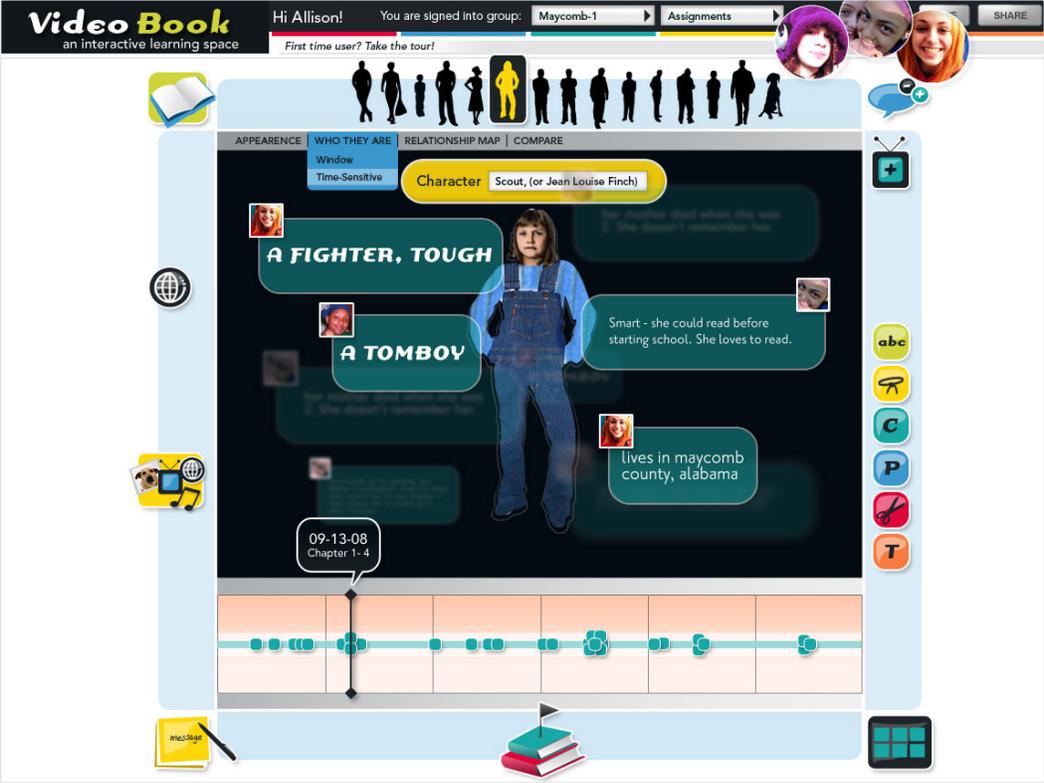


fig3, character building in a time based format

The *Video Book* prototype is demonstrated through four scenarios that represent students working through distinct clusters of components. Each component enables a set of interactions. Students can complete a diverse set of tasks and create various digital learning objects that take shape as digital avatars, storyboards, research collections and movies. Students may use *Video Book* in a remote setting, working from a home computer with Internet access, a mobile device or on a computer at school. Teens are clustered into groups of three or four students, and their work is primarily collaborative. These scenarios follow Allison, a seventh grader, as she works with her group in *Video Book* to complete school assignments.

In scenario one, (figure 3, previous page) Allison builds a character from the book *To Kill a Mockingbird*, by Harper Lee. Allison begins by building the appearance of Scout, the main character in the novel. She selects her facial appearance and her clothing. This function allows the student to visualize the physical character. The interface responds to the Allison's movements. As she wanders over the character with her mouse it invites her to select a face from a given set of actors. This virtual character is a concrete representation, which the student can save into the class database. This capability allows the students to practice collective intelligence as the students can each contribute notes and ideas about a character to the whole group. Each student has access to the character database as they build storyboards and make movies. The character analysis changes over time, and is recorded by the system. The emphasis is on the relationships between characters and the story structure.

Allison finishes by posting her comment, and viewing the comments of her group members. A few weeks in the future, when the class is several chapters ahead, Allison may look back in the time line and sees how Scout's character description has evolved throughout the book. The system documents participation, archiving the class activity for later retrieval.

In scenario two, Allison works with her group to build a storyboard illustrating chapter ten from *To Kill a Mockingbird*. (figure 4) The students gather actors from the character bank and compose them to visualize the key moments in the chapter. The interactions taking place in scenario two emphasize meaningful play.



fig 4, storyboarding and captioning of a key moment in a novel

**Video Book**  
an interactive learning space

Hi Allison! You are signed into group: **Maycomb-1** | **Assignments** | Sign out | SAVE | SHARE

First time user? Take the tour!

**TAGS**



**SOURCE**



**SOURCES**

Who made this movie: Jeremy Burkley  
Date created: 10-15-10  
Why they made it: For History class, 3rd period  
Who attached the movie: Silvia Alexander  
Why: I attached this movie because its all about the civil rights movement. I think it will help us think about who we can write out narratives on for Mrs. Kazel's class. I think I want to write about Rosa Parks.

