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Digital Soapboxes: Understanding the Growing Presence of Advocacy and Commercial Sites on the Web

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Advocacy and commercial websites are quickly becoming primary sources of information for students completing academic research projects, and it appears these sites are not always recognized by students as trying to persuade or market to them. Advocacy and commercial websites can appear credible, but they have agendas, limited points of view, and biases that students need to learn to recognize and acknowledge. Therefore, it is critical that students learn strategies that help them distinguish these sites from others on the Internet.
New technologies always affect the way that we perceive and participate in the world around us. When the automobile first became available to the public at large, the physical scope of the country seemed to shrink as people were able to travel farther and farther in shorter and shorter amounts of time. Like the automobile, the Internet has dramatically shrunk our world.

Kristen Chamberlain (2004, p. 239)

Yesterday’s students trusted their collections of encyclopedias as primary sources of information. Today’s students instead trust the Internet, especially information gateways like Google and Yahoo and comprehensive sources like Wikipedia, Reference.com and Answers.com. Students are particularly reliant on search engine returns, despite the fact that these sites have been criticized for preferencing certain types of information, some of which is sponsored by advocacy or for-profit organizations. Comprehensive sites like Wikipedia have also been criticized as they allow or encourage collaborative authoring and therefore contain information that is regularly changed. Giles (2006) in his hotly contested article, “Internet Encyclopaedias Go Head to Head,” has countered this criticism and equated the currency and correctness of the information on some of these popular sites with information found in traditional print sources. However, it is more important to note that these sources and students’ reliance on them are not going anywhere. Take, for example, recent reports on Wikipedia that note the site “boasts more than 1.3 million articles and hundreds of thousands of visits each day” (MacLellan, 2006) and is the 37th most visited site on the Internet (Giles, 2006).

Students are confident in the information that they retrieve from the Internet, and they are even more comfortable with the quick and easy process of finding information through comprehensive websites and search engines like Google, Yahoo, and Ask.com. Fadel (2006) notes of her interviews with college students that many of them acknowledge they “don’t know where to turn [for information] on the Internet besides free search engines.” Even more controversial social networking sites, such as Facebook and
MySpace, are comfortable web spaces for students today. A 2006 study found that more than 80% of students actively involved in social networking on the Internet believe the web to be a safe space to find and share information (Clemmitt, 2006, p. 628). The Internet intersects all aspects of life for most of today’s students, so it is no wonder that it has influenced their researching and writing practices. Unfortunately, the information that is readily available for students today and the easy and comfortable nature of surfing the Internet for it have caused students to become reliant on certain sources, often uncritical of them and prone to committing acts of plagiarism.

But what about the safety and reliability of information on today’s Internet? Are students able to recognize websites and information on the web intentionally trying to persuade, advocate, or market to them? If not, how does this type of information affect their researching, writing and thinking practices? If not, what strategies can teachers use to help students better understand advocacy and commercial websites? In the end, if students are not educated about the growing presence of advocacy and commercial websites, then there stands to be a literacy crisis in the years to come as the Internet becomes even more persuasive and pervasive in our lives.

The Digital Information Explosion

Websites like Wikipedia and Google have certainly achieved a certain stature in our culture and in the information trade. In fact, Google’s own website administrators claim that they serve millions of users conducting more than a billion searches a day. Though specific data on Google’s influence is interestingly hard to find, Hammonds (2003) clarifies Google’s claims: “Google says that it processes more than 150 million searches a day, but the true number is probably much higher. According to Nielsen/NetRatings, 67.6 million people worldwide visited Google an average of 6.2 times [in December 2002 alone].” Another more recent report from Nielsen/NetRatings adds that the number of Google users in Japan alone totaled more than 14 million in April 2006, a statistic up 31% in just one year’s time, and ComScore Networks reports that 2.9 billion searches were conducted worldwide using Google in April 2006 (Google Users, 2006; Lipsman, 2006). Pervasive indeed.
Whereas many people visit a search engine or “just google it” for information on new or unfamiliar topics, others seem to use comprehensive websites and online encyclopedias like Wikipedia and Reference.com when they want information from what they perceive to be more definitive and credible sources. As noted earlier, studies are starting to show that websites such as Wikipedia might contain as many errors in the accuracy of information as their traditional print counterparts, yet this is not what concerns MacLellan (2006) and others. In fact, MacLellan notes the belief of many of Wikipedia’s users “that the collective knowledge of the site’s users [creates] a resource that stands up to traditional information sources for its depth, breadth and accuracy of information.” Therefore, the main concern is not in the information on Wikipedia pages or pages in other online encyclopedias; it is the information on “linked” or related pages often attached to them.

The Coming of Electronic Advocacy and Digital Commercialism

Citing a Wikipedia page for the city of Guelph, Ontario, MacLellan notes that the site includes links to advocacy groups and regularly hosts political viewpoints and has since 2004: “The site has been used by politicians and their supporters looking to get their message out. It became a major issue after the United States presidential election in 2004” (Saewyc in MacLellan, 2006). Whereas electronic advocacy and digital commercialism have maintained a presence on the Internet for some time, most agree these concepts came of age with the effective 2004 cyber-political campaign of Howard Dean and MoveOn.org that claimed millions of members and raised millions of dollars. The success over the past decade of advocacy websites, sites dedicated to causes for the chief purpose of changing public policy, such as MoveOn.org and Pressureworks.org (UK), as well as commercial websites, sites selling products and services such as Amazon.com and Ebay, have paved the way for the current age of electronic advocacy and digital commercialism. What challenges most users of the Internet is not identifying websites clearly designed to advocate or sell; it is navigating through sites like the Wikipedia site for the city of Guelph that serve multiple audiences and purposes and weave together reliable and current information with other information intended to advocate or sell.
The coming together of information and advocacy defines today’s Internet. For example, the American College of Nurse-Midwives (ACNM), the nation’s oldest health organization for women, re-launched its website (http://www.WithWomen.org) in 2005 in order to “draw more attention to the myriad of major issues in women’s health care” (Clarke, 2005). Executive Director of the ACNM Deanne Williams has stated the intent of the site is to “educate and activate,” and this dual role is clear as the site in one instance combines information on the access gap between white and African-American women to quality health care with links to reputable health care organizations like the Kaiser Family Foundation (Clarke). Websites such as WithWomen.org, MoveOn.org and Pressureworks.org have been designed to blend information and advocacy, and many other sites have been repurposed to expand their roles from primarily information sources to sites that merge information, advocacy and commerce.

Take, for example, the website for the highly respected organization, Amnesty International. One of Amnesty’s recent web projects, Make Some Noise, (http://noise.amnesty.org/site/c.adKIIVNsEkG/b.1199681/k.BE16/Home.htm) is labeled “a crossover between ecommerce and cyber-activism, encouraging users to get involved with Amnesty’s human rights agenda at the same time as buying exclusive content for their MP3 players” (Rubach, 2006). Zureik and Mowshowitz (2005) explain that today’s Internet has shifted the balance of power to consumers and this shift “brings with it increased potential for influence” over them (p. 47). Arguably, Amnesty’s Make Some Noise site does just that—invites the consumer into an environment of influence, an environment that blends information with advocacy and commerce. Zureik and Mowshowitz add regarding this part of the Internet’s expansion, “The rapid growth of e-commerce attests to the advantages of using Internet facilities to identify, reach, and persuade an audience” (p. 51).

With this rapid development of the Internet into a commercial and advocacy enterprise and with the lines between information, activism and commercialism purposefully distorted, it is no surprise then that students are regularly persuaded by ideas and information they find on the Internet. Students today place faith in the information that they find on the Internet because they believe it all to be reliable,
current and unbiased when only some of it may be. Further, this in many ways distorted information is being found regularly. An advocacy website for Lasik surgery patients, USAEyes.org, sponsored by the Council for Refractive Surgery Quality Assurance and promoting a site that offers “detailed and objective information,” has been visited by more than 3 million people (Hagele, 2005). Moreover, it appears that information found on the Internet is taken for granted. Charles DeSassure, Chair of the Computer Science Department at Tarrant County College in Texas, notes of the students filling today’s classrooms, “Students are growing up in an age when everything is electronic. . . . They text-message, carry Palm Pilots, tote laptops and download music on their iPods” (Fadel, 2006). For the most part, students do not remember life without computers in the classroom or in the library, and they trust their computers and the information and people they encounter on them via the Internet.

Impact of Advocacy and Commercial Websites

Despite the pervasiveness of the digital information age in the lives of today’s students, the Internet itself is still in its formative years of advocacy and commercialism (it took decades for technologies like the radio and television to develop a strong commercial and advocacy presence). However, the information from such sources is already having a significant impact on the thinking, researching and writing of today’s students.

