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Media Literacy

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COMMUNICATION RESEARCH TRENDS

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Editor's Introduction

The Centre for the Study of Communication and Culture (CSCC—established in 1979), the founder and originator of COMMUNICATION RESEARCH TRENDS, became involved in media education early on in its existence, in the 1980s. Located in London, the Centre forged connections with the very lively British media education movement, headed by Len Masterman and others. Initially involved in reviewing and promoting research, helping with some conferences, and collecting and examining media education practices from various parts of the world, the Centre took on a much greater role under the leadership of John Pungente, S.J.

During his time as a visiting fellow at the Centre (1983-1985), Pungente, already involved in the media education movement in Canada, spent a year visiting practitioners and programs around the world. From this research, he published *Getting Started in Media Education* (London: Centre for the Study of Communication and Culture, 1985). Returning to Canada, Pungente continued the work in media education, authoring resource guides for the government of Ontario and a textbook for 11–15 year olds; he has also worked to promote media education in the context of the Jesuit schools around the world. Among his many other works, Pungente founded the Jesuit Communication Project to promote media education across Canada. The group's website notes, "The Jesuit Communication Project (JCP) is working in response to this call [for media education] by providing a variety of resources and services for teachers, parents, church groups, school boards, students, and other interested groups. The goal is to encourage, promote, and develop Media Education across Canada."

After Pungente's work at the CSCC, the Centre focused its media education work primarily in the United Kingdom, among the Jesuit schools. In addition, it published a review of media education research in 1992 (COMMUNICATION RESEARCH TRENDS, volume 13, number 2).

This issue of TRENDS returns to the topic, noting with Professor Kamerer the development of media education into media literacy. The name acknowledges the reality that children and young people face not just communication media like television and film in their world, but a range of screen technologies, most driven by the digital revolution. Despite all the talk of "digital natives," young people still need some guidance in the face of this world of communication—a literacy in these new media.

At the same time, the United States lagged behind much of the world in any kind of media education or media literacy, for reasons that Professor Kamerer discusses in his review essay. Restricting himself to U.S. approaches, he first provides a brief history of the impetus for media study in the United States and then identifies some common approaches before turning to the more current work in computer or digital literacy. He concludes his essay with a review of recent empirical studies that focus on media literacy.

This issue of TRENDS also presents some supplementary material assembled by its staff. First, we offer a short list of websites (most in the United States, in keeping with the focus on Kamerer's review) that promote media literacy. These range from long-established centers to material provided by media content producers such as the Discovery Channel. Many of them have extensive lists of resources. Second, we offer some additional bibliographic material: reviews, studies, and policy discussions published in the last 10 years. The first section lists some literature reviews, while the second presents material relevant to digital literacy. The third section offers a sampling of work describing media literacy around the world. The last section lists research studies and policy debates, extending what Kamerer presents in the sixth part of his own review of the literature.

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Media Literacy

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1. Prologue

Senator William Proxmire, D-Wisconsin, famously made fun of government waste with his "Golden Fleece" awards, which were "given to the biggest, most ridiculous or most ironic example of government waste." In December 1978, he selected the United States Office of Education:

> For spending $219,592 to develop a "curriculum package" to teach college students how to watch television. The product of the contract, according to its recipient, will enable college students to " . . . distinguish between television's fact and fiction, recognize Its various viewpoints, and evaluate its messages."
>
> Under its Special Projects Act, the Office of Education—which has in fact developed some outstanding programs, like Sesame Street and the Electric Company—has let four contracts totaling $823,651 to develop "critical television viewing skills" at the elementary, middle, secondary, and post-secondary school levels. Another $800,000 to train teachers and distribute the materials developed and tested in phase one is contemplated. In view of the amount of violence on television or the attempt of advertisers to aim commercials at children, there may be some justification for the elementary, middle, or secondary proposals. But the spending of $219,000 for the college program gets such low ratings it should be cancelled. (Wisconsin State Historical Society, 2013)

Proxmire's award had the effect of marginalizing the field of media literacy education in the public's mind. While media literacy and education has deep roots, the field grew substantially in the 1960s, bringing together disparate elements including film theory, access to new tools such as videotape, and new ideas from scholars such as Marshall McLuhan, largely played out in classrooms from primary school to college.

Proxmire's news release continued:

The grant raises a whole series of issues. Should the government be involved in developing curricula to teach students how to watch the mass media? If needed, why shouldn't it be done by individual university faculties to fit their own specific needs? Why shouldn't the materials be developed and produced by one of the many private textbook publishing houses? Is it clear that college students are, in fact, watching too much television or that they are unable to criticize it intelligently? Should the federal government be offering inducements for the proliferation of new courses to substitute for the limited time students have for fundamental subjects?

In my view, in this period of inflation and budget stringency the money should not be spent at all.

This criticism has been revisited many times by media literacy advocates. If media literacy education is added to a curriculum, then what should be removed? What ages are appropriate for this kind of instruction? And where is the natural home of media literacy education? English classes have proven popular, in part due to the affinity of film and television for fictional narratives. And media literacy education has been found in media production classes, "American studies," and other social science classes. But others have advocated that media literacy education should be taught across the curriculum.

When Proxmire gave his Golden Fleece award, media literacy education was growing for a reason. Media had become pervasive in society, and media use was on the rise. Consider how television had grown by the end of the 1970s: the average screen size had increased to 21 inches; cable television was in 16 million homes; the remote control empowered viewers; half of all homes had multiple televisions; and the television became a connecting point for video games and video cassette recorders (Carey, 2002). According to Nielsen, the average household had a set on for 6 hours and 36 minutes a day in 1980 (TVB, 2013).

Examined from another perspective, America had just experienced the Viet Nam war, the first "living room war" played out on television. America witnessed the Kennedy assassination, the civil rights movement, and the explosion of youth culture, all on television. TV had become the cultural glue that held society together.

So, while it may have been a good time for media literacy education, the Golden Fleece award sent it into decline. The award was followed by a new "back to basics" curriculum advocated by Ronald Reagan's Secretary of Education William Bennett. Next, a recession further decreased Federal support for media literacy education in the early 1980s (Heins & Cho, 2002). In its place rose a heightened interest in computer literacy, which was seen to have vocational value; it was a "hard" skill compared to the "soft" skills of critically examining media messages. It would take some time, but media literacy education would eventually re-emerge, as digital and social media would eventually redefine the concept of media.

2. What is Media Literacy Education?

Media education (the term generally used in the United Kingdom; in the U.S. "media literacy" is more common) is "the knowledge, skills, and competencies required in order to use and interpret media" (Buckingham, 2003, p. 36). Hobbs states that "most conceptualizations of media literacy now involve a type of 'critical' literacy based on reflection, analysis, and evaluation, not only of the content and structural elements of specific media texts but of the social, economic, political, and historical contexts in which messages are created, disseminated, and used by audiences" (Hobbs, 2005, p. 866). In a textbook widely used in college classes, Potter writes, "Taking control is what media literacy is all about. Becoming more media literate gives you a much clearer perspective to see the border between your real world and the world manufactured by the media. When you are media literate, you have clear maps to help you navigate better in the media world so that you can get to those experiences and information you want without becoming distracted by those things that are harmful to you" (2013, p. 10).