Ratings: ★★☆☆☆

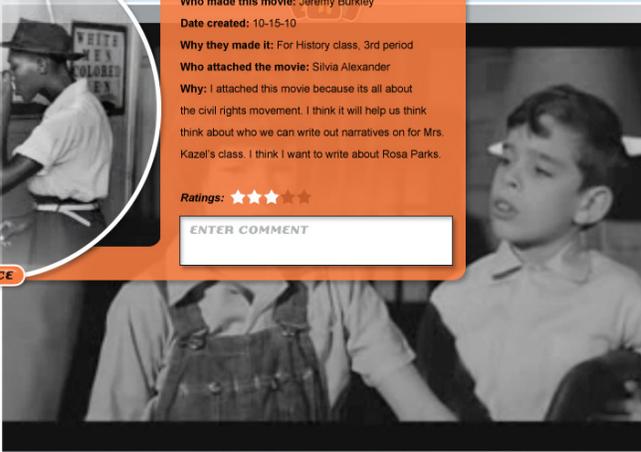
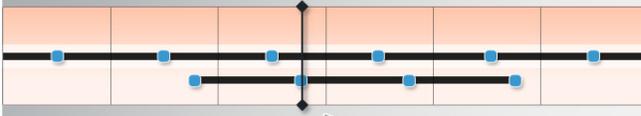
ENTER COMMENT

**MEDIA LINKS**

- Emmitt Till
- Civil Rights
- Rosa Parks - Bus Boycott
- MLK Interview
- Rosa Parks - Photo, 1965
- Rosa Parks - Interview, 1965

ADD MEDIA

COMMENTS

Message   

fig 5, conducting research, using and contributing to the media links

**Video Book**  
an interactive learning space

Hi Allison! You are signed into group: **Maycomb-1** | **Assignments** | Sign out | SAVE | SHARE

First time user? Take the tour!







**write** 









abc













fig 6, movie making tools being employed on the stage

Students reveal to each other the intricacies of the plot as they collaborate. Teachers may view individual participation and quickly assess if students comprehend the novel and its literary themes. Storyboarding allows students to view the narrative in a concrete, chronological format. Students understand the story visually as they share their mental pictures with one another.

In scenario three Allison and her group work to compile research for an informational report. In history class the students are studying the Civil Rights movement, in addition to reading *To Kill a Mockingbird*. This scenario reflects their progress as they work through ideation and brainstorming. (figure 5, previous page) Using the attachment tool the students connect media content from the Internet and their collective gallery. They make connections between related media objects. They may also edit out what they find to be inappropriate, making judgments and negotiating what is relevant to their topic. The tools allow the students to compile information quickly, and to see assigned tags, and the facts behind the media; where it was created, who authored it and when, as well as comments attached to the file. The tools act as educational framing devices.

Scenario four shows Video Book functioning as both an individual work space and as a community. (figure 6, previous page) Allison works independently, developing an informational video report incorporating video, photography, graphics, audio and text-based information. Allison imports her own recordings. Her amateur movie demonstrates not only what she has learned about Rosa Parks, but also reveals her creative and expressive talents. It allows her to perform by sharing her movies with her group members, her teachers, and her class. This exercise encourages Allison to become an author, building her confidence, as she shares work within a safe learning space. By allowing students to share work through an online learning space, critique and assessment will be focused on the learning object, not on the physical presence of the student.

### Case Studies #2: Trust It?

Our second case study, *Trust It?* explores how online interfaces can encourage students to analyze, interpret and judge the credibility of visual language. *Trust It?* is a plug-in that approaches credibility assessment from different angles, is a bridge between controlled and independent experiences and would be available on aggregated websites such as Flickr, You-Tube and Google Images. *Trust It?*, is a movable tool set (figure 7, 8, 9) that is managed by an area called Home Base. Students may choose where to put the tool, how large or small it is and when is visible. Putting credibility assessment tools in the hands of students encourages independent judgment. *Trust It?* presents three scenarios in which Alex, a 15 year old, uses the system to do research for assignments related to her Language Arts Class.

