

Digital Literacies as an Emerging Imperative in Higher Education

Dr. Lorayne ROBERTSON
University of Ontario Institute of Technology
Oshawa, Ontario, Canada

ABSTRACT

Definitions of digital literacies can often be located in the literature, but much of the focus has been on the technological advances of online learning tools and the ubiquity of access to information. As a result, less attention has been directed toward aspects of the ethos associated with new literacies and how learning can be impacted and improved. Some examples of ethos issues include the personalization of education, the design of more open, collaborative learning spaces, and the need for student assignments to have high degrees of authenticity and connection to applied settings. This paper explores digital literacy and provides a brief case study that is an example of digital literacy skills applied across disciplines. The author concludes that today's higher education students need to be strong communicators who can navigate in spaces that are characterized by interdisciplinary discourses and digital literacy skills.

Keywords: digital literacy, higher education, multi-literacies, literacy pedagogy, assessment, interdisciplinary

1. INTRODUCTION

In 1996, when the public Internet as we know it today was barely five years old, a team of respected literacy experts from England, Australia, New Zealand and the United States convened to discuss how the *teaching of literacy* might be expected to change in an emergent, interconnected world. After a full year of discussions on this topic, they published a manifesto about literacy. The thinking at that time was that "literacy" was changing to become "multi-literacies" and that these multiple forms of new literacies were connected to social futures in the digital realm in a number of significant ways. The authors came to be known as The New London Group and their manifesto was published as, "A pedagogy of multiliteracies: Designing social futures" [1]. Given the era of publication, their ideas were fresh and radical. What the New London Group

could not possibly have known at the time, however, was that digital life and its associated literacies would become as ubiquitous as oxygen in the lives of the ensuing generations of students and that this transition would take place over a relatively short period of time. They theorized a new design of literacy pedagogy in their manifesto. When this pedagogy is considered in light of the present-day realities of higher education, their predictions of the emergence of multiple literacies and their significance for building social futures have, in many ways, been realized.

According to the New London Group [1], when multiliteracies are connected to social futures, the mission of education is to ensure that all students can benefit from learning that allows them to participate fully in their communities, in the economy, and in public life. For this reason, the teaching of literacy plays a key role in promoting equitable access to education as well as other aspects of modern living. They also made some claims about pedagogy, defining it in a new way as *a teaching and learning relationship* that creates the conditions for learning and is also key to the design of social futures [1]. The New London Group theorized that, without careful attention to ensure that all students can acquire these new literacies, there would continue to be global disparities in life chances. In other words, they argued that the changing technology landscape could provide some people with unprecedented access to success in society but it could also potentially further marginalize those who most depend on education and training to be successful [1]. This paper examines key definitions of literacy and new literacy pedagogies in changing times and argues that there is a need for scholars to continue to examine how literacy is defined and taught in a fast-paced, digital world. The author also reflects on the advantages of more interconnected and interdisciplinary approaches to digital literacy in classrooms in the current era.

2. DEFINITIONS OF LITERACY

An exploration of digital literacies today brings to mind the many ways that technology is changing how we communicate. Some new literacy terms are value-laden, such as *fake news*, *shaming*, *cyberbullying* and *oversharing*. Other new forms of literacy have become words associated with good digital literacy practices such as *digital privacy* and *digital footprint*. Other new words have emerged that are less value-laden. The *24-hour news cycle* and *selfies* are some good examples of new words in the lexicon that were immediately embraced and became part of digital literacy.

The New London Group in 1996 envisioned that there were going to be multiple changes to literacy that would not be easily anticipated. They foresaw that literacy would no longer be simple (defined, for example, as the ability to read or to write one's own name) but they predicted that there would be a multitude of literacies [1]. There is some evidence that this shift has started to happen but perhaps not as quickly as predicted.

Literacy definitions at the present time are inclined to be fairly text-centric. For example, the United States employs a functional framework to define literacy. The National Assessment of Adult Literacy identifies that literacy skills are needed to function in the home, the workplace and the community. Literacy is described here as "the ability to use printed and written information to function in society, to achieve one's goals and to develop one's knowledge and processes" [2, p.4.]. Different types of literacy in the U.S. official policy are defined by the tasks that a literate person can accomplish. For example, *prose literacy* enables the completion of written tasks such as following instructions; *document literacy* refers to the knowledge needed to complete tasks such as job applications; and *quantitative literacy* is defined as the knowledge and skills for numerical tasks such as completing an order form or understanding interest rates [2].