In a 2005 study of 100 research essays submitted for a first-year composition course at a regional university in the upper Midwest, more than half (51%) of the 589 sources acknowledged by students were websites. Other sources included books (31%), articles from print and electronic databases (18%), government documents and personal interviews (less than 1%). The distribution of sources in this study shows students’ reliance on the Internet as their information source, and this reliance is not surprising. However, the types of websites referenced by students in this study highlight the growing presence of advocacy and commercial sites on today’s Internet. Specifically, nearly one-third of the websites (89 out of 300) acknowledged by students in this study have a clear advocacy or commercial purpose. Students in this study regularly referenced advocacy websites such as the Never Hit a Child Organization, the
Catholic Educator’s Resource Center and the Parent’s Television Council which is a website devoted to “promote and restore responsibility and decency to the entertainment industry in answer to America's demand for positive, family-oriented television programming” (McClure and Clink, in press).

For example, one student essay in this study is written on the topic of abortion and contains references to four books; however, the writer relies almost exclusively, as evidenced from the essay’s in-text citations, on information taken from one website, AbortionFacts.com (Our Mission, 1998). The mission statement of this self-labeled “facts” site claims the following:

Our mission is simple. We have brought together quality information on the abortion debate from many different sources. . . . We believe these facts point to an obvious conclusion. You are free to accept or reject this conclusion. We simply ask that whatever you do, do it on the basis of fact…this information is valuable to all members of society no matter which side of the abortion issue they find themselves. We ask nothing more than the opportunity to present factual information on abortion in an honest manner to thinking people.

With words and phrases such as “facts” (repeated three times), “quality information . . . from many different sources,” and “honest,” and omission of the “obvious conclusion,” it is no wonder that the student relies on this website for information. However, the small icon in the upper left-hand corner of the screen reveals the sponsor of this site, the pro-life organization Heritage House, whose own mission statement begins, “We are committed to the sanctity of life at all stages” (Our Mission, History, 2003).
In fact, many of the essays in this study reveal student reliance on data provided by advocacy groups or corporations in clear and biased support of their own ideas and products, yet it is likely that students in this study were misled by the sponsors or failed to pick up on their intentions.

(Mis)Use of Information from Advocacy and Commercial Websites

The regular use of information from advocacy sites such as I Want Clean Air, GunCite and Kentucky Fried Cruelty is noted throughout the 2005 study, and the following list contains just some examples of advocacy groups used but likely not fully understood as cause-related by students. These websites could and probably do initially appear credible (many end in .org—a domain name historically used by not-for-profit organizations), but they clearly have an agenda, limited point of view or bias that students need to be able to recognize:

- Citizens for a Safer Minnesota (http://www.endgunviolence.com/)
- Computer UFO Network (http://www.cufon.org/)
- The Crop Circular (http://www.lovely.clara.net/)
- Group for the Education of Animal Related Issues (http://www.geari.org/)
• Gun Cite (http://www.guncite.com/)
• Helping Animals (http://www.helpinganimals.com/)
• Humane Farming Association (http://www.hfa.org/about/index.html)
• I Want Clean Air (http://www.iwantcleanair.com/)
• Information Clearing House (http://www.informationclearinghouse.info/)
• Jobs Now Coalition (http://www.jobsnowcoalition.org/)
• Kentucky Fried Cruelty (http://kentuckyfriedcruelty.com/)
• National Alliance to End Homelessness (http://www.endhomelessness.org/)

It is clear from sources like these used by students in this study that the Internet has allowed groups with nearly every agenda imaginable to enjoy broader audiences than ever before; therefore, teachers need to help their students learn to distinguish and articulate the differences between information presented to inform and information presented to advocate or advertise.

Now, it might seem obvious that some of the websites in the above list are advocacy websites. Site names such as Kentucky Fried Cruelty and I Want Clean Air as well as website address names like endgunviolence.com and endhomelessness.com should be recognized as limited or biased in their viewpoints or in the information they present, yet students are regularly using information from these sites. Other site and address names in the above list, such as the Group for the Education of Animal Related Issues and the Information Clearing House as well as helpinganimals.com and jobsnowcoalition.org, are much less obvious. Interestingly, two of the websites on the above list—Helping Animals and Kentucky Fried Cruelty—are sponsored by People for the Ethical Treatment of Animals, more commonly known as PETA. However, if visitors to these sites have not heard of PETA or do not click the small PETA.org icon in the upper corner of the screen (see the green arrow on the following two screenshots), then they might not realize the focus of these sites on advocacy:
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(http://kentuckyfriedcruelty.com/)

(http://www.helpinganimals.com/)
Before providing suggestions or tips for recognizing advocacy and commercial websites, it is important to consider why students are using information from these sites so heavily in their writing. At least three factors likely contribute to students’ growing reliance on these sites. First, most students start to regularly encounter argumentative writing during their early college years, and they often comment that they lack the authority to make convincing points on their own. Therefore, many students search for information that makes strong, definitive statements or provides convincing data, and this type of information is central to websites designed to advocate and sell. The research on writing of non-native speakers has cited this authority issue for years, and this issue is just as marked in essays by native speakers who are unfamiliar, uncomfortable or inexperienced with argumentative writing.

Second, students often lack the level of skill or investment to identify sources beyond those provided by search engines and encyclopedic websites. Library research databases often return much more credible and reliable sources of information as well as sources that are just as convincing as advocacy and commercial websites, but these databases do require some degree of training to navigate along with permission to access them. College and university libraries provide training in a variety of formats (computer-based tutorials, face-to-face help sessions, even entire courses) and try to provide easy and reliable access to these databases. Even the databases themselves have updated their search screens and returns to make the information retrieval process quick and easy, often providing full-text versions of most of the information sources. However, search engines are easier and more familiar to students, and the advent of new engines like Google Scholar that attempt to filter information from sites and sources that might have advocacy or commercial purposes only adds to the popularity of such sites and to the comfort level of students using them. Further, the sheer number of returns from search engine queries allows students to find information on almost any topic, so many students believe there is little need to search library databases or traditional print sources for information.

Third, websites today are designed for multiple purposes and audiences, and this multi-faceted design adds as well to the usefulness of websites as sources of information for students. Certainly, there
are sites that only advocate or sell. However, most websites today blend information to educate with information to advocate or sell. Take, for instance, the website for the popular sport drink, Gatorade (http://www.gatorade.com/). In years past, it was generally good advice to pay attention to the domain name (.org, .gov, .edu, .info, .net, .com) in order to distinguish different types of sources. For example, websites ending in .org, .gov and .edu were typically seen as domain names of more credible sources of information for academic research, and websites ending in .com, like Gatorade’s site, were not. However, this simple distinction no longer applies (just look back at the number of .org domain names in the list of advocacy websites earlier in this essay). The complicated nature of today’s Internet (not to mention the exponential growth in the number of websites available today) makes it difficult to separate information designed to educate from that designed to advocate or sell.

On Gatorade’s website, for example, there is certainly commercial (.com) information, as Gatorade’s products are marketed on nearly every page, even this page that focuses on the history of Gatorade (see the red arrows on the screenshot below):
attempt to educate. For example, a student searching for information the effects of dehydration on athletic performance could easily find her way to the following page on Gatorade’s site that answers the question, “What is Dehydration?” and provides information on the factors, signs and effects of it (follow the red arrows in the next screenshot):

(Dehydration, 2006). The information on dehydration is designed to educate, but it is also information designed to sell readers on the importance of hydration, particularly Gatorade. In this regard, advocacy websites like WithWomen.org and MoveOn.org are no different, except that their purpose is to get readers to act instead of purchase (even though most advocacy sites are also heavily invested in fundraising). Therefore, it is understandable that users of today’s Internet have trouble distinguishing information designed to educate from information designed to sell or advocate, and it is important that these users, our students, develop skills for making these important distinctions.

Helping Students Understand Advocacy and Commercial Websites and Avoid Plagiarism

Advocacy and commercialism are rapidly evolving on the Internet, even in more established and
reputable sites and domains; therefore, the advice for students conducting research on the web must change as well. No longer can students simply rely on certain websites and domain names and avoid others. Further, it seems unrealistic to restrict students to the traditional library and its sources. Though electronic databases available in most libraries today return information that is usually free from commercialism and advocacy, this is not always the case. Also, students are surrounded by or immersed in the Internet, and restricting student use of it fails to educate; it simply ignores or limits the digital literacy skills that today’s students desperately need.

Therefore, the following suggestions should help teachers as they work with students to make sense of today’s Internet, including helping them to distinguish advocacy and commercial websites from others, discuss them in class and in writing, and avoid plagiarism.