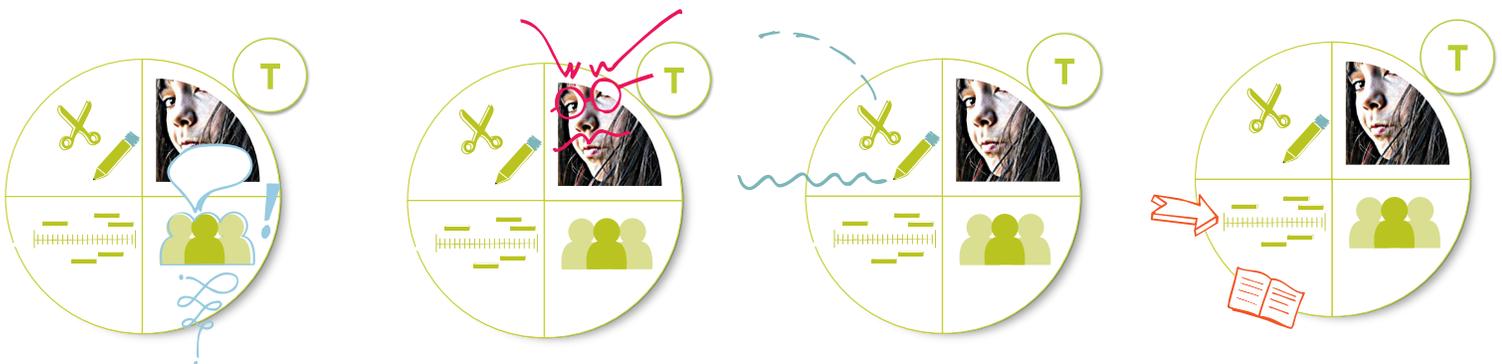


fig 7, three states and the Home Base of the movable tool set



fig 8, plug-in in static state

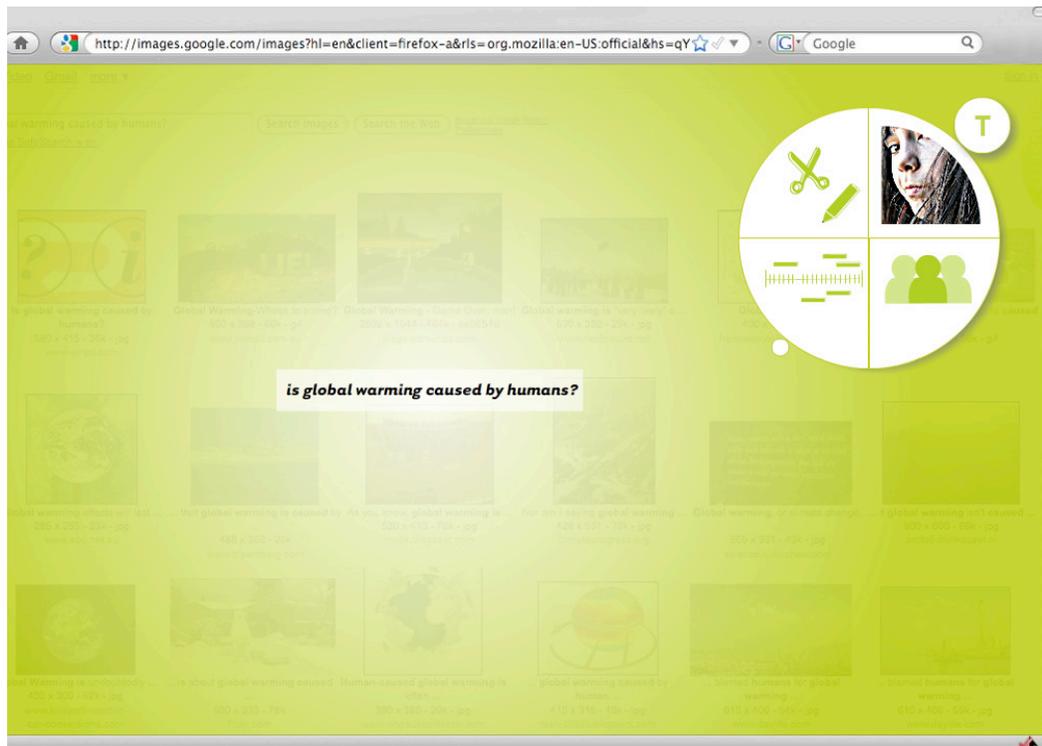


fig 9, tool in active state

In scenario one Alex explores aspects of visual language and originating sources that inform and educate her to the credibility of information. Because teens rely on look and feel to determine credibility, *Trust It?* explores how specific visual cues can infer credibility. Alex is searching for information regarding the causes of global warming. *Trust It?* search results are categorized by genres such as journals, blogs, news media and academic libraries. (figure 10) These categories include contextual information that is often lost in web searches that yield millions of results. No categories are considered entirely credible, so Alex is encouraged to make credibility assessments in all genres. The dynamic nature of the images hints at the level of credibility assigned by a team of experts: teachers, professionals and mentors who support the Home Base.