A monograph published by UNESCO defines media literacy as:

> The process of assimilating and using the codes involved in the contemporary media system as well as the operative skills needed to properly use the technological systems on which these codes are based [and as] the capacity to access, analyze and evaluate the power of the images, sounds, and messages with which we are faced every day and which play an important role in contemporary culture. It includes the individual capacity to communicate using the media competently. Media literacy concerns all media, including television, film, radio, and recorded music, the press, the Internet, and any other digital communication technology. . . . They share the idea that media literacy is a basic skill, one that supports many others and that it therefore should not solely be taught as a specific field of knowledge, nor simply as a skill, nor as a collective practice. (Pérez Tornero & Varis, 2010)

Hobbs shared an applied model of media literacy, developed by high school teacher Joanne McGlynn. It asks students to answer these five questions when reflecting on a text, such as a film, commercial, or television show:

- Who is sending the message and what is the author's purpose?
- What techniques are used to attract and hold attention?
- What lifestyles, values, and points of view are represented in this message?
- How might different people interpret this message differently?
- What is omitted from this message? (2007, p. 9)

These questions express the range of media literacy education. For example, one thread that many have pursued is the notion of learning production skills. By learning to "construct" meaning in a text, the student implicitly also learns to "deconstruct" messages received through the mass media. Some researchers have additionally endorsed media production as a way to encourage teamwork and collaborative problem solving.

Another thread has to do with the economic base of media; this kind of education helps students understand the economic motives behind media messages.

For example, while most understand that newspapers are in the business of disseminating news, an economic analysis would teach that the "news hole" in a newspaper is the space that's left after the ads are placed in a layout—that fundamentally, newspapers are in the business of accumulating an audience to sell to advertisers.

Representation in the media is another area frequently addressed by media literacy education. What's included in the message, and what's left out? For example, packaged foods or fast foods are frequently represented in commercials, while fresh or non-branded foods are seldom shown. How does this influence what children eat or want to eat? Representation also looks at the prevalence of different groups in the mass media, such as ethnic groups, ages, genders, as well as how members of these groups are portrayed in the narratives.

Access is an area of media literacy education that has grown in importance, as digital media have become part of the information landscape. To understand the access dimension, consider reading a book. To read, one access element is to understand the language. Another is knowing that the story is told in linear fashion, working from the front to the back. While we may take these things for granted, it's a large part of successfully using digital media. Here, access can relate to finding information, using search engines, using plug-ins to access content, downloading information, or using a database.

A. The need today: Our media-saturated culture

Media have come to dominate our daily lives so much that one analyst, Steve Rubel from public relations firm Edelman, has coined a term for the malady of the age: the attention crash. Writing in 2007, Rubel noted:

> In-boxes, smart phones, and IM windows are overflowing. Always-on connections, mobile devices, and new publishing tools have expanded the media we consume to include content from peers. Further, new networks and platforms for participation are sprouting up and going supernova overnight, with no end in sight.
>
> The problem is that human attention, unlike technology, has limits. There are only so many digital inputs we can realistically pay quality attention to in our busy, multitasked lives. Demands for our attention have outstripped our finite supply of time. A crash is coming, folks. But this time it's not financial—it's personal. (2007)

Despite our daily need to work, sleep and eat, media use dominates how we spend our days. The three main categories of media use today are television, computers, and mobile devices.

While the impact of digital media is large and growing, "The TV screen remains the dominant platform on which to consume content," in the U.S., according to an AC Nielsen report from the last quarter of 2011 (2012a). Including new program sources (such as watching a movie on a game box), the average American watches nearly five hours of video a day, 98% on a traditional television.

Computer use is tricky to assess, because many applications—such as writing—are not media use per se. Social networking is the most prevalent media use on computers today. According to Nielsen, in late 2011, the average man in the U.S. spent six hours and 13 minutes on social networking on a PC in a month, with an additional six hours and 44 minutes social networking on a mobile device. For women, these numbers are even higher, with eight hours and 37 minutes on the PC and nine hours and 43 minutes on a mobile device. These numbers are a moving target; according to Nielsen, between July 2011 and July 2012, desktop social networking declined 4% while mobile access from an app increased by 85% and mobile browser access increased 82%.

The largest social network by far is Facebook, with more than 152 million unique monthly visitors in the U.S. (Nielsen, 2012b). Examined in the aggregate, Facebook is the number two website in the U.S. with daily reach of almost 45% of the U.S. population. The average of time on this single site is more than 29 minutes a day. Other social networks ranked in the top 20 U.S. websites include YouTube, Twitter, LinkedIn, Pinterest, and Tumblr (Alexa, 2013).

Since so much media literacy education focuses on children, it's worthwhile to break out juvenile media use. In 2009 the Kaiser Family Foundation surveyed children ages 8–18, and found that children engage with media an average of 10 hours and 45 minutes a day. While television dominates (4 hours, 29 minutes) there's also a mix of activities, including music/audio (2 hours, 31 minutes), computer (1 hour, 29 minutes) and video games (1 hour, 13 minutes) that all may be done on the same digital hub, the home computer. The study found media use by children had increased by almost two and a quarter hours daily in just five years. Print media is a small part of the diet, constituting only

38 minutes a day, including only three minutes with a newspaper (Rideout, Foehr, & Roberts, 2010).

The Kaiser study also found a large increase in mobile media use. Mobile use helped boost overall media consumption, and also increased multitasking of media. In five years mobile phone ownership increased from 39% to 66%, portable music player ownership increased from 18% to 76%. Compared to five years ago, mobile video game playing increased by 24 minutes a day and mobile music listening increased by 47 minutes.

B. Qualitative changes brought about by digital media

The pervasiveness of digital media is but one reason to encourage media literacy education. Digital media also rewrites much of what we know about mediated messages.

Because barriers to entry are low, anyone can publish. The self-published content mixes freely with mainstream news and entertainment sites. A consumer can choose to receive news from a respected journalism site like NYTimes.com, a comedy site like TheDailyShow.com, or from an advocate site that presents limited information from an ideological frame. While they all may look legitimate, not all adhere to the traditional canons of journalism. Evaluating the quality of information on a site is a learned skill. And a source of noise in social channels occurs when people share information they have not personally confirmed or that comes from sites of unknown quality.

The very nature of journalism is changed when people get their breaking news from social feeds like Twitter. While it can be useful to witness political events in the words of those involved, such as the Arab Spring, and while many credible journalists use Twitter, individual messages from people you don't know are of very little value (see, for example, Howard, et al., 2011).