First, teachers need to help students understand that sites on today’s Internet are complex mazes of information, as the examples presented earlier in this essay illustrate. Whether users of today’s Internet are searching comprehensive websites like Wikipedia, navigating through returns from search engines or investigating websites that appear to be self-contained or stand-alone sites, they must take the time to explore sites in depth. This kind of detailed exploration should include the simple activity of illustrating to students how to check a website’s hyperlinks and icons to get a better understanding of the site and its contents. Exploring the links and icons should help to determine the purpose of a website as well as identify the sponsor of the site. Another activity could have students collectively explore advocacy and commercial websites and discuss with their teachers the types of information and the positions on the issues emphasized on these websites. Until students are assisted in the processes of exploring and understanding websites, particularly advocacy and commercial sites, they will continue to misinterpret and misuse them as sources of information in their research.

This deep exploration also includes the complicated but important activity of evaluating the website using the criteria that apply to nearly all sources of information, such as authority, credibility, currency, accuracy, reliability and purpose. It is suggested that teachers unfamiliar with helping students
understand and apply these criteria to sources as diverse and complex as those found on the Internet pair with their college librarians to develop instructional sessions and activities that explore these criteria within online sources. To this end, there are numerous print and electronic resources for learning more about the criteria for evaluating sources of information, including the Online Writing Lab at Purdue University (http://owl.english.purdue.edu/handouts/research/r_evalsource4.html) and the Writing Studio at Colorado State University (http://writing.colostate.edu/guides/trad_research/eval/index.cfm). Direct, teacher-led practice in the process of evaluating websites is vital to helping students develop the critical digital information literacy skills needed of them today.

Second, teachers must be willing to discuss the growth of electronic advocacy and digital commercialism with their students. Information literacy has been regarded as the most pressing literacy need of the early twenty-first century, and this concern is due in large part to the rapid advancements in information availability and dramatic shifts in authorship of this information afforded by today’s Internet. Advocacy and commercial websites discussed in this essay illustrate the importance and sense of urgency of this literacy need. Therefore, it is argued that teachers incorporate discussions and activities into their courses that explore and explain the information now available to their students via the Internet.

There are likely many reasons why students fail to acknowledge the biases, agendas and limited points of view of many of the Internet-based sources they use in their writing. However, one reason seems to be the limited experience with and exposure to advocacy topics during class discussions and activities. Since students today are wrapped up in the electronic age as it is becoming increasingly defined by the Internet and since one significant area of growth in today’s Internet is the area of advocacy and commercialism, it seems all the more important that students have the opportunity to explore and exchange ideas found on the Internet with their peers and teachers. Websites today are complicated because they weave together information designed to educate with information designed to advocate and advertise. For this reason, students first need to learn the criteria for evaluating websites and have opportunities to apply the criteria in real reading and writing situations in courses across the curriculum.
Further, students need the opportunity to exchange their interpretations of websites they encounter with their peers and teachers. If students are going to develop the skills to acknowledge the shortcomings and biases of advocacy and commercial websites in their writing, then they first need to cultivate these skills in real classroom activities. For example, a political science or sociology course could explore and discuss sites sponsored by PETA or an ethics or nursing course could likewise examine the ACNM’s website.

Third, teachers need to help their students learn how plagiarism can result from the misuse of advocacy and commercial websites. Just as there are many reasons that students fail to acknowledge the biases and agendas of their sources in their writing, there are many reasons why students commit acts of plagiarism with advocacy and commercial websites. For example, students often fail to acknowledge the sources themselves, not to mention their biases and points of view. Reasons for this common act of plagiarism include concern over the credibility of the source information, concern with using websites as sources more than or instead of traditional print sources, failure to understand websites as the intellectual property of others that warrants documentation and not as “free” sources of information and lack of competent documentation skills. For example, it seems almost necessary for teachers to explore encyclopedic sites like Wikipedia with their students in order to help them see the intellectual property, credibility, multiple authorship and documentation issues involved in sites that are dynamic tapestries or mazes rather than static sources of information. While students do occasionally intentionally plagiarize websites by purchasing essays online or “cutting and pasting” in entire chunks of texts from websites into their essays, the acts of plagiarism listed previously mentioned are what frequent most student writing. It is only through the deep exploration of these sites accompanied by class discussions and activities that will help to mitigate this growing research writing trend for students and teachers now living, researching and writing in a digital age. Committing plagiarism is a serious act; however, most acts of plagiarism arise from not knowing. This essay argues that teachers must help students know more about websites as sources of information by highlighting the evolving presence of advocacy and commercial websites on the Internet.
Conclusion

The Internet will continue to impact the ways information is retrieved in the years to come. Not only will students continue to rely on search engines and comprehensive websites for their information, but the information accessed through and found on these sites will only become more controversial, more commercialized and, for the uncritical viewer, more convincing. Even now, sites like Wikipedia and search engines like Google are being criticized for the ways that information is ranked, influenced, changed and connected. More importantly and more distressing, many other websites are intentionally blending information, advocacy and commerce, making it difficult for anyone to distinguish fact from opinion, impartiality from bias, and freedom of speech from ideas for sale. We live in an age of electronic advocacy and digital commercialism, and for the reasons discussed in this essay, it is critical that teachers help students detect, distinguish, decipher and document information found on today’s Internet.
References


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Just Another Trendy Theory?: Finding Space in the Curriculum for Teaching Visual Literacy

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Abstract

The increasingly visual nature of changing communication practices has wide-ranging ramifications for how and what is taught in schools. In response to such change, the objective of making students visually literate is a theme that is appearing in a range of policy documents in Australia, including the new Queensland arts syllabus (Years 1-10) (Queensland School Curriculum Council, 2001). Broadly speaking, the concept of visual literacy refers to the range of skills needed to understand and create visual texts. Current policies suggest that Australian schools are embracing such definitions of literacy and that the visual mode is taking on increasing significance because of the emergence of new, digitally driven environments.

The aim of this paper is to explore the concept of visual literacy in terms of the meanings with which it is associated and the attitudes of practicing teachers towards teaching it. While the new arts syllabus in Queensland is addressing the changing nature of literacy needs, what significance do such concerns have for elementary teachers, particularly in light of the pressures they face in connection to a perceived crisis in traditional literacy? In order to make this analysis, Goodson’s (1997) concept of "trendy theory" is used in combination with Kress’s (2000, 2003) concept of "changing modalities" to highlight the constructed nature of curriculum priorities and literacy practices. The discourses used by these teachers indicate that they did have an appreciation of the changing needs of a visually-oriented generation but struggled to give this aspect of learning space in the curriculum because of other, overarching agendas.

Key Words

Visual literacy; media; changing modalities; new literacies; multiliteracies
Introduction

When the new arts syllabus in Queensland, Australia advocates that students become "visually literate" (Queensland School Curriculum Council, 2001, p. 20) it signals that educators are keeping abreast of the times by embracing broadening definitions of literacy. Gaining skills in creating and understanding visual texts is presented as a must for today’s student, since reading and writing are no longer just about understanding the written word but also about negotiating a wide range of complex electronic and visual texts that surround us and with which we interact in our daily lives (Cope & Kalantzis, 2000). However, what priority do generalist, elementary teachers in Queensland schools give such agendas? This question is especially poignant in light of the escalating attention being given to the need to improve students’ traditional literacy skills. For example, the report Teaching Reading: National Inquiry into the Teaching of Literacy (Department of Education, Science and Training, 2005) advocates a revision of present pedagogies to address concerns about standards in reading. The document argues that literacy is necessary "not only for school-based learning, but also for children’s behavioural and psychosocial wellbeing, further education and training, occupational success, as well as for productive and fulfilling participation in social and economic activity" (2005, p. 25). With such persuasive arguments enthusiastically being taken up by the media and in other public forums, promotions of visual literacy – and any other "new" literacy – may easily be dismissed as "trendy theory" rather than a curriculum initiative of any lasting concern.

The aim of this paper, therefore, is to open up discussion about the significance of visual literacy from the perspectives of practicing teachers, taking into account the ongoing pressures to address more conventional curriculum objectives. The research that informs this study is based upon a series of interviews with elementary teachers. In my analysis of teachers’ responses, I draw on Goodson’s (1997) concept of "trendy theory" to examine the relationship between the educational agendas promoted at a policy-making level and the work of practicing teachers. I also use Kress’s (2000, 2003) concept of "changing modalities" – with additional references to the work of Kress and van Leeuwen (1996) – to
highlight the cultural values and beliefs that underpin literacy practices. These concepts serve to contextualize the visual literacy initiative in terms of the broader social and cultural values that characterize this reform.

In this paper I first discuss the meanings associated with visual literacy and how it is represented in the media strand of the new Queensland arts syllabus (Years 1–10) (Queensland School Curriculum Council, 2001). I then describe a study that was designed to investigate teachers’ engagements with visual literacy. Research data are examined using discourse analysis to show how some practicing elementary teachers perceive this initiative and to highlight the various contextual issues that impact upon their attitudes towards teaching it. These findings are then discussed in terms of the implications for how visual literacy may best be promoted as a worthwhile objective in the curriculum.