fig 10, categorization

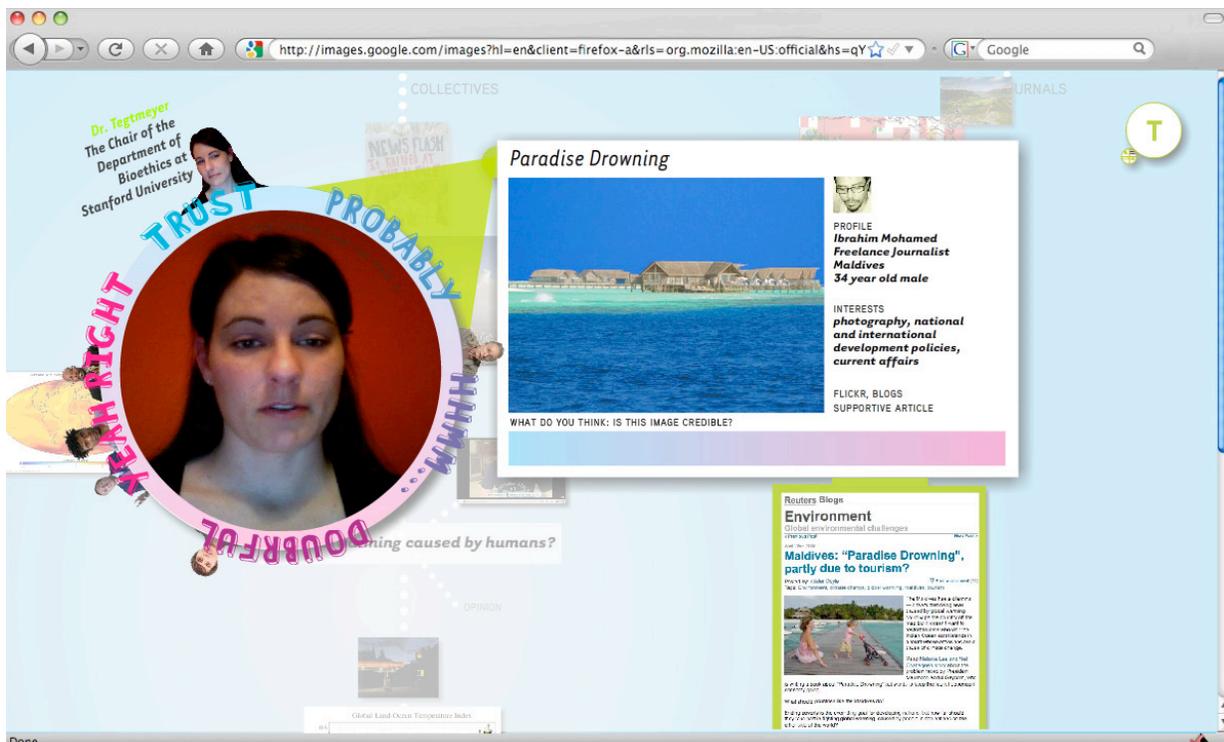


fig 11, detailed source information, supportive content and expert testimonials

With participatory sites many authors use nicknames, further complicating source assessment. Using *Trust It?* Alex may view detailed source information as well as supportive content without leaving the space. (figures 11) Participatory assessment in *Trust It?* relies on contributions from teens and experts rather than on a system or single authoritative voice, allowing students to understand that people perceive images differently. Alex is shown what several experts think about a photo. (figure 11) Credibility is determined by the group and by giving teens tools they become a part of the process.

Scenario two addresses what online activities encourage students to critically analyze the visual language they view, create or alter on informal learning environments. Alex searches for images related to three subjects for her class research assignments: global warming, domestic violence and US presidents. *Trust It?* functions as a prompt for interaction and learning. When Alex chooses to roll over different parts of the tool set or an image, open-ended questions are revealed that hint at larger educational goals. (figure 12, next page)

Visual language is constructed, just like written language. Formal choices in photography — whether made in the moment of capture or later when editing — affect the understanding of the message. Little research has been done on how teens understand the concept that visual language is constructed, however, tools are widely available for teens to alter images. A simple cloning tool allows a teen to change the background of an image. This type of alteration affects the meaning of the image and the message. While searching about global warming, Alex is confronted with an image and when she rolls over the image, the cloned snow appears; when she rolls off the image, the snow goes away. Making a connection between time-based comparisons and Alex's explorations, is meant to inspire further investigation into what the message means. A chat area in the same space as the images allows discussion among teens. In surface level exchanges, social interaction may be limited to conversational chatting. However, in more specialized knowledge areas, such as researching global warming, more in-depth dialogue may occur. The 'thoughts' area in the toolbar gives Alex a space to construct an argument about the poster advertising the documentary film "An Inconvenient Truth." Alex is questioning the appropriateness of a manipulated image to promote a documentary film. (figure 13, next page)