The means of financial support for digital channels is often not clear, yet may guide the content they publish. It's common for bloggers to receive free products, trips, or money in exchange for a flattering post, yet sites seldom tell their readers about this material connection. Many bloggers also participate in affiliate programs in which they receive a kickback when a reader purchases a product under review. Celebrities may tweet about brands for a fee, not always disclosing that the tweet is a commercial (see Davis & Gilbert, 2011, for a discussion of FTC rules on this issue). Review sites have been compromised by fake reviews, written by people who have a personal stake in a business's success or failure (Streitfeld, 2011).

Access issues are also worth addressing in the digital domain. The web and digital technology is inherently complicated and changes quickly. Phishing, distributed denial of service attacks, copyright infringement, advertiser tracking, search engine manipulation, hacking, and identity theft are part of everyday life online.

Beyond these dimensions of media literacy education lie questions of greater importance: Does our media exposure improve our knowledge? Help us in our daily lives? Make us better people? Here is the biggest payoff for media literacy education: by improving our choices and better understanding the content that we consume, people can put all of those hours of exposure to work in the pursuit of a richer life, family, and culture.

3. The Growth of Media Culture

When parents first taught their children, the lessons were immediate and practical: how to plant, harvest, build, repair. As our society became industrialized, education was given over to public or private schools, which offered a Eurocentric world view today often derided as "dead white male" education. By 1917, all U.S. states had compulsory attendance schools in place. Curricula featured Greek, Latin, Euro-centric classical literature, math, and science.

In the early 20th century, popular culture may have been the talk of the playground, but it was not a subject for study at school. Indeed, many authorities were mistrustful of new technology and voiced concern over widespread adoption. For example, composer John Philip Sousa railed against Edison's recording device, saying "The time is coming when no one will be ready to submit himself to the ennobling discipline of learning music . . . everyone will have their ready made or ready pirated music in their cupboards" (Ross, 2005).

While we take mass culture for granted today, at the beginning of the 20th century there were very few mediated experiences that helped to create a common

culture. Newspapers were the primary transmission of news information. Much of our musical culture was transmitted through sheet music performed at home on the piano, or by traveling acts on the vaudeville circuit.

But early in the 20th century, several technological innovations—audio recording, cinema, and radio—became part of everyday life. The second half of the century brought us television. In each case, while the technology may have been jaw-dropping, it was through mass adoption that the technology affected our culture.

A. Audio recording

Thomas Edison developed the first cylinder recording apparatus in 1877, and through his own company and through licenses with companies like Columbia Records, spurred the sale of both cylinders and players. By the 1910s, flat disc recordings became more prominent. In 1904, Caruso's recording of *Vesti la Giubba* from Pagliacci was recorded. It would eventually become the first million-selling sound recording. Both classical and contemporary music were popular sellers, and by 1921, annual sales were more than 47 million. The rise of radio put a dent in sales of recorded music, however. Still, by 1929, 34 million recordings were sold annually (Lesk, 2003, p. 74).

B. Cinema

Early experiments with cinema took place in the late 19th century, with Edison first demonstrating his kinetoscope in 1894 and the Lumiere brothers projecting an early film, *L'Arrivée d'un Train en Gare de la Ciotat*, in 1895. One of the first "hit" movies, Thomas S. Porter's *The Great Train Robbery*, was made in 1903 and was a full 12 minutes long. From that point, the movies grew quickly, both as an art form and in terms of cultural influence: Griffith's full-length feature, *The Birth of a Nation*, premiered in 1915. Charles Chaplin became a huge star in the late teens with his two-reel comedies; his masterpiece feature *The Gold Rush* was made in 1925. "Talkies," led by the Warner Brothers film *The Jazz Singer*, began to be popular in 1927. Movie attendance grew to 80 million a week by 1930; during the Great Depression people may have been broke, but they still used their scarce nickels and dimes to buy movie tickets (Pautz, 2002).

C. Radio

Radio began as a hobbyist medium, with operators building their own sets so they could transmit as well as receive audio information. As radio's popularity grew, people began to purchase receive-only radio sets to listen in on other people's broadcasts. Department stores that sold radios would set up a station of their own to drive sales of receivers. The long-term success of radio would depend upon creating a commercial base for the programming. In the 1920s the advertiser-supported model became pervasive, leading the way for the growth of CBS and the two NBC radio networks, which came to dominate listener time and attention. Rural electrification in the 1930s helped create more radio homes away from the cities. By 1930, 40% of all homes had a radio; by 1938, radio penetration had jumped to 82%.

By the 1930s, mediated culture had transformed American life. Americans all listened to the same recording artists—Bing Crosby and Rudy Vallee; they all listened to the same radio shows—Amos 'n' Andy and Gene Autry; and they all went to theatres to see the same movie stars—James Cagney and Marlene Dietrich.

Thus, while Americans still studied Shakespeare and Longfellow in school, they spent far more time with Jack Benny and The Lone Ranger.

D. Media education history

While school curricula were largely unaffected by this cultural transformation, authors and advocacy groups made the case for their preferred media. Baker has identified educational media artifacts dating back to the early 20th century (Baker, n.d.). In 1917, Ernest A. Dench published a book, *Motion Picture Education*. The 1922 book *Film: Its use in popular education,* noted that "The children of to-day are such habitual Cinema-goers that too much cinematograph is to be discouraged, but the film used in proper perspective in the schools will excite and increase interest in science, industry, art, geography, travel, history, biography, and literature" (Jackson-Wrigley, 1922, p. 11). One suggested use, for composition, could have been taken from a contemporary media literacy course: " … a portion of the story be shown, and that when the children have returned to the school they should be asked to invent a title or to summarize the film as far as it has been shown, and complete it according to their own ideas. At a future sitting the remaining portion of the film would be exhibited and the children would then compare it with their own efforts" (pp. 27-28).

The predominant flavor of media literacy education in the early 20th century took the form of educators advocating use of media in education, such as that

offered by *Educational Screen*, a magazine launched in 1922, that:

> … is published to give American education, and every American who believes education important, the thing that they have needed ever since the so-called "visual movement" started—namely, a magazine devoted to the educational cause and to no other; a magazine distinctly intellectual and critical, rather than commercial and propagandist; a magazine written and produced exclusively by those whose scholarly training, experience qualify them to discuss educational matters. (Seattler, 2004, p. 163)

Outside of schools, some communities, churches, or other organizations formed their own listener guilds to advise members on quality programs to listen to and advocate for certain kinds of programs. This kind of organization would eventually become common for public church-licensed stations across the U.S.

In the 1960s the formal study of film became a new subject of instruction in schools, particularly in English classes, where films were examined alongside traditional narrative forms like novels and plays. During this time, film scholarship increased in quality and quantity. While earlier books like Knight's *The Liveliest Art* (1957) were mostly descriptive histories, new scholarship offered ways to understand how films created meaning within cultural or aesthetic contexts. While films are generally a commercial product created by a team of technicians, the auteur theory, popularized by Andrew Sarris (1968), held that the director was most often the author of a film, and that some directors developed styles of themes, storytelling structures, or plastic elements that could be distinctly personal. For example, Orson Welles, trained in the theatre, often used long takes and deep focus to develop a scene, using camera and actor movement to create meaning. As an illustration of a thematic interpretation of auteur theory, consider how director Frank Capra used fables of the common man to show triumph over the adverse economic conditions of the 1930s economic depression in films like *It Happened One Night* and *Meet John Doe*.