**Changing Literacy Paradigms**

Definitions of literacy are becoming increasingly elusive. As new technologies dramatically alter communication practices, particularly in developed, capitalist societies such as Australia, there is a growing sense that traditional literacies alone may not be enough for the individual to be considered truly literate. Therefore, educators have promoted the concept of multiliteracies (Cope & Kalantzis, 2000) and new literacies such as digital literacies (Gilster, 1997), meta-media literacy (Lemke, 1998), media literacy (Tyner & Lloyd-Kolkin, 1991) and visual literacy (Snyder, 1999). While these are contested terms, the evolution of such language signals an interest, within the educational research community at least, in broadening notions of what appropriate literacy skills might mean for the 21st century.

For the purposes of this paper, "multiliteracies" and "new literacies" may be understood in terms of their relevance to the construction and interpretation of new media. As technologies change, so too do the ways we practice literacy and perceive its social role (Lankshear & Snyder, 2000). Hence, growing attention has been given to the "multimodality" of texts (Kress, 2000, 2003), which refers to the ways in which they can be read and constructed using multiple perceptional modes. In the context of digital environments, the visual mode has taken on a particular significance (Kress & van Leeuwen, 1996; Kress,
2003). The concept of visual literacy generally refers to the communication aspects associated with the visual mode of representation, thereby encompassing a broad range of skills and understandings inherent in the production and interpretation of visual texts. Though writings about this concept date back to the 1940s, visual literacy has enjoyed something of a revival in recent years because of the growing reliance on imagery associated with new technologies. The visual mode is increasingly acknowledged in discussions about literacy practices.

In response to such expanding definitions of literacy, Education Queensland, the government body which is responsible for public education in the state of Queensland, has produced a number of policy documents that embrace the concept of visual literacy within the broader context of multiliteracies. The New Basics Project, which seeks to define essential learning for the twenty-first century, suggests that visual literacies are needed "for overall design and to manipulate images" (Education Queensland, 1999, n. p.). In Literate Futures: Report of the Literacy Review for Queensland State Schools (Education Queensland, 2000) there are references to "understanding and composing . . . visual . . . texts" (p. 29) and being visually literate is described as being able to "comprehend and analyse visual information" (p. 37). Therefore, when the new Queensland arts syllabus (Years 1-10) (Queensland School Curriculum Council, 2001, p. 20) articulates the need to become visually literate, it is theoretically endorsing an existing objective rather than introducing a new concept.

What is meant by becoming visually literate is never explicitly defined in the syllabus, but three broad mindsets associated with visual literacy can be identified in this document and in the wider literature: the structural mindset, the sociocultural mindset and the cognitive mindset (McDougall, 2005). These mindsets are by no means intended to be viewed as definitive and distinct categories; rather, they are offered as a means of exploring the range of diverse perspectives associated with this concept. The new arts syllabus – which includes studies of media, as well as dance, music, visual arts and drama – makes direct and indirect references to these mindsets and to the multimodal aspects of learning.
The first of these mindsets may be labelled "structural." This mindset embraces any attempt to understand how texts are constructed in terms of the various visual elements used. The visual structure is sometimes described in terms of design elements and principles (Dondis, 1974) or in terms of communication elements and languages (Royce, 2002). Any attempts to analyze the visual layout and design of the text may be classified as structural. Implicit in these discussions is the idea that particular structures will be used in accordance with the purposes intended. In other words, particular genres, or types of texts, are associated with specific structural features. In the media strand of the new arts syllabus, visual elements are described in terms of both language and genre; for example, students are required to develop an understanding of the "elements of media languages" (p. 13) and "the languages and codes recognized by audiences as conventions associated with particular media genres" (p. 19).

The second important mindset associated with visual literacy is the sociocultural mindset. Since literacy is more than just encoding and decoding, meanings need to be understood as inscribed within particular social and cultural practices (Kress & van Leuwen, 1996; Lankshear & Snyder, 2000). Therefore, in line with multiliteracies and other new literacies, this mindset may be linked to critical and cultural aspects of literacy. In the new arts syllabus students are encouraged to understand the social and cultural aspects of image-making. For example, it is recommended that students develop "their critical literacy" as they "clarify ideas, justify opinions and decisions, seek and critically appraise information" (Queensland School Curriculum Council, 2001, p. 8). To this end, there is a focus on "students producing and responding to meaning in media texts" (p. 19). In addition, the curriculum articulates the objective that students need "to be visually literate in the symbol systems and visual communication of cultures and societies, past and present" (Queensland School Curriculum Council, 2001, p. 20).

The third visual literacy mindset identified within the new syllabus and in the broader literature may be described as the cognitive mindset, which has as its focus the relationship between visual skills and cognitive/physiological processes. According to this mindset, the individual’s visual capacities can be improved with practice (Metallinos, 1994); furthermore, there is a belief that certain visual processes may
assist in other learning domains (Royce, 2002). Another related concept, which has gained widespread acceptance in many sectors of education, is that some individuals are "visual learners" because they have more highly developed capabilities to learn via the visual mode (Felder & Brent, 2005). Some of these cognitive aspects of visual literacy are alluded to in the new syllabus, as evidenced by the reference to students developing "perceptual and conceptual understandings of visual language" (Queensland School Curriculum Council, 2001, p. 20). However, a more dominant theme is that of the cognitive benefits of transferable learning from the arts to other learning domains:

Students use their developing literacy skills to listen, speak, view, shape, read and write in arts activities. They use appropriate language conventions and learn arts specific vocabulary to interpret, communicate and explore their imaginative thinking, feelings and understandings. . . .

learning in The Arts makes a particular contribution to the development of English literacy. . . .

(Queensland School Curriculum Council, 2001, p. 8)

From this perspective, the syllabus suggests that the promotion of the visual mode – by allowing students to express themselves through media images and in their verbal analysis of such images – can enhance traditional literacies. In this way, the production and interpretation of multimedia can be viewed as a vehicle for developing reading and writing skills.

Thus, the media strand of the new arts syllabus (Queensland School Curriculum Council, 2001) incorporates discourses that link to the structural, sociocultural and cognitive mindsets of visual literacy. Though the concept of visual literacy defies neat definition, its inclusion in the new arts syllabus implies that elementary teachers are expected to take this initiative on board in some capacity. The implication is that experiences in visual media, such as in multimedia, can develop visual literacy. While it is clear that broadening definitions of literacy are taking on a greater significance in policy documents, what is less certain is the degree to which generalist teachers are engaged with or concerned about this initiative.

About the Study
The following discussion describes a research project conducted in Queensland, Australia, the purpose of which was to explore the reactions of a group of elementary teachers to new literacy paradigms, with the concept of visual literacy being its particular focus. The main source of the data was semi-structured interviews conducted with 26 elementary teachers from 11 government schools in a regional Queensland center in 2002. Using a broadly post-structuralist lens, my approach to this study has been to recognize that all forms of knowledge, including the findings from this research project, are constructed and perspective-bound in nature. These responses have been chosen because of the way that they encapsulate the ideas expressed by a range of other teachers in this study, particularly those of the same year level. I recognize that, by choosing to report on the responses of only some participants, I am already creating a particular perspective. However, in line with poststructural sensibilities, this study does not claim to achieve certainty or closure but aims to strategically interrupt processes in a way that encourages further scrutiny and debate (Stronach & McLure, 1997). In this case, it is the process of curriculum change which is being scrutinized so as to reveal underlying meanings and tensions.

In order to frame this analysis I have used Goodson’s concept of "trendy theory" (1997) and Kress’s (2000, 2003) work on "changing modalities." While not specifically post-structural, both authors highlight the impact of social and cultural contexts on curriculum priorities and are therefore compatible with post-structural notions of knowledge production. The concept of "trendy theory" (Goodson, 1997) is used in this context to explore teachers’ engagements with educational trends; in this sense "theory" refers to current educational policies such as the new arts syllabus. Goodson (1988) maintains that the written curriculum, or syllabus, represents the public expression of officially endorsed ideologies and rhetoric. As such, there is a need to acknowledge the symbolic significance of the written curriculum; certain goals and visions may be "enshrined" in written documents but bear little resemblance to the priorities of practicing teachers (Goodson, 1988; 1994). According to Goodson (1997), teachers see themselves primarily as practitioners, not theorists, and therefore have a lack of interest in, and a mistrust of, policymakers and their visions. This theory is endorsed by an Australian report which found that only 45% of
teachers were interested in "latest trends in educational thinking" in the context of preferred forms of professional development (McRae et al., 2001, p. 136).