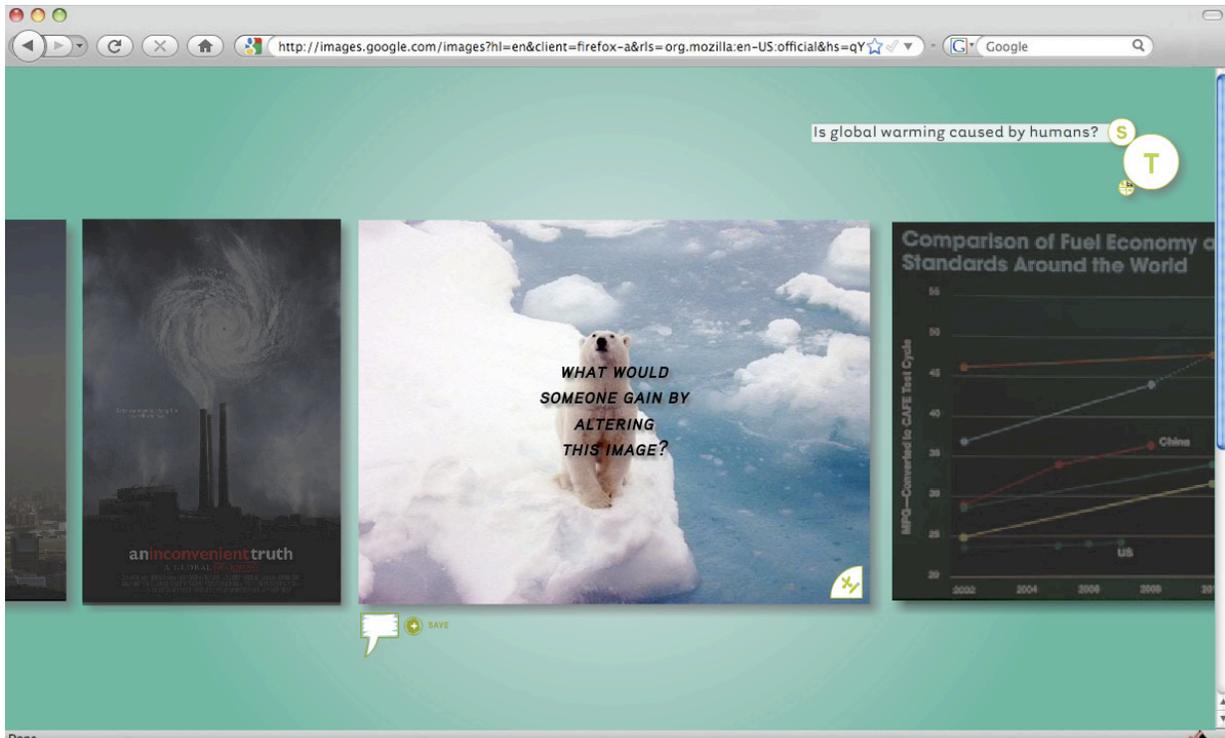


fig 12. prompt for interaction and learning



fig 13. in-depth writing space for teens to construct arguments and add content from their library