Genre theory, borrowing from earlier structuralist analyses like Cawelti's *The Six Gun Mystique* (1971), held that genres implicitly promised audiences certain narrative structures and motifs, which could be respected for a classic film, or stretched to create new kinds of meaning. For example, one structure implicit in the film musical is the story of discovered romance, then working through antagonism and conflict on the way to a mythical marriage, symbolically consummated by dancing at the end. While this is the structure of all Fred Astaire and Ginger Rogers films, the genre was tweaked in 1940's *The Barkleys of Broadway*, which begins with the couple married and bickering. Film westerns grew darker and more complex in the 1960s as a reflection of a more complicated, ambiguous world. These kinds of structures were explored by Kaminsky (1974) and Feuer (1982).

Schatz (1988), building on both auteur theory and genre theory, looked at institutional constraints and opportunities, making the case that the studio can be the "author" of certain films.

Film theory became more accessible, as early works by authors like Sergei Eisenstein (1949) and Andre Bazin (1967) were reprinted and read in the classroom. Students could read about Eisenstein's theories of montage, then create their own short 8mm films to test them. Many a baby carriage has been pushed down the steps and filmed by students, eager to recreate the Odessa Steps sequence from the film *Battleship Potemkin*. Indeed, this very homage has appeared in feature films created by authors who formally studied film theory, history, and criticism, ranging from Woody Allen (*Love and Death*) and Brian de Palma (*The Untouchables*). Films on videotape or videodisc could be viewed repeatedly and analyzed in slow motion or frame-by-frame. Films became more widely available, as schools built libraries of films on tape and as video rental stores sprouted across the country. For the first time it was possible for an enthusiast to own a collection of favorite films.

Foreign and independent filmmakers, trained in film theory and criticism and taking advantage of lower cost 16mm cameras and a larger independent film distribution system, put these principles into action in feature films that reached ever-larger audiences. In France, Jean Luc Godard and Francois Truffaut started their careers as film writers at the journal *Les Cahiers du Cinema*. Godard's first feature film, *Breathless*, a deconstruction of the American gangster film genre, is filled with reflexive elements, like intentional jump cuts or scenes in which the characters directly address the camera. In the U.S., a new kind of filmmaker, trained in film school, became influential. Many of the "American New Wave," including filmmakers George

Lucas, Francis Ford Coppola, and Martin Scorsese, attended film school.

Studying films or television provided one path to greater media literacy. But others found value in teaching production work. In the mid-1960s, *Media Now*, a pioneer program in Red Oak, Iowa, arose out of the need to share audio-visual resources across several school districts. *Media Now* was developed by middle school teacher Bill Horner and AV specialist Ron Curtis, who received grant money to curate audiovisual resources and to develop original materials. By 1968 the focus turned to developing a high school curriculum. The program eventually comprised a student workbook, a student book of readings, a teacher guide, a media dictionary, and a library of 50 hands-on exercises, which were physically shipped to participating schools. According to Jensen, "the package on 'Lighting' contained a Styrofoam head plus a book of activities on how to light it for various emotional effects (dramatic, scary, etc.) The 'Basic Camera' package included a kit to make your own camera plus a hand viewer to look at your film!" (2002).

Media Now was based upon seven modules: media hardware, media production, media genre, media evaluation, media interpretation, media aesthetics, and media presentation. The modules could be flexibly deployed in a semester-long course, as part of a related course, or as independent study materials.

Fellow Iowan, media activist, and Federal Communications Commissioner Nicholas Johnson facilitated a grant that allowed *Media Now* to scale nationally. The program was eventually used in 500 school districts across the nation.

An evaluation study of *Media Now* by Curtis (1975) found that after completing the program, "student usage of media had improved attitudes toward school and that students selected a greater diversity of program types" (p. 1).

Inspired by the work of Marshall McLuhan, John Culkin, S. J., in 1964 wrote a film studies curriculum as part of earning the doctorate in the school of Education at Harvard University. Culkin developed a relationship with McLuhan, popularized his work, and helped bring him to Fordham University, where Culkin served on the faculty. There he developed a curriculum that brought inquiry about film, television, and other mass media into humanities and arts courses. In 1969 Culkin left Fordham and found-ed The Center for Understanding Media, a stand-alone organization dedicated to teaching media literacy education. Through this organization, Culkin was able to reach a national audience with his ideas about media literacy education.

One program that Culkin's organization eventually reached was the Mamaroneck school system in suburban New York. A "perfect storm" of the right change agents in the school system (including a principal with a background in educational radio), progressive parents (many active in the arts), and a state grant helped purchase a complete television studio and distribution system in 1966. What made the Mamaroneck experiment stand out was that, while television was used to distribute traditional teaching, it was primarily used as an "instrument of writing" (Moody, 1999). Children produced diverse shows, including news, instruction, and arts programs. Some of the positive outcomes were unanticipated: a dyslexic student found his first success in school through television production, while another used television to learn to speak without stuttering. In 1970, The Center for Understanding Media helped secure a $123,043 grant from the Ford Foundation to "to develop a school program to promote understanding media, especially television, film and photography. The new course was intended to draw upon skills, resources, and teaching experience which was at that time spread across the English, Music, and Art departments. Students would learn to analyze the media in terms of aesthetic, economical, sociologic and psychological" factors (Moody, 1999, p. 98). Photography, film and television were included, and the curriculum was broadened to reach more students. While there was no formal evaluation, anecdotal evidence presented by Moody suggests the program to be successful.

While the Red Oak and Mamaroneck programs have received the most attention, countless educators across the country brought media literacy education to their students through production work and critical analysis assignments. But these educators ofen worked along, blazing their own trails. But scholars started addressing the issues in more formal ways, often with empirical tests heralding a new maturity. While individuals used media literacy education in limited, applied ways, the new scholarship helped define the breadth of the field and disseminate best practices. it also helped to legitimize the study of media literacy education in the classroom.

4. Searching for Commonality

In Buckingham's view, the key concepts around media education are production, language, representation, and audiences. "Production" is based upon the concept that "media texts are consciously manufactured" (2003, p. 54). At the heart of an inquiry on production is research and a close look at the economic motives for creating the message. "Language" includes both verbal languages as well as semiotic ones; the general "rules" for constructing meaning in a given medium, as for example, in editing a film, increasing tension by alternating shots and speeding up the pace of cutting between them. Or, in cinematography, by suggesting psychological isolation for a character by shooting her with a telephoto lens with shallow depth of field. "Representation" has to do with presentation of stereotypes, what is shown and what is omitted from the message, or bias and objectivity evident in the message. "Audiences" has to do with how the audience is addressed, which groups are targeted by the message, how the audience finds and uses the text in its daily life.