While Goodson’s work is used to provide insights into teachers’ engagements with curriculum reform, Kress’s (2000, 2003) study of changing modalities enables an exploration of teachers’ cultural preferences for particular literacy practices. According to Kress (2000, 2003), and Kress and van Leeuwen (1996), there are many deeply entrenched cultural beliefs that affect the ways in which modes of communication and associated literacies are perceived and valued in schools. On the one hand, the growing significance of the visual mode in changing communication practices has resulted in an awareness about the pressing need to re-evaluate the literacy landscape (Kress, 2000, 2003; Kress & van Leeuwen, 1996). On the other hand, the trend towards a landscape of communication dominated by image rather than word "has given rise, understandably, to much anguish, soul-searching and deeply pessimistic predictions about the future welfare of civilization" (Kress, 2003, p. 51). Such sentiments encapsulate the depth of concern that characterizes reactions to changing literacies. This paradigm shift presents a significant challenge to western notions of what constitutes valuable forms of literacy, with reading and writing unquestioningly accepted as the main modes of communication (Kress, 2000, 2003; Kress & van Leeuwen, 1996). Therefore, Kress’s concepts provide a useful framework for understanding the broader social contexts that impact upon teachers’ attitudes towards literacy practices.

The method of data analysis used in this study is discourse analysis because of its compatibility with the post-structural approach adopted. In this context I am interested in discourse not in a linguistic sense but as a broad pattern of communication that reflects particular ideologies: "a way of speaking that is consistent with the beliefs/values/mindsets of a particular context and that, in the process, helps to produce the context" (Rowan, Knobel, Bigum & Lankshear, 2002, p. 54). As such, discourses are socially constructed, having been developed in specific social contexts and having appropriated the interests of the participants within these contexts (Kress & van Leeuwen, 2001, p. 4). Thus, the aim of this study is to identify the beliefs, values and mindsets that emerge from the discourses that teachers used in particular
social and cultural contexts. The concepts of Goodson (1998, 1994, 1997) serve to highlight the context of schooling and education systems, while Kress’s (2000, 2003) theories provide a means for exploring the broader context of western tradition. Therefore, the methodological and conceptual framings of this study facilitate identification of a range of value-laden and socially constructed perspectives that need to be acknowledged in understanding teachers’ reactions to the visual literacy initiative.

Research Findings: What Teachers Say about Visual Literacy

In the following section I analyze the responses of six teachers as a means of illustrating some of the key findings from the study (pseudonyms have been used to preserve the identities of the teachers involved). The participants and year levels taught at the time of the study are outlined in the table below:
The key discourses to be drawn from the responses of these teachers are identified as visual, futures-oriented and traditionalist. A visual discourse is characterized by direct or indirect references to any aspect of the visual literacy mindsets described earlier in this paper while a futures-oriented discourse is demonstrated by an expression of interest in the changing needs of students. A traditionalist discourse reflects preferences for more conventional learning priorities and the need to be accountable in this respect. These teachers used different discourses in different contexts; furthermore, the discourses used by the same person sometimes appeared to be contradictory. From analysis of the discourses used, and taking into account the conceptual frameworks provided by Goodson (1988, 1997) and Kress (2000, 2003), a number of beliefs relating to these teachers’ engagements with visual literacy have emerged. For the purposes of this paper, I explore two dominant perspectives: lack of engagement and lack of priority.

"Visual What?: Lack of Engagement"

The data indicate that most elementary teachers in this study were only vaguely aware of visual literacy, if at all. Lorinda was one of the few teachers in this study who had heard of this concept because of some recent professional development in the context of teaching reading:

<table>
<thead>
<tr>
<th>Name</th>
<th>Year levels taught</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-School to Yr 2</td>
</tr>
<tr>
<td>Ben</td>
<td></td>
</tr>
<tr>
<td>Christine</td>
<td></td>
</tr>
<tr>
<td>Eileen</td>
<td>✓</td>
</tr>
<tr>
<td>Lorinda</td>
<td>✓</td>
</tr>
<tr>
<td>Mary</td>
<td></td>
</tr>
<tr>
<td>Sharon</td>
<td></td>
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</table>

Table 1: Participants and year levels taught
I haven’t got a real lot [of understanding]... I do understand that just through our understanding of... visually we see line and we see dot and we see print and we see colour and that sort of thing. How it can affect us purchasing things and how we feel about things. Visually, it’s certainly a strong medium, but I don’t understand a real lot about how it’s going to be incorporated.

Lorinda has touched on some important aspects of visual literacy. Her reference to line, dot and colour reflects the design aspects of the structural mindset, and her description of "[h]ow it can affect us purchasing things and how we feel about things" connects to the sociocultural mindset. However, she was clearly struggling to find the words to describe this concept and admitted that she did not have "a real lot" of understanding. Nor did she know how it was "going to be incorporated," presumably into the curriculum. This teacher, like most in the study, demonstrated only a tenuous engagement with a visual discourse.

While it might be true that most of these teachers did not have a specific understanding of visual literacy, some teachers did use a visual discourse in expressing an interest in the visual mode of communication that may be linked to the cognitive mindset. For example, Sharon referred to students being "visual learners":

Kids are more visual learners I think [in] this day and age. And... you can put a video on or something like this, if you can get the right thing to take over what you are aiming to teach at.

You know, they’re totally engrossed and it’s just another way of reinforcing [learning] and things like this.

While Sharon did not make a specific reference to visual literacy, she did acknowledge that students today are more "visual" and that the visual mode has the potential to "reinforce" students’ learning. She suggested that multimedia texts were effective with students today because of their preference for the visual texts. In this way, the teacher has acknowledged that students’ needs are changing. However, it also
became clear during the interview that multimedia activities were not widely used by this teacher in her Year 3 classroom.

While a number of teachers in this study alluded to students being increasingly dependent upon the visual mode, very few talked about the ways in which they applied this concern to their own teaching practice. Mary, who taught Year 3, described the impact of new technologies on students’ learning:

Mary: [Multimedia] should go over really well. I hope it does because it’s just so good for the kids. I have got a friend who works at Wurringa and . . . and that’s what she does. . . . I just get really excited about it!

Interviewer: Yeah? Why is that?

Mary: Oh, just because . . . it is a really, really good way to . . . switch [students] on. And then also to be able to give them a different way of showing you what they have learnt.

In outlining the opportunities offered by multimedia activities, this teacher is drawing upon a futures-oriented discourse. However, she appears to have assumed this position from the perspective of an interested bystander rather than an active participant in such processes. While she believed multimedia activities were "just so good for the kids," she did not engage in such aspects of learning herself, admitting elsewhere in the interview that she was not "computer literate."

These responses illustrate a lack of engagement with visual literacy in the context of teaching multimedia. Most teachers had not heard of visual literacy, and even those who had were mostly uncertain about what it meant. The confusion regarding its meaning may not be surprising in view of the wide range of definitions associated with the various mindsets. Some teachers were aware of students’ changing needs and were enthusiastic about the motivational potential of multimedia activities; in this way they were at least acknowledging the significance of the visual mode and taking tentative steps into the new literacy landscape described by Kress (2000, 2003; Kress & van Leeuwen, 1996). However, only a minority was able to put such policy-endorsed ideologies into classroom practice. From this perspective,
the concept of visual literacy would appear to have more "symbolic significance" (Goodson, 1988) for most of these teachers than having a meaningful application to classroom learning.

"Too Many Other Things to Do": Lack of Priority

Another key finding was that elementary teachers in this study felt that the curriculum was already overcrowded and therefore did not have much interest in new ideas concerning new literacies. Most saw the teaching of "media" as a diversion from their core business. Christine’s views echo those of other early childhood teachers interviewed:

I feel at the moment that they are forgetting that we’ve basically got to teach [children] to read and write, and there are so many other things they’re trying to push on us to do and fit in the day that that is going to get pushed to the side. That’s all my concern is. I’m with the little kids. They’re only seven or eight, Year 3, and everything you see just keeps escalating and escalating, and yet they still say, "Why aren’t they reading? Why aren’t they writing?" The time is not there.

A sense of frustration about policy-making procedures is evident in Christine’s descriptions of the various changes that "they," the people responsible for curriculum change, were "trying to push on us." Her concerns about accountability are defined in terms of traditionalist concerns: "[Y]et they still say, ‘Why aren’t they reading? Why aren’t they writing?’" Like most teachers in this study, especially those of younger students, Christine believed that her first priority was to concentrate on the more traditional modes of communication. According to this teacher and those like her, the expectations implicit in the new curriculum documents were unrealistic and showed how out-of-step policy-makers were.

Similarly, Eileen felt that the media strand of the new arts syllabus would not be a priority for her own teaching:

And in terms of the mass media, I guess lower primary [elementary] is so involved with the Year 2 Net — getting them to read, write and count. That’s an upper grade problem! It’s sort of, sweep it aside because we have got too [many] other things to do and achieve that it’s not done.
Again, the teacher’s desire to remain accountable dominates this response. "[T]he Year 2 Net" is a reference to the diagnostic literacy assessments completed by Queensland students in their second year of elementary school. Eileen admitted that her primary concern as an early childhood teacher was "getting [students] to read, write and count." Her belief that teachers of younger grades would view media studies as "an upper grade problem!" was reinforced by the comments made by other teachers in the study. While Eileen admitted elsewhere in the interview that she could see the relevance of teaching new media, she did not feel comfortable teaching it, nor did she view it as a priority.