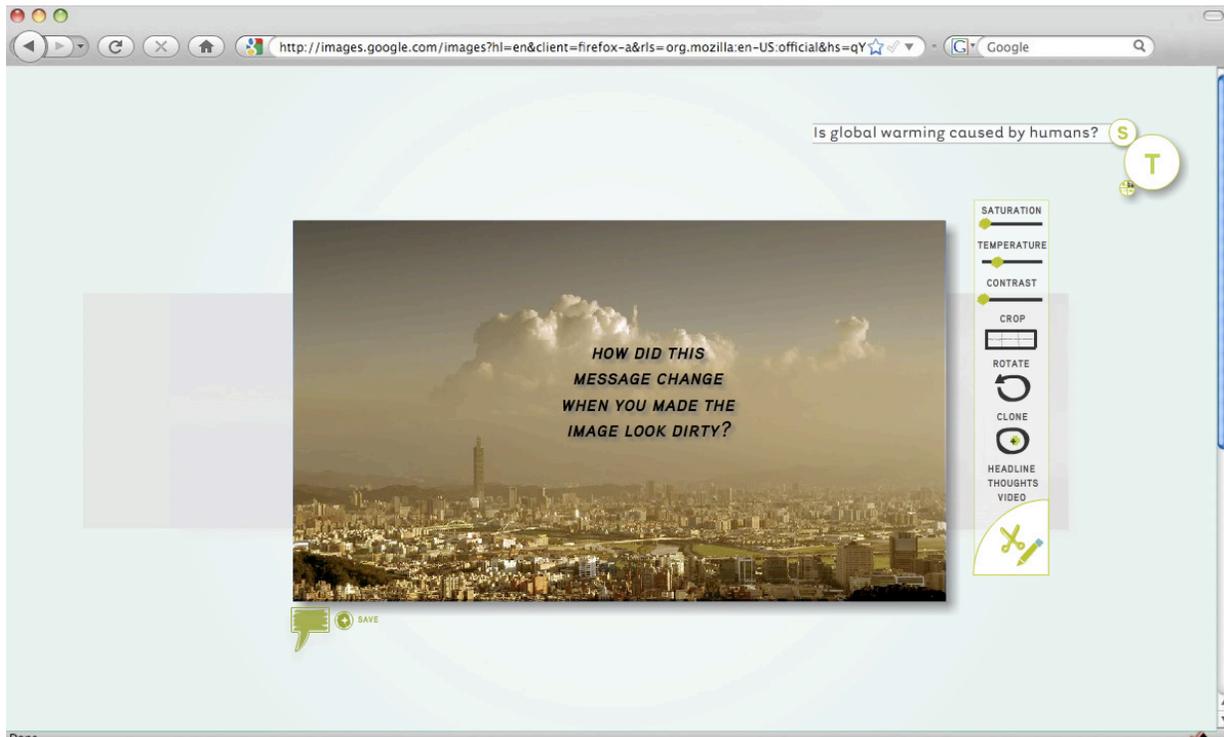


fig 14. questions regarding editing

As Alex continues to scroll through images in her global warming search, she comes to an image of a cityscape. As she rolls over the manipulation tools, a question appears: "How would this message change if you made the image look dirty?". She chooses to adjust the temperature of the image, which makes the scene look polluted. The system then prompts her with another question, "How did this message change when you made the image look dirty?". (figure 14) The goal of active editing is to reveal that images are constructed and easily manipulated.

Alex now chooses to search "domestic violence" and "rihanna." She stops at an image of Rihanna and Chris Brown that she has seen a lot in the news. As Alex hovers over the 'headlines' tool, she is prompted by the question, "How do these headline treatments affect your perception of this photo?" The headline, "Teenage girls stand by their man" from the attached *New York Times* article is presented on top of the image. She has the ability to play with typefaces, positions, angles and colors. Textbooks lack the ability to address such recent cultural occurrences as the Rihanna case that could be teachable moments for teens.

Alex continues and finds a video from the Video Music Awards in which Chris Brown and Rihanna perform a duet. The visual language of this spectacle is seductive, so the system narrows the focus. Alex can explore five formal properties: light, pose, special effects, cropping and props. With a prompt to focus on lighting, Alex continues to watch the video as other images of the couple appear over time. (figure 15, next page) The juxtaposed images are accompanied by textual analysis. The goal is to bring attention to the role that lighting and juxtaposition play.

Alex now searches for information about US presidents. Framing is used in advertising, pop culture and news media. Like most public figures, presidents have teams working for them to ensure that they are posed in a desirable way and surrounded by the necessary props to reinforce their image. Perhaps most importantly, undesirables are excluded from the frame. In her search, the middle image is from a speech given by President Bush at Mt. Rushmore. Upon rollover, she is confronted with user annotations that show alternative framing options, resulting in varied messages.

In scenario three, we address the history and context of images. Two types of history are relevant to this scenario: the way that an image has been used over time; and the context within which an image was created. Continuing