Kellner & Share (2007) divide the field of media education into four different approaches. The "powerful media" model is ascribed to Postman (1985). This view holds that the media (television in particular) are powerful in part because audiences are passive, and also because of the time and attention our culture gives media messages.

The second approach is through media arts education—the notion that learning to construct media messages implicitly teaches media literacy. The authors note that while learning media production can be valuable, it is not sufficient to teach media literacy without a critical orientation, noting "Many of these programs tend to unproblematically teach students the technical skills to merely reproduce hegemonic representations with little awareness of ideological implications or any type of social critique" (Kellner & Share, 2005, p. 61).

The third approach, media literacy movement, "attempts to expand the notion of literacy to include popular culture and multiple forms of media (music, video, Internet, advertising, etc.) while still working within a print literacy tradition" (p. 61). This tradition is criticized for being too objective and neutral, rather than being an agent of change, a hostage of its "con-servative base that does not engage the political dimensions of education and especially literacy" (p. 61).

Critical media literacy, the fourth approach, combines elements of the previous three, "but focuses on ideology critique and analyzing the politics of representation of crucial dimensions of gender, race, class, and sexuality; incorporating alternative media production; and expanding textual analysis to include issues of social context, control, resistance, and pleasure" (p. 62). The audience here is viewed as active and always exploring the link between power and information.

Taking a more applied position, Hobbs (2011) uses "five communication competencies as fundamental literacy practices that are now part of learning across all the subject areas" (p. 12). These are:

- ACCESS. Finding and sharing appropriate and relevant information and using media texts and technology tools well.
- ANALYZE. Using critical thinking to analyze message purpose, target audience, quality, veracity, credibility, point of view, and potential effects or consequences of messages.
- CREATE. Composing or generating content using creativity and confidence in self-expression, with awareness of purpose, audience and composition techniques.
- REFLECT. Considering the impact of media messages and technology tools upon our thinking and actions in daily life and applying social responsibility and ethical principles to our own identity, communication behavior, and conduct.
- ACT. Working individually and collaboratively to share knowledge and solve problems in the family, the workplace, and the community, and participating as a member of a community at local, regional, national, and international levels. (p. 12)

"Access is always media specific" writes Hobbs (2011, p. 13). For example, video production involves disparate activities such as formatting a memory chip, learning to focus a zoom lens, connecting a microphone, and exporting footage to a computer. These "basic competencies" are necessary but not sufficient conditions for making a successful video. Hobbs notes "most of us tend to learn the access skills we need to use on a day-to-day basis . . . both teachers

and students need time to play with the new tools, messing around and exploring so that they can continue to develop particular access skills when they need them" (p. 14).

The "analyze" dimension is the most multi-dimensional. Hobbs says this is "considering the author, purpose, and point of view to understand how they are constructed and the assumptions that underpin them" (p. 14). Multiple, sometimes overlapping critical approaches can be used. A feminist reading of a music video? Sure. A Marxist analysis of the financial support of a blog? You bet. A Freudian reading of a Hitchcock film? Fair game. This openness also leads to some of media literacy's biggest criticisms. When an English class works through Shakespeare's *Romeo and Juliet* and then watches a film of it on Friday as a reward, there's no explicit analysis involved. There's such broad room for analysis, one must put a lot of trust in the educator. Critics argue that this approach lacks rigor or structure.

Analysis can be daunting because it will "inevitably involve issues of values and ideology" (Hobbs, 2011, p. 15). This "embedded point of view" can create conflict when values collide. For example, a documentary on hydraulic fractioning or "fracking" may seem anti-environment to some, while against domestic energy production to another.

The "communicate" dimension goes back to the roots to the media literacy movement. The idea here is to learn the codes that create meaning in a text, implicitly making them more transparent when they're encountered in an existing text. For example, a student may learn that a shot composed with a low camera angle makes a character appear more powerful. After making a film, the student may be more aware of camera angles in films and television shows.

The "reflect" dimension offers an opportunity to consider ethics and social responsibility in media messages. This might include inquiry into digital etiquette, ethics of remixing or sharing, or a consideration of how different ethnic groups are represented in the media. When any student can instantly publish to a worldwide audience the message is potentially powerful. Reflection helps assure ethical, purposive communication.

"Act" is the dimension that facilitates the solving of real-world problems through communication, says Hobbs. Working through using media for personal communication helps create effective communicators that are connected to something larger—whether it's a social group at school, an interest group, family, or government.

When the field of media literacy education was developing, "media" largely meant television, radio, and film. As the Internet has become an important message delivery channel, digital literacy has become an important part of overall media literacy. But computer literacy initially was more of a threat to media literacy education than it was a component.

5. Computer literacy

The earliest computers, such as the World War II-era ENIAC 1, were developed for technical calculations, such as calculating trajectories for artillery. The ENIAC was hardly user-friendly, weighing 30 tons, using 200 kilowatts of electricity, and deploying 19,000 vacuum tubes (Weik, 1961). Computers would largely remain in the province of engineers throughout the 1970s, until the first hobbyist personal computers were developed and marketed. In the public mind, computers were more science fiction than science fact.

Between 1977 and 1980, personal computers gained traction in the marketplace and in our culture. In the first wave, computers were primarily sold to hobbyists, who would use them to play games and write simple programs. They often utilized an ordinary television set for their display. Popular models from this era included the Apple II, the Commodore Vic20 and 64, the Atari 400 and 800, and various models from Tandy/Radio Shack. These computers could be expensive (a 1977 Apple II with 4k of RAM retailed for $1298, while one with 48k RAM cost $2638) (Macfilos).

Notions of "literacy" around these early computers can be extracted from contemporary messages. A 1980 magazine ad for Apple computers reads:

> Apple is a real computer, right to the core. So just like big computers, it manages data, crunches numbers, keeps records, processes your information, and prints reports. You concentrate on what you do best. And let Apple do

the rest. Apple makes that easy with three programming languages—including Pascal—that lets you be your own software expert. (Modern Mechanix, 2007)

Early attempts to operationalize or measure computer literacy reflected these uses. Johnson, Anderson, Hansen, and Klassen (1980), funded by the National Science Foundation, performed a meta-analysis of knowledge, skills, and abilities taught in precollege computer literacy classes. After combing through more than 50 syllabi and generating more than 2,000 test items, the study summarized a subset of 63 items into six categories: hardware; programming and algorithms; software and data processing; applications; impact; and attitudes, values, and motivation. Here's a sample question from the hardware section: "Identify the five major components of a computer: input equipment, memory unit, control unit, arithmetic unit, output equipment." In the programming and algorithms section, sample questions included "correct errors in an improperly functioning algorithm" and "develop an algorithm for solving a specific problem." Under software and data processing, a question asks "select an appropriate attribute for ordering of data for a particular task." These kinds of knowledge have very little to do with the concept of media literacy.