Such arguments highlight the deeply-entrenched nature of traditionalist discourses in relation to curriculum priorities and literacy practices. Teaching someone to read and write remains a dominant preoccupation of western traditions. While the study of media texts is associated with entertainment and popular culture, the objective of teaching someone to read and write is symbolic of "the ‘finest achievement’ of human culture" and "the highest forms of rationality" (Kress, 2003, p. 30). Thus, the mastery of reading and writing skills is an example of a learning objective that is considered inevitable and therefore impervious to reform processes (Goodson, 1998). Eileen could acknowledge the importance of media studies as an aspect of the new arts curriculum agenda but still viewed this area of learning as someone else’s responsibility since teachers have "too [many] other things to do" that were clearly more pressing. From this perspective, the drive to promote any new kind of literacy or mode of communication seems destined to fall into the category of "trendy theory."

Discursive tensions are also evident here. On the one hand, curriculum documents are asking teachers to consider new ways of looking at literacy; on the other, public and political expectations dictate that traditional approaches to literacy are upheld as evidenced by the Teaching Reading: National Inquiry into the Teaching of Literacy report (Department of Education, Science and Training, 2005). Even those teachers who were enthusiastic about the educational potential of media activities admitted that it was easy for these activities to fall by the wayside. As Kress and van Leeuwen (1996) point out, teachers are not necessarily opposed to the teaching of visual media as such but are reluctant to embrace any
curriculum objective that is perceived to be a "potential threat to the present dominance of verbal literacy" (Kress & van Leeuwen, 1996, p. 16). This ongoing battle between traditionalist and futures-oriented ideologies left some teachers in this study feeling a combination of guilt and frustration.

**Beyond "Trendy Theory": Making Visual Literacy a Reality**

In view of such complex and overarching agendas, how can the visual literacy initiative ever transcend the perception of being another "trendy theory"? No amount of professional development devoted to multimedia skills will make a difference unless teachers such as these can be convinced that such learning experiences are worthy of space in the curriculum. What is really being asked is that they rethink definitions of "literacy" and valuable forms of knowledge in the 21st century. While it is unrealistic to expect generalist teachers to have expert knowledge in all aspects of visual literacy, they do need an appreciation of the significance of the visual mode in terms of meeting the needs of today’s students. Furthermore, they will need to develop an understanding of how this can be implemented in the classroom. Failure to ensure students develop such skills may lead to as serious a form of illiteracy as any other (Kress & van Leeuwen, 1996, p. 15). Change at this deep-seated level is difficult to effect in view of the domination of traditionalist discourses in attitudes towards curriculum priorities, particularly among teachers of younger year levels. Unless teachers can be convinced as to the value of the visual mode, it will continue to be sidelined as a curriculum priority.

In order to find a stable foundation in the curriculum, the links between visual literacy and what teachers already know and value need to be highlighted. The findings from this study suggest that this might be done in two ways, both of which are drawing upon aspects of the cognitive mindset of visual literacy. Firstly, some teachers might be persuaded that visual literacy needs to be promoted because of the preference of students today to learn via the visual mode. As an awareness of individual learning styles grows, the assumption that some students are more "visual" as learners is becoming increasingly accepted (e.g., Felder & Brent, 2005). Furthermore, there is a perception that young people – the "visual generation" (Fitzgerald, 2001, p. 13) – are more likely to be visual learners because of their enthusiastic
immersion in new multimedia forms of communication. Teachers in this study drew upon such futures
discourses in their references to "kids . . . in this day and age" being "more visual," though not all of these
teachers found a practical application for such beliefs, save for the viewing of movies that might link with
particular topics or themes being taught. Emerging research confirms that instructional multimedia
experiences can address the needs of the visual learner (Sankey, 2005). Since the idea that "kids are more
visual these days" appears to have considerable credibility among some elementary teachers, this
common ground could well become the starting point for discussions about the significance of visual
literacy and how it can be developed in practical ways in the classroom.

Second, the perceived links between visual literacy and other key learning areas can be exploited.
Most teachers in this study were not opposed to the idea of teaching multimedia but did shy away from
any classroom activity that might be perceived as a threat to the teaching of reading and writing.
Therefore, teachers are more likely to be persuaded that there is merit in focusing on the visual mode if
they can be convinced that such learning can actually enhance key learning areas, including the teaching
of conventional literacies. Some teachers were already aware of visual literacy in the context of teaching
reading. Furthermore, the motivational aspects of multimedia may be promoted as a significant
consideration in advancing the visual literacy initiative.

Some teachers in this study were already making such connections because they believed that
media activities were valuable, not just for their own sake but in their capacity to enhance more traditional
literacies. Ben, for example, was a teacher who was emphatic about the motivational benefits of involving
students in the production of multimedia texts:

   Ben: Not that we can prove that the technology and what we do here actually did
        improve [literacy], but we think it has, if that makes any sense.

   Interviewer: So when you are talking about literacy, you’re talking about traditional literacy
                — reading and writing?

   Ben: Reading and writing.
Interviewer: And that it can be enhanced using the —

Ben: Yeah. So some kid who has never read or never spoken. And they get on the computer and they have the microphone and they do up a narration for a slide. And you know they never would have done it [without the technology] and there’s this proof in itself that [technology] can get kids into [literacy].

Though it goes beyond the scope of this paper to make any assertions concerning the links between multimedia studies and improving reading and writing skills, what can be said is that there is a perception that this is so. Certainly, the new arts syllabus encourages this belief, as described earlier. References to the motivational benefits of multimedia activities were common in this study, even among teachers who did not actually include these activities themselves. In this way, learning to read and write does not have to be a learning activity distinct from developing skills associated with visual literacy; there are connections here that suggest that these pursuits have the potential to complement each other rather than compete for space in the curriculum.

Such claims are supported by other studies that have linked the use of new media to improvements in students’ literacy levels (Glewa & Bogan, 2007; Huffaker, 2004; Lin, 2005). Bearing in mind the range of practices associated with reading and writing (Luke & Freebody, 2003), further research needs to be done to unravel this futures discourse and to determine exactly how visual media can enhance specific aspects of English literacy. At present there remains a paucity of research in this area, perhaps because of a reluctance to infer a linear causal relationship between the use of multimedia and academic achievements in other areas when there are many complex and subtle variables at play. The premise that skills learned in multimedia environments are transferable to other academic areas of learning is one that is likely to remain contentious; however, that does not mean that it is not worthy of further investigation. As Friedland, Hurst and Knipping (2007) assert, the real contribution of multimedia to education is only just beginning to be understood.
In view of these findings, the teaching of the visual literacy in the context of media studies presents a number of ideological and pedagogical challenges to elementary teachers. They will need to be convinced that this is an objective worthy of space in the curriculum and that it will not undermine the teaching of conventional literacy. As Goodson’s work (1988, 1997) reinforces, teachers are suspicious of change, particularly if it perceived as a being out of touch with the reality of face-to-face classroom teaching. Such challenges have further implications for policymakers and administrators in that they highlight the need for the provision of appropriate forms of professional development and pre-service training for teachers. If teachers are expected to take such agendas on board, they will need to be supported through this process in terms of ongoing training and support, as well as access to resources. Furthermore, practical suggestions are needed for how to incorporate a wider variety of visual texts in the classroom in meaningful, rather than tokenistic, ways. A growing body of literature devoted to this undertaking is evolving (e.g. Anstey & Bull, 2006; Callow, 2003; Unsworth, 2001). Teachers seek "a coherent and practical framework for classroom work which consolidates fundamental aspects of traditional literacy pedagogy and also encompasses the multiliteracies competencies that children will need to negotiate in the new millennium" (Unsworth, 2001, p. 1). Such educational goals suggest that there is considerable scope for future research in this nascent yet significant area of concern.

Conclusion

"Visual literacy" is a term that has become popular in recent policy documents in Queensland, Australia, having gained enhanced status because of its relevance to multimedia environments. In the new Queensland arts syllabus (Years 1-10) (Queensland School Curriculum Council, 2001), for example, there are references to the structural, sociocultural and cognitive mindsets of visual literacy. The implication is that by giving students learning experiences that utilize the visual mode, such as those associated with the production and critique of media texts, students can develop visual literacy. However, most of the elementary teachers in this study were unaware of this conception of literacy. Even those who considered today’s youth to be more "visual" were not concerned about the implications of this for their own
teaching practices. On the whole, these teachers were much more preoccupied with ensuring that their students developed competencies in conventional literacy, particularly if they taught younger year levels.

Therefore, if the development of visual literacy is to become any kind of reality, such teachers will need to embrace changing notions of literacy needs. Whether the term "visual literacy" survives in the long term does not matter so much as the fact that teachers appreciate the significance of giving students opportunities to explore the visual mode via the construction and interpretation of media texts.