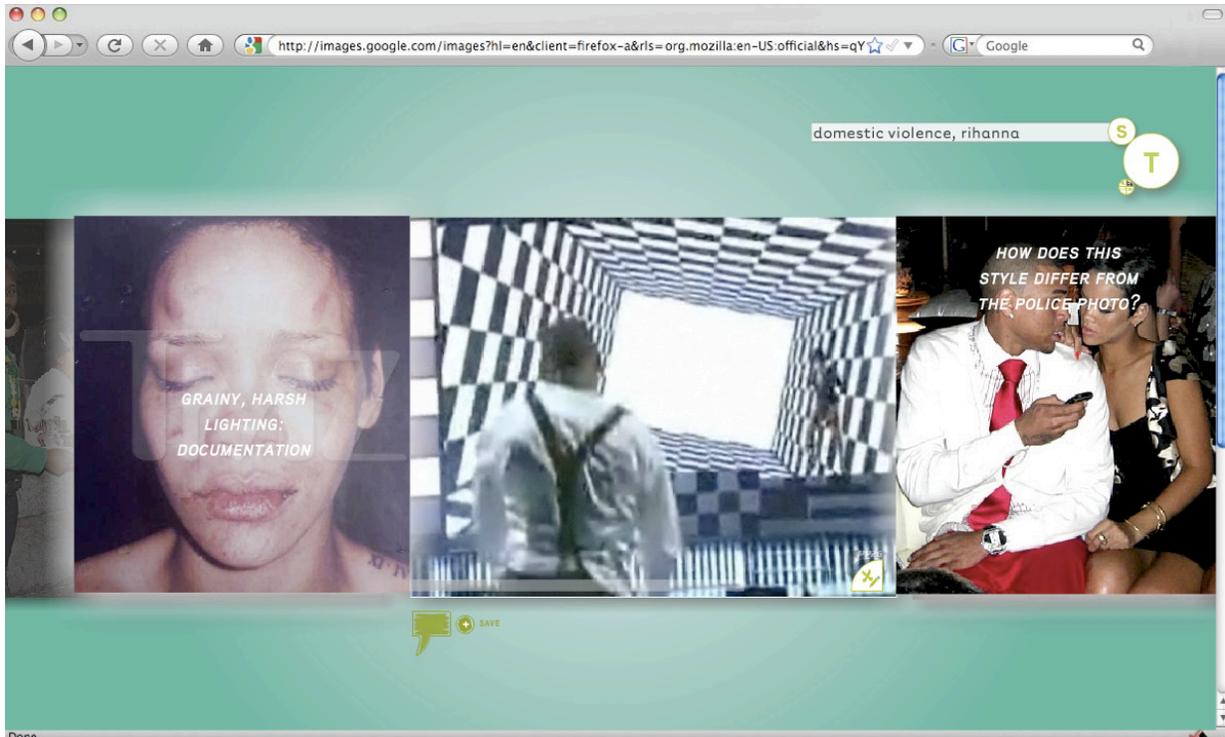


fig 15, textual analysis and questions regarding juxtaposition and lighting

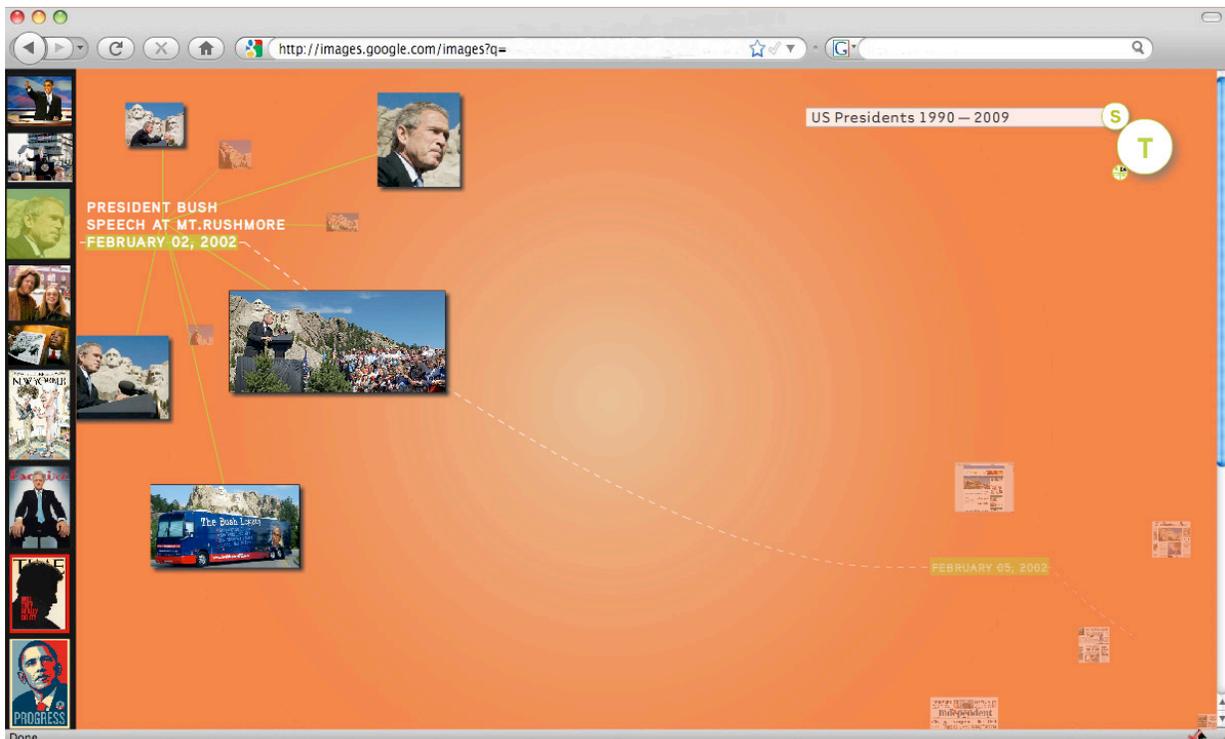


fig 16, framing choices and use in media

with her presidential search, *Trust It?* provides Alex with a collection of iconic images, subject matter, locations and dates. (figure 16, previous page) The goal is to reveal the original context by providing a variety of images. Building on the framing tools from scenario two, she may now see how the images were used in newspapers three days later. Alex can zoom out to find a large timeline expanding to the current day, or zoom in to access more information. When she is in the full-timeline view, the system points out significant moments in time regarding the image as well as questions, such as: "Do you know that this image has been used as satire?"; "How has this image been used to convey a positive myth?" Through interaction with the images, Alex may gain an understanding of the entire event and see how an image has been used overtime for various ends.

### **Final Thoughts**

As technology becomes less expensive and increasingly more available, graphic design has a great deal to offer the educational landscape. Perspectives are often shaped not by what students read in textbooks, but from what they see and read in the media, even by content their peers create. Designers have a means to create tools, interfaces, and systems that allow the convergence of media content and alternative educational strategies that afford the student endless learning experiences.