In Canada, literacy definitions are also linked to task completion but the definition of literacy appears to be more nuanced. According to Bailey and Tuinman [3] literacy was once defined as the ability to read and write one's own name as well as the ability to read and to understand newspapers. In recent years, however, levels of Canadian literacy have been defined in more complex ways. Recent surveys find

that 22% of Canadians have Level 1 literacy which means that they struggle with the basic decoding of text. There are 26% of Canadians at Level 2 literacy, meaning that they have limited literacy and would be challenged to understand common reading materials. A third of Canadians have stronger reading skills but rarely use them for advanced reading, and these Canadians are at Level 3. Strong literacy skills are displayed by readers at Level 4 or 5 of literacy, and 20% of Canadians have skills at that level [3]. It is worth noting that, at the present time, neither the Canadian nor the American definitions of literacy include digital literacy - a significant omission.

3. MULTIPLE "ENGLISHES"

The New London Group theorized that, as the digital age progressed, there would be less of a focus on a single, standard form of English, and more acceptance of multiple languages and multiple "Englishes." They also predicted that the single text form, print, would be replaced by multiple forms of text such as hypertext, video and symbolic language. They foresaw a shift from a canonized, formalized, mono-cultural form of literacy to official recognition of multiple discourses, including non-standard dialects [1].

A second prediction of the New London Group was that the standard form of English would continue to exist but there would be many more forms of English. In the ensuing twenty years, there is evidence that this is happening and that society has become open to more diverse forms of English. For example, the advent of texting has brought with it multiple forms of text that replace standard English in interpersonal communication. Texting is a form of instant messaging that is brief and efficient in its use of letters. It employs abbreviations such as IMHO (in my humble opinion) and other types of modifications. It is a popular form of communication - one study indicates that American teens send an average of more than three thousand texts in a month [4].

While research has identified a negative correlation between texting and grammar skills (e.g., [5]) it is not clear whether some of the lack of acceptance of these new modes of communication can be attributed to generational mindsets. Leander [6] identifies a *discourse of distraction* which is a negative school-based response to technology that labels computers

and digital devices as distracting or taking away from the real work of classrooms. (See also [7] in press). Other complaints from teachers indicate that texting is blamed for not requiring standard spelling and punctuation. Others scholars disagree, finding that students are able to distinguish between texting and formal writing and that texting gives adolescents voice, confidence, and a discourse that connects them to peers. Regardless of whether or not new technologies help people to be more literate, there is consensus that technology is adding new forms of English and new representations of words and ideas.

4. MULTIMODALITY

As we look back on the three decades since the internet was introduced to us by Berners-Lee, it must be argued that the internet has fundamentally changed the ways that we communicate, share ideas and data, and collaborate. At any given point, there are more than four million users of the internet, sending more than 200 billion emails in an average day (internetlivestats.com). Jewitt [8] finds that, because language is so social, and the internet is a hive of social activity, the canon of language itself is constantly changing because people are continually shaping and reshaping both culture and work while online. Literacy involves engaging in social practices and using new forms of texts that are constantly evolving and changing. For example, text can be in colour, with movement, images, sound effects and speech added. Images and messages are shared instantly. These changes have occurred so quickly and so ubiquitously that elements of multi-modal messaging, such as emojis, have instantly become part of daily, communication discourse.

Lankshear and Knobel [9] work to define digital literacies as social practices. They distinguish between “keystroke” literacy, which is the technical side and instead they focus on the cognitive and social aspects of literacy. They argue that digital literacy is “shorthand” for the many social practices and ways of making meaning that are produced, received, distributed and exchanged digitally [9. p 5]. A good example of a new social practice enabled by digital literacy would be the production and sharing of memes, which allows democracy to flourish through satire. Lankshear and Knobel [9] also point out that the types of activities in which students choose to engage online are authentic and engaging forms of involvement, not just textbook learning.