In the mid-1980s the IBM PC running MS-DOS became the dominant computer platform. While personal computers continued to be used for a wide variety of tasks, including programming and gaming, this era marked the ascendance of office applications, especially word processing, database, spreadsheet, and presentation applications. Prior to IBM's entry, the hardware landscape was notable for a lack of technical standards. The IBM PC and MS-DOS operating system standard brought a "critical mass" to personal computing. Developers quickly moved to support this new standard, particularly with business applications. The default 80-character monitor configuration facilitated word processing. And other manufacturers including Compaq quickly started shipping "clones" or compatible computers, further cementing the standard. Offices and some homes rushed to place these computers into service (Koenig, 2011).

In this era, notions of computer literacy shifted. While programming and technical knowledge were previously dominant as constructs of literacy, the new emphasis was on the ability to use standard office applications, particularly word processing, spreadsheet, and database software.

The Office of Technology Assessment explicitly linked media literacy to computer literacy in its 1982 report, stating, "media literacy will include computer literacy—the ability of individuals to use an information system to help them at home and at work. While individuals will not need to be experts in computer science, they will need to know how to use computer programs and information banks and how to evaluate critically the results they get" (p. 19).

In 1985, Haigh wrote "Five years ago, I would have said that anyone who was going to use a computer as a tool would have to learn to program, but this is no longer true" (p. 163). Haigh then listed four kinds of software packages that people would use: word processing ("can effectively introduce students to the computer as a tool, and can become a first step toward achieving widespread computer literacy"), spreadsheets, graphics, and information retrieval. Writing before email and the public Internet were widely utilized, Haigh wrote, "Indeed, it is in communication rather than in mathematics where the computer may eventually make its most important educational contribution" (p. 166). This statement was prescient, especially in light of the fact that most computers were not connected to networks. The Hayes Smartmodem, the first widely available way to easily go online (via telephone line) was introduced in 1981 for $279 (Infoworld, 1981, p. 9). Yet, even with a modem, there were relatively few places to connect. And, at 300 baud, the connection is painfully slow, taking approximately three seconds to fill one 80-character line with text (Cavalier, 2007).

In the mid-1990s, notions of computer literacy were again revised to account for the emergence of the Internet. Under this model, using search engines, accessing information online, and even building web sites were seen as essential skills for people who were "computer literate." Congruent with this was the emergence of a more media-rich desktop computer experience, which included graphics production, multimedia content delivered through CD-ROMs, and use of email.

While this was a new way for the general public to use computers, technologists had long been envisioning a tool that would serve as an information appliance. This is the beginning of a conceptualization of computer literacy that is directly connected to media literacy traditions.

"As we may think" was the title of a 1945 essay by Vannevar Bush, published in the *Atlantic Monthly*. In it, Bush proposed a futuristic device, the memex,

which in some ways foreshadowed today's Internet-connected computers.

While Bush largely got the details wrong (he was keen on advances in the analog technology of the day, such as dry photo imaging, telephone exchanges, and punched cards), he basically posited modern hypertext:

> A memex is a device in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility. It is an enlarged intimate supplement to his memory.
>
> It consists of a desk, and while it can presumably be operated from a distance, it is primarily the piece of furniture at which he works. On the top are slanting translucent screens, on which material can be projected for convenient reading. There is a keyboard, and sets of buttons and levers. Otherwise it looks like an ordinary desk.
>
> In one end is the stored material. The matter of bulk is well taken care of by improved microfilm. Only a small part of the interior of the memex is devoted to storage, the rest to mechanism. Yet if the user inserted 5000 pages of material a day it would take him hundreds of years to fill the repository, so he can be profligate and enter material freely.
>
> Most of the memex contents are purchased on microfilm ready for insertion. Books of all sorts, pictures, current periodicals, newspapers are thus obtained and dropped into place. Business correspondence takes the same path. And there is provision for direct entry. On the top of the memex is a transparent platen. On this are placed longhand notes, photographs, memoranda, all sorts of things. When one is in place, the depression of a lever causes it to be photographed onto the next blank space in a section of the memex film, dry photography being employed. (1945, Section 6)

Another pioneer who predicted computers that could access databases, interlink records, and create a unique path of discovery was Ted Nelson. In his self-published 1987 books *Computer Lib/Dream Machines* (they were combined in one volume, one reading from the front cover, the other from the back), Nelson described a utopian world of computer use and learning, including the concepts of hypertext, stretchtext (which gets shorter or longer according to the user's interests), hypergrams (graphics that yield detailed or ancillary views on demand), hypermaps, and thinkertoys ("a computer display system that helps you envision com-

plex alternatives") (p. 330). Nelson's self-published and hand-illustrated tome was a flaming arrow shot over the bow of the staid computer industry of the time, which had not yet entered consumer markets.

Nelson further articulated his vision, which dated back to 1960, in *Literary Machines* (1980). His dream, the Xanadu project, is remarkably like today's Internet, with some key differences. Xanadu was envisioned with two-way linking between documents, making it even more interconnected than the Internet. Because of Xanadu's structure, only one version of every document need be published. All references to that document call that very file. Nelson imagined strong intellectual property protection for authors on Xanadu, with links triggering micropayments between users according to each document's use and popularity. While Nelson's ideas have gained traction in the world of ideas, they have never been viable in the marketplace. Indeed, *The Economist* compared Nelson to Charles Babbage, who envisioned elaborate mechanical computers but could never build one that worked (2000).

While Nelson has continued to tinker with Xanadu, the social web has grown up to become its real-world alternative. The key characteristics of the social web are interconnectedness of people with similar interests ("friends" or "followers") and the ability of anyone to publish—whether a 140-character "tweet" on Twitter, comments on a news site, a Facebook status update, or long-form content on a blog or wiki.

Changes in the web have brought with them changes in how people operationalize computer literacy. Epperson (2010) surveyed schools with computer literacy courses, and found traditional office skills (taught in 83.7% of courses) still dominant, followed by technical terminology (63%), computer software (61.7%), and computer hardware (58.2%). This vocational approach is to be expected. But also prominent in surveyed computer literacy courses was information literacy (taught in 46.7% of courses), impact of technology on societal issues (44.3%), and intellectual property issues (43.9%). Programming was only taught in 26.9% of the courses.

Information literacy processes to help people find, process, and use information are at the heart of the Big6 model, which dates as far back as Eisenberg and Berkowitz's work (1999). Activities at the core of the Big6 model include task definition, information seeking strategies, location and access, use of information, synthesis, and evaluation. This process is technology-agnostic, making it relatively evergreen; it would be

equally useful for a trip to the library or an Internet search query.

As teaching of programming and office applications have declined, "computer literacy" has morphed into "information literacy." Another phrase, "digital literacy," has gained traction among media literacy advocates who spend most of their energy teaching awareness of a wide range of media in the digital domain.