The findings from this study suggest two possible inroads in terms of the promotion of visual literacy. One is to show how this concept aligns with that of the visual learner and the idea that young people today are more visually oriented than generations past. The other is to promote the possible links between visual literacy and other learning areas, particularly the teaching of reading and writing. Further research needs to be undertaken to make these links more explicit. In this way, the concept of visual literacy may be perceived, not as "someone else"s problem" or a "trendy theory," but a set of skills and understandings that can benefit many aspects of learning, including traditional literacies, in meaningful and tangible ways.
References


Adding Societal Impact and Reflection to Information Technology Fluency Classes

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Abstract

Information technology fluency courses often focus on terminology, history, and application use without addressing societal impact. They should be augmented with readings that explore our technology-centric society in order to help connect technical material and modern tools to real-world events and personal concerns. Additionally, guided classroom discussions may help students reflect on what they’ve encountered in the course materials and readings to better integrate technical knowledge with personal beliefs and actions. Using these techniques, students may explore how technology changes our society as well as themselves.
Introduction

Courses seeking to establish fluency in information technology tend to focus on terminology, the history of technology and applications, and understanding how to use currently popular applications. However, such courses often do not address the societal impact of the technology they introduce. They can and should be designed to do so. Our educational goals are expanding to include more ties to personal ethics and societal issues. Technology fluency courses can play an integral part in achieving these goals. They can explore how technology is used in and changes our society and ourselves. This paper will address two ways in which this goal may be accomplished.

First, these courses may incorporate non-technical or semi-technical readings that explore our technology-centric society. Books such as Leonardo’s Laptop: Human Needs and the New Computing Technologies (Shneiderman, 2002) or True Names and the Opening of the Cyberspace Frontier (Frankel, 2001) can help meet this goal. Both books that explore some ways in which the availability of technology either has had or could have an impact on issues such as education, safety and privacy. The courses may also include news articles about topics such as digital privacy laws, the use of digital evidence in court cases or technology corporations operating at a global level. Readings such as these may help connect technical material and modern tools directly to real-world events and both global and personal concerns.

Second, courses may include discussion of these readings to further expand on their content and to allow students to reflect on both what they’ve learned in class and what they encountered in the readings. They may then expand upon this reflection through the exchange of thoughts and debate of specific issues. However, accomplishing this interaction in the classroom (especially in large lectures, which is typical for these courses) might be difficult. One solution
is to have a set of well-designed paired discussions carried out in the classroom. These may help students integrate their new technical knowledge with their personal beliefs and actions by facilitating directed conversations with a peer about serious issues such as file sharing, personal privacy on the Internet and various digital divides.

Combined, these two approaches provide an excellent conduit for advancing our students' understanding of how the technologies about which they are learning have changed and continue to change the world in which they live.

**Non-Technical Readings**

In the design of a new Introduction to Technology course at the University of Maryland in 1996, I wanted to incorporate a reading that would allow students to make use of their new technical knowledge and also show the impact of technology and electronic communities on society. There are a number of books that could be assigned in a technology fluency course to fit this purpose.

*Where Wizards Stay Up Late* (Hafner & Lyon, 1996), *Net.wars* (Grossman, 1998) and *The Cuckoo's Egg: Tracking a Spy Through the Maze of Computer Espionage* (Stoll, 2005) are examples of books that have a high technical component and show how technology, electronic communities and “offline” society intermix. However, a number of students commented that these books, while somewhat interesting, were too focused on the “techy stuff,” in their opinion. Two books that we have used more recently that differ from those examples are *Leonardo's Laptop: Human Needs and the New Computing Technologies* (Shneiderman, 2002) and *True Names and the Opening of the Cyberspace Frontier* (Frankel, 2001). Both of these texts focus more on people and society in their discussions of technology.
Shneiderman’s *Leonardo’s Laptop* (2002) talks about the “old computing,” where the focus was more on issues such as how powerful the machines were, and the “new computing,” where the focus is on how computers can help people accomplish the things they want to accomplish. It discusses how people interact with each other and society and the ways in which technology can be used to support, enhance and extend these interactions. It addresses practical concerns in high-visibility areas such as eLearning, eCommerce, eHealthCare, and eGovernment.

By reading this book and then writing individual papers addressing specific topics, students are encouraged to explore their own feelings about technology’s impact on society and the consequences of various technology designs and decisions. The issues of trust and privacy recur through many of the topics in the book. By asking students to address questions such as the importance they place on trust in online commerce or asking them to explain how the need for security must be balanced with the need for access to information in eHealthCare, we may work to move beyond the regurgitation of facts and encourage the integration of these facts into their view of technology in society.

Shneiderman’s (2002) “Activities and Relationships Table” provides a way to visualize the things people do with respect to information (collect, relate, create, donate) as well as the different circles of relationships to which we belong (self, family and friends, colleagues and neighbors, citizens and markets) *(insert page number)*. Students may be asked to fill in cells of the table for a specific interest such as music or cooking and asked to identify places where the technology is lacking.

True Names and the Opening of the Cyberspace Frontier (Frankel, 2001) is a collection that includes a speculative fiction novella written in 1981 and eleven essays written by noted
technology pioneers, scientists and fiction writers. While the quality varies, there are some very poignant pieces.

The essay “True Nyms and Crypto Anarchy” by May (2001) delves into notions of privacy, trust and identity online. Asking students how they know an e-mail message they receive is really from the person named as the sender or why they think their floormates aren’t intercepting and reading their e-mail and IM messages makes the technical material they have learned about how SMTP and TCP/IP work directly relevant to their own lives.

“How is the NII Like a Prison” by Wexelblat (2001) explores issues of how access to the Internet and the ways in which resources are provided via the Internet may have serious consequences. After discussing how client/server systems work in general and how IM works in particular, the students might discuss what similarities exist between Bentham’s Panopticon (1787/1995) and systems such as AIM (AIM FAQ, 2007), exposing some of the practical concerns about and consequences of a technology that has become a part of our everyday lives.

Stallman’s “Right to Read” (1997/2001) is a fictional work but may be used to play devil’s advocate in a discussion about online libraries, copyrights, digital rights management and law enforcement. The fact that the essay, though published in this traditional book, is also available free online may itself be used as discussion point on the topic.

Finally, “True Names” (Vinge, 1981/2001) itself may serve as a channel for discussing how technology has advanced from 1981, when the story was written, to the current age. Many of the students in our classes were born in a world that always had home computers and have had the World Wide Web and graphical interfaces in the world for almost their entire lives. Students may be asked to write about what they think readers in 1981 must have thought about the futuristic cyberspace in which much of the story takes place and the related doomsday scenario.
They may then be asked to express their own reactions to the same ideas, in light of having grown up with more advanced technologies than earlier readers had. Rather than simply dates and trivia, the history discussed in the classroom must be considered from a human perspective to accomplish such a task.

**Technology in the News**

Technology appears in the news in two ways. First, an article may discuss the creation of a new piece of technology. Articles presenting information about a new portable game system or new e-mail service may be of interest in a technology course but typically do not address the societal issues we have been discussing. However, a second type of article is one about a general event in which technology played a critical role. These articles may help us to explore the implications and impact of technology on our lives. Below is discuss some articles that have been used with a class and the related issues they helped expand.

In September 2005, a news story described how fake e-mails were being sent out under the name of the mayor of Orlando, Florida ("Orlando," 2005). This article, combined with the essay “Why Do You Need PGP” (Zimmermann, n.d.) and the May essay from *True Names* (2001), may show that the topic of e-mail trust is not merely theoretical and serve as a launching point for discussions about the type of information we receive via e-mail. Another related topic could be phishing schemes such as the IRS-related one reported by *PC World* in February 2006 (Rosencrance, 2006). Integrating such material provides a compelling reason for students to consider more closely the technology they are learning to use in class.

In a technology fluency course we might discuss online communities such as those found at MySpace and Blogger, how the technology works and how to effectively use the full power behind these resources to create personal spaces online. In certain courses, students might be
encouraged or required to create accounts within such communities to gain firsthand knowledge of how the technology works. However, by exploring articles such as “Bloggers Need Not Apply” (Tribble, 2005), “Don't Blog So Close to Me” (MacMillan, 2005) and “Stalking over the Web Is a Growing Threat” (Brandt, 2003), class members may be encouraged to consider the implications of their online actions on their “real-world” lives.

From banning cell phones in schools because of locker room or cheating incidents (Said, 2004) and reactions to such bans (Hartocollis, 2006) to American corporations setting up business in other countries that restrict users in ways which would not be acceptable in this country ("Google," 2006; Kahn, 2005), there are regularly technology-related news stories in which our students may take a personal interest. By exposing students to specific examples and teaching them where to look for others, we may better support the integration of material they might otherwise learn just for the sake of fluency.