We are moving forward with these case studies, developing functional prototypes in order to conduct user testing, classroom trials and in depth analysis.

### **References**

Boyd, Danah. "Why Youth Heart Social Network Sites: The Role of the Networked Publics in Teenage Social Life." *Youth, Identity, and Digital Media*. Buckingham, David. Cambridge, Massachusetts: The MIT Press, 2008.

Buckingham, David. "Introducing Identity." *Youth, Identity, and Digital Media*. Buckingham, David. Cambridge, Massachusetts: The MIT Press, 2008.

Buckingham, D. (2005). "The Media Literacy of Children and Young People: A Review of the Literature." *London: Centre for the Study of Children Youth and Media Institute of Education, University of London*. Retrieved from [http://www.ofcom.org.uk/advice/media\\_literacy/medlitpub/medlitpubrss/ml\\_children.pdf](http://www.ofcom.org.uk/advice/media_literacy/medlitpub/medlitpubrss/ml_children.pdf) (September 2006)

Eastin, Matthew "Toward a Cognitive Developmental Approach to Youth Perceptions of Credibility." in *Digital Media, Youth, and Credibility*, edited by Miriam J. Metzger and Andrew J. Flanagin, 29 – 47. Cambridge, Mass.: MIT Press, 2008.

Finders, Margaret J. *Just Girls. Hidden Literacies and Life in Junior High*. New York: Teachers College Press. (1997)

Fine, Michelle. *Framing Dropouts: Notes on Politics of an Urban Public High School*. Albany: State University of New York Press. (1991)

Fogg, B. J., Cathy Soohoo, David Danielson, Leslie Marable, Julianne Stanford, and Ellen Tauber. "How do Users Evaluate the Credibility of Web Sites? A Study with Over 2,500 Participants." *Proceeding of the 2003 Conference for Designing for User Experiences* (June 2003).

Fogg, B. J. *Persuasive Technology: Using Computers to Change What We Think and Do*. The Morgan Kaufmann Series in Interactive Technologies. Amsterdam; Boston: Morgan Kaufmann Publishers, 2003.

Gee, James Paul. *Situated Language and Learning: A critique of Traditional Schooling*. New York, NY; Routledge, 2004.

Jenkins, Henry and Ravi Purushotma, Katherine Clinton, Margaret Weigel, and Alice J. Robison. *Confronting the Challenges of Participatory Culture: Media Education in the 21st Century*; The MacArthur Foundation, Project NML, 22 September 2007, <http://www.projectnml.org/files/working/NMLWhitePaper.pdf>

Kelly, Ursula A. *Schooling Desire; Literacy, Cultural Politics and Pedagogy*. New York, NY; Routledge, 1997

Kendall, John S. and Robert J. Marzano. *Content Knowledge; A Compendium of Standards and Benchmarks for K-12 Education, Language Arts Level III. Grades 6-8*. McRel, 1996.

Lankes, David "Trusting the Internet: New Approaches to Credibility Tools." in *Digital Media, Youth, and Credibility*, edited by Miriam J. Metzger and Andrew J. Flanagin, 101-121. Cambridge, Mass.: MIT Press, 2008.

Lenhart, Amanda. *A Timeline of Teens and Technology*. Pew Internet & American Life Project, August 16, 2007, <http://www.pewinternet.org/Presentation/2007/A-Timeline-of-Teens-and-Technology.aspx>, accessed on April 2, 2009.

Lenhart, Amanda and Mary Madden. *Teen Content Creators and Consumers*. Pew Internet & American Life Project, November 25, 2005, <http://www.pewinternet.org/Reports/2005/Teen-Content-Creators-and-Consumers.aspx>, accessed December 2009.

Lessig, Larry. *Speech, Laws that Choke Creativity*. TED 2007 Conference. Monterey Conference Center Monterey, CA, USA. 7 March - 10 March 2007. Ted Conference - Web site. 28 November 2007. <<http://www.ted.com/talks/view/id/187>>

Palfrey, John and Urs Gasser. *Born Digital: Understanding the First Generation of Digital Natives*. New York: Perseus Books, 2008.

Rich, Motoko "Literacy Debate: Online, R U Really Reading?" *The New York Times*, July 27, 2008, Books section, Sunday edition.

Roberts, Donald, Ulla Foehr, and Victoria Rideout. *Generation M: Media in the Lives of 8 - 18 Year Olds*. Kaiser Family Foundation, 2005.

Sundar, Shyam . "The MAIN Model: A Heuristic Approach to Understanding Technology Effects on Credibility." in *Digital Media, Youth, and Credibility*, edited by Miriam J. Metzger and Andrew J. Flanagin, 73-100. Cambridge, Mass.: MIT Press, 2008.