6. Empirical Studies

While media literacy education advocates have published abundantly, there are relatively few data-based studies extant. There are many possible reasons for this, including gaining all of the necessary assents to work with students—human subjects not of majority age. While it's easy to get behind media literacy education concepts, the devil is in the details. What are the dependent variables? And perhaps most importantly, how is the media literacy education implemented? There's a world of difference between a good teacher and a bad one, just as there is between a successful lesson plan and a poor one. In short, designing a rigorous study and measuring impact is difficult and beyond the reach of many researchers.

Still, there is evidence across the literature that media literacy education can be effective.

A. Interpersonal interventions

Potter has summarized the research around how children consume media at home (2013). Research on coviewing media content with an adult shows mixed results. Salomon (1977) found that coviewing with parents resulted in increased understanding of educational content. Nathanson (2001) found that children reported greater enjoyment of programs when coviewing with parents. But other studies have found negative outcomes of coviewing, such as increased aggression in children when exposed to television violence (Nathanson, 1999) or increases in children's believing the TV characters are like real people (Messaris & Kerr, 1984). A general negative outcome from coviewing is that the presence of an adult authority figure during shows that feature adult themes functions as a kind of "endorsement," implicitly approving violence in the mind of the child, for example (Nathanson, 2002). In the case of older adolescents who viewed together, Nathanson found that coviewing could lead to antisocial behavior (2001).

Restrictive mediation is a strategy in which an adult places inappropriate media content "off limits" to a child. While this can be an effective strategy, it can also have the effect of making the forbidden content seem desirable and can lead to negative attitudes toward the parent. Further, restrictive mediation can lead the child to seek the content elsewhere, such as at a friend's house (Nathanson, 2002).

Active mediation is a media literacy strategy in which an adult consumes media content with a child, using the common experience as a springboard for discussion about the meaning of the text, understanding of commercial messages and other cognitive or affective variables. Studies have generally found positive impacts for active mediation, in particular for reducing negative effects. Parents can influence how children interpret messages (Austin, 1993), and parental involvement helps reduce negative effects from exposure to violence (Singer, Singer, & Rapaczynski, 1984). Children who watch television with an adult can be more skeptical about news (Austin, 1993) and show more understanding of fictional narratives (Desmond et al, 1985). The negative effects from scary movies can be lessened for some children via active mediation (Cantor, 2001). Reid (1979) found that advertising effects can be reduced through active mediation.

Media literacy groups have created resource materials to facilitate active mediation. The National Association for Media Literacy Education has a one-page guide, "Key questions to ask when analyzing media messages," at http://bit.ly/9sgM7C. The Center for Media Literacy offers "Five key questions for media literacy" at http://bit.ly/ZpzjXO.

B. Assessing school programs

In schools, students are graded and teachers are evaluated. Assessment is integral to the activities that happen at school. But in the case of media literacy education it can be difficult to ascribe a causal relationship between a classroom activity and a learning outcome. As Christ and Potter ask:

> The troublesome question is this: How is it decided that a student is becoming or has become media literate? Is a "B" average in all

courses the mark of literacy or are assumptions of literacy tested with assessment strategies? Also, what should be assessed? Knowledge? Skills? Behaviors? Attitudes? Affect? Values? (1998, p. 11)

Hobbs and Frost (2003) note that early attempts to measure the success of media literacy education rely upon short-term interventions and immediately measured effects. These studies typically would offer a short course of media literacy training, then test students for short-term recall. The first school-based, long-term study of media literacy education was conducted in Australia by Quin and McMahon (1995) involving 1,500 students. Hobbs and Frost followed that study with similar inquiry in the United States, using a 12-week course in media literacy education about understanding news as the treatment condition in a quasi-experimental design. The study found that students exposed to the media literacy curriculum outperformed students in the control condition in terms of understanding the message, target audience, representation in the story, similarities to the genre, and points of view expressed (Hobbs & Frost, 2003).

Media literacy education in the context of a language arts curriculum was next examined by Hobbs (2007). This study offered an assessment of a media literacy education program that was taught in high school grade 11 English classes in Concord, New Hampshire schools. The study uses multiple methods, including interviews with teachers and students, classroom observation, and a quasi-experimental study conducted over a school year. In a quasi-experimental design, instead of using random assignment between treatment and control groups, naturally-occurring groups are selected. Compared to true experiments, quasi-experiments generally offer less control (lower internal validity) but offer a more lifelike setting (higher external validity). Hobbs found that students exposed to the media literacy education condition showed significant improvements in reading comprehension, critical reading, and quantity and quality of writing. As a check on the results, the improvements were still observed after controlling for the students' grade point averages.

C. Media literacy education in health

Perhaps the most-researched aspect of media literacy education addresses how the media form images of health and body image. Irving, DuPen, and Berel (1998) used a one-time training session to teach high school girls about media representations of attractiveness. The

study found that students who had the training were less likely to internalize a "thin" beauty standard and showed lower perceived realism of media beauty images. College-age women were the subject of a study by Coughlin and Kalodner (2006). Two groups, one at risk for eating disorders and the other not at risk, were administered a two-session media literacy training course. The study found no change in the not-at-risk group, but the at-risk group reported significantly less body dissatisfaction, drive for thinness, feelings of ineffectiveness, and internalization of societal standards of beauty. The at-risk group showed no change in three other indicators of eating disorders. The study concluded "media literacy may be an effective secondary prevention intervention for eating disorders" (2006).

Using an experimental design, Kusel (1999) found that training grade-school girls about how commercials present beauty (for example, extremely thin models and flawless skin) along with other media literacy tools, resulted in improved diet, body satisfaction, self-esteem, ideal body stereotype internalization, and beliefs about the media.

In a study that compared the efficacy of self-esteem training and media literacy education on risk factors for eating disorders, eighth-grade boys and girls were administered one of three conditions (self-esteem training, media literacy education, and control group) and measured at three times over a three-month period (Wade, Davidson, & O'Dea, 2003). Students in the media literacy condition showed lower concern for body weight than did students in the other two conditions.

In a study by Hinden, Contento, and Gussow (2004), parents of children in Head Start programs were given media literacy training over a four-week period. The program was designed to help the parents manage food requests from their children. The researchers found that dieticians could adequately train the parents and that the program significantly improved parental knowledge about nutritional issues (such as reading and understanding food labels) as well as knowledge of food commercials, and TV mediation strategies.

Watson and Vaughn (2006) explored the length of the media literacy education intervention as applied to female body image. They found that all media literacy treatments were effective in improving body image, but the longer-term interventions (four sessions one week apart) were most effective.

Media literacy education has also been used to change attitudes about drug and alcohol use among

children and adolescents. Austin and Johnson (1997) used an experimental setting to explore how media literacy education would affect the attitudes of third graders toward drinking of alcohol. They found positive effects for media literacy education, particularly for girls, and that a treatment featuring alcohol-specific ads was most effective.