In-Class Peer Discussions

Another key to helping students fully appreciate the impact on society of technology is to encourage personal reflection on the topics and to provide an opportunity for direct involvement in discussions about the assigned readings. Ideally, a small selection of related readings (for example, one to two book chapters, or four to six articles, or a chapter and two articles) will be the focus of an individual class discussion. The discussion itself should be scheduled for roughly 15-20 minutes; while this might not be enough time to discuss an issue fully, it should provide a suitable amount of time to have a lively discussion, which could be continued outside of the classroom. If a class is small enough, simple roundtable discussions may serve. However, in large lecture classes, it is difficult if not impossible to engage the entire class. One possible solution to this is to have students pair off to discuss specific points from their readings.
To accomplish this quickly and effectively, the instructor may place students into teams simply by having them sound off “A, B, C, D” and then having A/B students who are sitting next to each other form teams, and the same for C/D student pairs. Insuring that the pairs have effective discussions may be a more challenging venture. While the instructor may (and should) circulate among the teams, this alone probably does not suffice if the pairs are not guided somehow in their discussions. To better facilitate these peer discussions, a worksheet may be distributed at the start of the discussion time.

The front of the worksheet might start with opening discussion directions that identify and address the general theme of the readings for the day (such as “Discuss the general tradeoffs between accessibility and privacy within the context of the technologies mentioned”) and provide blank space in which students may jot down notes during their initial discussion (for example, 10 of the 20 minutes).

The back of the worksheet could provide more specific questions that require the students to address very specific points in or related to the articles. One type of question would involve a request for specific definitions (“What is PGP?”) or a short-answer question (“What is a potential danger of every e-mail you send being verifiable as being from you?”). A second type of question for this part of the worksheet would present a statement for the students to agree or disagree with and explain their reasons (“I think that file sharing systems should not be legal”). This second type of question should be designed to lead the students to look within themselves – it should not be something that may be answered in the abstract.

While the students are exploring these questions with each other, it is useful for the instructor to circulate among the groups to observe trends in their comments. At the end of the paired discussion, the instructor may collect the worksheets and then discuss the trends she or he
observed in the team discussions, providing comments to help congeal the material and inspire further thought. It is also possible to conclude with a directed dialog, in which a limited number of students have the opportunity to directly participate but all of the students have more fully explored their own thoughts on the topic and be better positioned to passively participate in dialog.

Conducting such an in-class discussion raises several issues. For example, in the paired approach if one student in a pair has not done the readings, then the student who has must “carry” more of the discussion. If one of the students in a pair is less “into” the topic, again, the other student might need to be more active in the discussion. Keeping the topics interesting, the discussions short and the value of the assignment less than others helps to minimize the impact of these scenarios.

One final note on this subject is that some students might have concerns about the instructor having a written record of their opinions on potentially controversial topics. Choosing issues on which we do not have a strong opinion and informing the students of this fact might help ameliorate the situation. For example, in one discussion my students read about a case in which “a Minnesota appeals court . . . ruled that the presence of encryption software on a computer may be viewed as evidence of criminal intent” (McCullagh, 2005). I wanted the students to give their honest opinions on the general question of whether they felt that the presence of software that could be used to hide criminal activities but that had other legitimate uses should be admissible as evidence of intent. I mentioned in introducing the issue that I personally could see arguments on each side. Looking at the students’ responses and seeing that there was almost a 50/50 split on the issue made me feel that the students did not think I wanted them to take a particular side.
Future Work

These techniques and approaches have been integrated into an existing technology fluency course at the University of Maryland. Anecdotal evidence in the form of many positive comments from students reinforces my opinion that these methods are not simply adding content but increasing student connection with course material.

One continuation of this work could be an exploration of whether computer-mediated discussions of a similar nature might allow for broader and more frequent student interactions to help them better internalize the legal and ethical aspects of information technology and our society. While that does appear to be a natural extension of the methods I have used in my course at the University of Maryland, there are some different challenges that online discussion could raise. One of the challenges that might present itself is that, if we require students to use certain online discussion forums to earn part of their grades, some students might feel that we are creating our own Panopticon, especially if they have read Wexelblat (2001). However, other challenges could also exist.

The issue of active versus passive online participation might offer another challenge. If part of the student’s grade is attached to active participation, anecdotal experience has shown that some number of students might post for the sake of posting, rather than for the sake of enhancing the discussion. These posts could have a negative effect on the overall discussion. There are also questions related to issues such as “communication overload” and the value of “lurking” instead of active participation (Nonnecke, Andrews & Preece, 2006) that should be explored. In addition, there is an issue about online discussion creating a persistent written record. This issue is perceptually and practically different from students' concerns about in-class discussion sheets.
because an online forum provides wider access to students’ written opinions and greater ease for others to archive and distribute them.
References


Book Review of: Schiller, Dan. *How to Think about Information.*


From the start of *How to Think about Information*, Schiller acknowledges that the creation of this book would not be complete without the generous help and insight of various scholars, conferences, and peers. Without a doubt, Schiller’s hard work to incorporate the preceding writings in this field adds greatly to his own useful addition. Schiller’s book works to transform the way we (as communication scholars and global citizens) view information.

The concept of information and information technology has changed dramatically over the last 20 years. *How to Think…* addresses these changes and offers insight in the next movement of information and communication technology. Connecting historical, theoretical and contemporary studies, this book provides a fantastic and interesting read about the transformation of information into a major capitalistic commodity and beyond.

A key note is recognizing Schiller’s definition of the term information, which he describes as “a kind of shorthand to include the converging fields of culture, media, and telecommunications” (p. xiv). The book is broken into three major sections which address the roots of information as a commodity, the effects and uses of commodification and finally a look to the future of informational commodities.

At first glance, this book is a motivating read as it offers a multi-disciplinary approach to information and communication. Schiller’s appreciation of business and the effect of information and information technology on culture prove an effective backdrop to this work.
To begin, Schiller addresses the view of many information theorists which view information as a definition of organization. However, he argues that while information is key to organization, one cannot forget the impact that social institutions and relations play into information. For this reason, information is an ever-changing field and focus.

This ever-changing presence leads into the discussion of information as a true commodity. To this extent, Schiller notes that the process of commodification is “an uneven but ongoing process (which) is foundational to capitalist development” (p. 21).

Tying back into the economics of information and information technology, he argues that the commodification process was accelerated beginning around 1970. In this postwar era, there was a shift made in business due to a profit slowdown and an edging decline in business. The shift required a need to develop new profit margins and interests. The re-focus of information commodity came into view as the Senior Executives Council of the Conference Board in 1970-71 stated “the information ‘industry’ in its broadest sense could soon become the leading edge of many economies” (p. 36).

From this point, Schiller begins a strong literature and culture review on the terming of information as a commodity as well as the angles and effects of this commodification.

What is of particular delight is since this publication is from 2007 the discussion of technology and information tools can be current and aware of trends. Yet, Schiller’s commitment to discussing a variety of information technology tool, not simply Internet explosion and bust, but including tools from pre-Internet and post-Internet boom are discussed and provide a stronger insight into information as a commodity and the effect it can and does play on our culture and society. Chapters 4-6 provide a fun and interesting review of history and
informational tools which allow the reader to reflect on how the system of information technology may have changed in form but never in style.

As mentioned previously, there is a strong correlation between information technology and culture. A reader is led to question at times the severity and control of these two pieces on each other. Does culture mandate the needs of information technology or vice versa? This debate is continued throughout the rest of Schiller’s work. Consider “by opening the doors to profit-seeking investment in networks – including terrestrial, cable, and satellite broadcasting – capitol obtains access to tempting new tracts” (p. 139).

The scope and depth of this book is simply a communication scholar’s envy. Schiller adeptly moves between historical, economic, theoretical, and cultural debates. For some, this could pose a challenge as more questions than answers are proposed. If nothing else, this book allows readers the chance to examine the interconnections of our society and tools. A caveat Schiller provides is in the discussion of advertising and the normalization it can provide within a society/culture. This proves relevant as Schiller questions that tools and information are being brought down to merely the value of their commercial availability and sponsorship (p.161).

These conversations of information and culture and change all build to the final crescendo of Schiller’s work. In part 3, Schiller focuses his remaining text on the future of information technology and capitalism. While the Internet boom has appeared to lose some of its sizzle, it is clear that the global information technology industry will continue to lead the future of many economies. To this end, Schiller raises awareness concerning China. China has become “the fastest-growing large economy in the world” (p. 177). With this final addition of a global economy, Schiller reemphasizes the emergence of the information commodity as a likeness to the growing need for profit improvement.
I was most impressed with this reading and I feel it would greatly enhance many graduate level courses concerning communication. At times, our disciplines can neglect the effects of other disciplines and the correlation between these upon us. Our work requires a singular focus however this focus could be costing us greater discoveries and connections. How to Think about Information encourages readers to see the intertwining needs and effects of our culture and technology.