Lankshear and Knobel theorize also that the changes with new technology fall into two broad categories: the technical stuff and the ethos stuff [9]. Using their broad categories ten years later it appears that the *technical stuff* has become all about the technology tools, such as the applications, video production software that allows individuals to remix, create and share video, robots, gadgets, voice to text software and wearable technologies as just some examples. The *ethos stuff* are the ways that we use technology to work, to socialize and to collaborate [9]. Ethos stuff today in higher education includes collaboration, co-operation, teamwork, and the ability to be nimble and agile as the technology continually changes. Within new technical spaces, expertise and authority can be more dispersed and collective.

In sum, digital literacies refer to more than ICT literacy, computer literacy, media literacy and other literacies combined. Digital literacies are both the online and offline social practices of communication for life, home and work. The work of higher education in this present schema is to help students integrate and make sense of these digital literacy practices for learning. Digital pedagogies are examined next.

5. NEW LITERACIES AND NEW PEDAGOGIES

The New London Group [1] theorized that the arrival of new literacies would be accompanied by concurrent changes in pedagogy, such as a broader distribution of power in the classroom and a shift from authoritarian methods of teaching toward more collaborative and democratic teaching practices. The singular definition of *literacy as reading or writing text* reflects a more traditional outlook of schooling. With a plurality of ways to communicate today, Lankshear and Knobel [9] argue that schools need to recruit student engagement by using the digital skills that students are acquiring in their out-of-school lives and harness these digital skills for learning. In addition, as global settlement patterns reflect immigration and diversity, the New London Group argue that there will be cognitive benefits for all students, including “mainstream” students to become immersed in a pedagogy that includes linguistic and cultural pluralism and will help students to develop cross-cultural skills in authentic ways.

The New London Group predicted that digital technology would open up new spaces for learning

about different languages, backgrounds, and culture and that this pluralism would enrich everyone. Since that time, more culturally-relevant pedagogies (See for example, [10].) have taken hold in many sectors of education. In culturally-responsive pedagogy, the students' unique cultural background and experiences are part of the learning for the entire class. The New London Group claimed that this type of teaching about "other than mainstream" cultures, discourses and experiences would be a "cognitive benefit" for all students, and that the digital era would promote a new form of civic pluralism. As a professor in higher education, I have certainly seen this come to pass as students learn from a multitude of sources and there is less emphasis on a single canon, text or knowledge source in higher learning.

Buckingham [11] reminds us that digital literacy is more than information and it is more than technology. When students use all of the digital tools at their disposal to learn how to "be" in the world, they participate in media culture. Personal relationships are now conducted online. Online is how students understand their world and how they represent themselves. Media has become a form of culture. Students need to learn how to sort relevant from non-relevant information and how to recognize authoritative sources. Information no longer comes from a teacher source but it is available online in persuasive ways. Students need to understand not only how to gather credible information from the internet, they also have to learn how the internet is gathering information from them. Learning about the language and representations in media and their persuasive powers, and learning how to produce media for others are forms of digital literacy that go far beyond information literacy skills.

McCallum and Hammond [12] using an online metaphor, refer to the interface between teaching and learning as a *location* that is framed by deliberate pedagogical choices. They state,

Within a constructivist frame, the interface between teaching and learning is characterized by pedagogical choices. Those choices, made by teaching practitioners, need to work within the constructivist paradigm and have as their goal the creation of powerful learning experiences for all students. What is it that we as educators want those learning experiences to achieve? If we have clarity around the learner we seek, then our pedagogical choices will follow. [12, p. 3].

Students in higher education today know how to use social media and their phones as well as different forms of hardware and software in order to find information, find locations and share and create digital media. They use digital skills for life and for work. Yet the use of these digital literacy skills in classrooms continues to be less than what might be expected. Ng [13] proposes that digital literacy has a place in the classroom and that its inclusion should be deliberate.