Gonzalez, Glik, Davoudi, and Ang (2004) explored the role of media literacy education in attitudes and behaviors of adolescents toward tobacco use. The study used an eight-week weekly intervention. The results showed not only a significant change in attitudes in the treatment group, but also a reduction in tobacco use. Primak, Gold, Land, and Fine (2006) measured smoking behavior and student scores on a smoking literacy scale among adolescents and explored the relationships between the two. The study found that students with higher smoking literacy were less likely to smoke, implicitly providing support for media literacy education on smoking issues.

Using a quasi-experimental method, Pinkleton, Weintrab, Cohen, Miller, and Fitzgerald (2007) explored media literacy messages about tobacco use with students. The authors found differential effects between non-smokers and smokers. Non-smokers were more likely to be influenced in the early stages of the intervention, while smokers were more likely to be influenced in later stages. The study found overall support for the efficacy of media literacy education on smoking reduction and/or cessation.

Media literacy education varies widely, whether it's where the interventions are delivered, their duration and intensity, or their overall effectiveness. Overall, however, there is good support for the value for media literacy education, whether it's delivered in schools or one-on-one by a parent or other adult mentor.

7. Looking Forward

A construct is a bundle of variables that can be loosely assembled to form a concept. For example, the notion of political conservatism was popularly summarized by Wisconsin governor Lee Dreyfus, who said the federal government's role should be limited to three things: "defending our shores, delivering our mail, and staying the hell out of our lives." But today, conservative values have changed and splintered; some conservatives have gone the way of the Tea Party and libertarianism, while others are active in intensely personal social issues such as family preservation and reproductive rights. Somehow, though, they're all conservatives.

Constructs change, and so they have with media literacy education. Today the most sweeping change is the digital transformation of virtually all communications. Computer literacy, once entirely the realm of programming, is today broadly conceived in a way that's relevant to all computer users. Today, we all need to be computer literate. From the library science field comes the concept of "information literacy," intimately tied to media literacy but beyond the scope of this essay. One aspect of information literacy is "crap detection," or the ability to vet a fragment of information based upon context and research (Rheingold, 2012). We all need a kind of personal sense that says, don't share that information, don't click on that link from that unsolicited email. As we share news and information daily through social networks, and as these fragments of knowledge become viral, crap detection has become an essential 21st century skill.

Directly related to information literacy is news literacy, which takes up many of the issues associated with media literacy, such as representation. News literacy applies those concepts to the contemporary practice of journalism. Who is a journalist today? It used to be simple to understand. A small subset of highly trained information workers, all of whom subscribed to the same set of values: objectivity, layered oversight of writing and editing, and core values including timeliness, impact, proximity, honesty. Their work was monetized by advertising and direct sale. They did not have a position to defend or an opinion in the discussion. While we do not license journalists in the U.S., everyone used to know who was a journalist and who was not. Fast forward to today. Bloggers, pure-play digital publishers, social gadflies, and celebrities who are famous simply for being famous—these are the influencers who compete with journalists for our attention. Many people use Twitter or Facebook as their news feed today, relying on an army of untrained but eager social sharers to spread news.

While this by itself doesn't seem like cause for the end of the world, it's also a terrible way for citizens to run a democracy. Stories about reality show contestants multiply, while the school board remains uncovered. Cat pictures go viral, while otherwise intelligent people think that Kofi Annan is a drink at Starbucks. Sadly, while traditional publishers struggle to make digital distribution pay, it's never been easier or cheaper for the common man or woman to jump in and publish for him or herself.

Thought leaders eagerly try to fill this void. Stony Brook University School of Journalism has launched its Center for News Literacy. Educator Dan Gillmor has released a how-to guidebook, website, and open community called *Mediactive* (2010), in which he hopes to elevate the quality of the new pure-play digital publishers to proudly take their seats alongside traditional journalists in the marketplace of ideas.

And new kinds of publishers are creating new kinds of journalism—hyperlocals, industry verticals, aggregators, specialized curators, ventures that previously fell below the noise floor, stuff that could not pay for itself before the Internet existed.

There's still a lot of junk out there. And there always will be. So our first line of defense is an educated citizen, someone who understands how the mediated world works. Someone who will think before they click. Someone who has some sense of media literacy.

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Additional Resources

In addition to the material reviewed in Professor Kamerer's essay, many other resources exist, both on

online and in research conducted by scholars around the world. The next sections present, first, web-based resources—the web sites of organizations dedicated to media literacy—and, second, research studies and policy statements about media literacy.

Online resources

A&E Classroom. http://www.aetv.com/class/medialiteracy/

Cable in the Classroom. http://www.ciconline.org/Resource/media-literacy-101

Center for Social Media. http://www.centerforsocialmedia.org/fair-use/related-materials/codes/fair-use-and-media-literacy-education

Center for Media Literacy. http://www.medialit.org/

Citizens for Media Literacy. http://www.main.nc.us/cml/

Community Media Center. http://www.grcmc.org/medialit/what.php

Consortium for Media Literacy. http://www.consortium-formedialiteracy.org/

Discovery Education. Media Literacy. http://web2012.discoveryeducation.com/media_literacy.cfm

European Association for Viewer's Interests. A Journey to Media Literacy (video). http://vimeo.com/37670223

European Commission. Media Programme. http://ec.europa.eu/\culture/media/media-literacy/index_en.htm

Girls Inc. Media Literacy. http://www.girlsinc.org/about/programs/media-literacy.html

International Clearinghouse on Children, Youth, & Media at NORDICOM. http://www.nordicom.gu.se/clearinghouse.php

Ithaca College. Project Look Sharp. http://www.ithaca.edu/looksharp/?action=about

Jesuit Communication Project. http://jcp.proscenia.net/

Media Literacy Project. http://medialiteracyproject.org/

Media Literacy.Com. http://www.medialiteracy.com/

Media Education Lab (Renee Hobbs). http://mediaeducationlab.com/about/renee-hobbs

NAMLE: National Association for Media Literacy Education. http://namle.net/

Partnership for 21st Century Skills. http://www.p21.org/

PBS Teachers: Digital Media Literacy. http://www.pbs.org/teachers/digital-media-literacy/

Signis (World Catholic Association for Communication): http://www.signis.net/rubrique.php3?id_rubrique=46.

The Academy of Motion Picture Arts and Sciences. Teacher's Guide. http://www.oscars.org/education-outreach/teachersguide/medialiteracy/index.html

The Henry J. Kaiser Family Foundation. http://www.kff.org/entmedia/upload/key-facts-media-literacy.pdf

The Journal of Media Literacy. http://journalofmedialiteracy.org/

UNESCO. Media and Information Literacy Clearinghouse. http://milunesco.unaoc.org/

University of Connecticut. Northeast Media Literacy Conference. http://medialiteracy.education.uconn.edu/

University of Oregon. Media Literacy Online Project. http://mlop.proscenia.net/

Wikiversity. Media Literacy. (This document was originally developed by graduate students.). http://en.wikiversity.org/wiki/Media_literacy

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