Ng defines digital literacy as a combination of cognitive, technical and social emotional skills. The technical dimensions of digital literacy include operating technology but also using technology to problem-solve and access the help functions. The cognitive dimension is the ability to think critically when searching, evaluating and creating digital information including linguistic, audio, visual, spatial and gestural forms of media. This also includes the ability to construct and convey knowledge digitally to others. The social-emotional dimension of digital literacy includes communicating digitally with respect and socializing appropriately as well as understanding how to protect individual safety and privacy (See figure below.). Ng believes that students need to learn these digital literacy skills by working in real-life contexts [13].

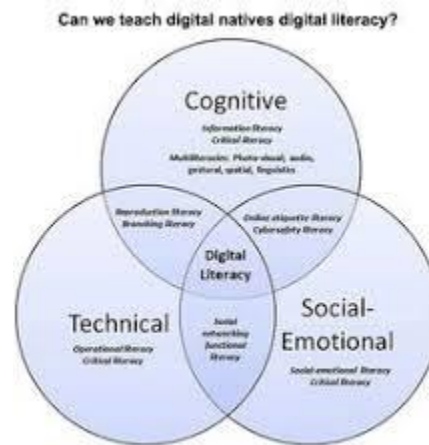


Figure 1: Digital Literacy (source Ng, 2012)

Ng [13] explains digital literacy in this way,

While 'new literacies' emphasize social practices that are shaped by emerging technologies, within educational contexts. Digital literacy is a broader term that embraces, technical, cognitive and social

emotional perspectives of learning with digital technologies, both online and offline. While ‘new literacies’ is adapting literacy, digital literacy is development that progressively builds on foundational and achieved skills and knowledge [13. p. 1066].

5.0 DIGITAL LITERACY IN HIGHER EDUCATION

Recently, an invitation arose to visit an undergraduate class on the fundamentals of professional writing. This class had been taught in previous years in traditional ways with assignments based on textual forms. Taking a new approach, their instructor instead worked with the class to brainstorm key elements of Canadian society that were of interest to them. The students worked in groups to locate information on their chosen topics, share the information, and create media that would explain their inquiry topic to others.

The course for the students was fully online and synchronous. The software for the class was Adobe Connect which allowed the students to work online in small groups that could be visited by the instructor. The students chose a range of significant topics to investigate. One such topic was an investigation of Basic Income in Canada. The students researched the topic extensively and then prepared a written paper and a video to share their findings. The resulting papers from each of the groups reflected a high level of quality. The students found the experience to be motivating. The instructor supervised and corrected their work, as in any writing class, and the students gained skills at reading, writing and presenting in professional ways.

This model of inter-disciplinary teaching can produce powerful learning outcomes for students in higher education. According to McCallum and Hammond [12], providing opportunities for students to work together to solve problems will build their decision-making skills and break down barriers between the disciplines. Constructivist learning principles were followed, including an element of choice for the learning and students were using digital literacy skills honed outside of school for their studies in school. As a result, the project had a high degree of relevance and connectedness for them, and they were working in an environment that was supervised by their instructor.

6. SUMMARY

Changes to higher education pedagogy can change in favour of more relevant pedagogies that engage students and use their digital literacy skills. Education is moving from teacher-centered classrooms where the source of the information and knowledge is the teacher (or the textbook), even in situations where students are learning basic writing skills. In the case of the example provided here, the instructor designed the course so that students would have the same learning outcomes, but their journey toward improving their writing skills was based on a topic or problem that they felt needed solving. In sum, here are some of the changes that can come about when digital literacy and interdisciplinarity are foundations of the deliberate pedagogies employed in the higher education classroom:

1. There is a shift from teacher-centric talking to student-centered discussion.
2. The focus changes from “information delivery” to the social construction of knowledge.
3. Learning is not known before it is constructed, making the inquiry less certain and the learning more agile.
4. Students learn from a variety of sources, and multiple cultures and countries.
5. The students construct media that is generationally and culturally relevant.
6. The assessments are less formal and more formative.

Although this paper focuses on interdisciplinarity and digital literacy skills in higher education, the skills of digital literacy can and should be taught across the grades in schools. The key skills of finding and verifying information are important skills for life in the digital era. Similarly, the skills of ethics, empathy and community engagement toward solving social problems are important life-long skills. As today’s students grow up in the digital era, they need digital literacy skills for their safety and security as well as the opportunities that they provide to learn how to solve complex problems.

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