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Teaching Media and Information Literacy in the 21st Century

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INTRODUCTION

Multimedia platforms such as blogs, social networks, forums, and video sharing websites have become a key component of communication in the 21st century. Ranging from flash news, popular press, and activism to trends, scandals, and advertising, these platforms have also become a repository of media and information in today’s hyper-connected society. Both individuals and media professionals often create, curate, and circulate content (i.e., user-generated content) in digital media spaces, thereby saturating media spaces with images and information that shape our digital culture (Gleason, 2013). Possessing the competencies to understand how information is conveyed through digital media is therefore an important skill to empower citizens to recognize its functions and effects on human communication.

To address these objectives, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) developed a media & information literacy (MIL) framework that encompasses the skills needed by 21st century citizens to critically evaluate information communicated through different media sources (UNESCO, 2013). Drawing from the UNESCO MIL framework, this chapter examines the skills needed by individuals to evaluate information presented through digital mass media, and discusses the role that educators can play in its instruction. The next section provides a brief history of MIL, followed by a look at the specific competencies that compose MIL. Then, the chapter proceeds to discussing the role of educators in MIL instruction and concludes with the implications of MIL implementation in educational settings.

BACKGROUND

What does it mean to be literate in the 21st century? While literacy has traditionally been contained to reading and writing skills, communication in the 21st century has expanded these customary views of literacy into an ever-evolving concept (Hobbs & Jensen, 2009). In today’s world, unfiltered information is available across multiple media platforms, such as television or newspapers, but more particularly on the Internet. Because media and other information providers are instrumental in shaping the perceptions, beliefs, and attitudes of individuals in today’s digital age (Guzzetti & Lesley, 2015), being literate in today’s society therefore includes being able to read, write, and communicate across a range of platforms, tools, and media. As a result, individuals need to master an array of literacy skills beyond basic reading and writing abilities (Livingstone et al., 2014). Citizens who are not aware of how media and information systems function are more likely to accept media messages as facts, while individuals who possess media and information literacy skills are able to evaluate and draw their own conclusion from the constant flow of mediated information (Potter, 2004).
Media & Information Literacy (MIL) is an umbrella term that bridges information literacy with media literacy. Because the Internet is a digital platform that hosts multitudes of archives of mediatized information, navigating 21st century digital information implies the convergence of different sets of skills to address the challenges of our globalized world. Modern information systems are complex and multifaceted, and require individuals to be informed and engaged citizens in order to make sense of the mediatized information that surrounds them. MIL thus describes the 21st century skills that individuals need to critically evaluate information via various media sources and to become critical consumers of information (UNESCO, 2013). UNESCO (2013) articulated that media and information literate citizens should understand the importance of accessibility to information, know how to evaluate its veracity, and use it in ethical ways. Additionally, they should understand media functions and purposes, and engage with them for self-expression. For instance, individuals should be able to distinguish when media and information are used either for entertainment, decision making, problem solving, learning, or communicating with others. They should also understand how these purposes are related to the roles and the functions that different media play, and that based on these functions, different media adhere to different professional and ethical standards. With this understanding comes the ability to practice one’s own digital skills to engage with media and information for personal purposes, such as creating user-generated content, evaluating the credibility of a source, or communicating with others. This conceptual view of MIL is represented in figure 1. below.

The social implication of being media information literate in the 21st century is informed participation in digital communication (Jenkins, 2009; Lee, 2013; UNESCO, 2013). MIL skills allow users to move from being passive consumers of digital information and media to being actively engaged in the information systems that shape their culture (Lankshear & Knobel, 2008). For example, an informed media and information literate person would recognize and react to media biases when present, would engage in an ethical manner with online social exchanges, or would participate in a digital culture by creating content relevant to that culture. MIL skills not only foster individuals’ critical thinking and engagement with contemporary issues, but also allow them to take part in our era’s “participatory culture” (Jenkins, 2009). A participatory culture allows users to communicate through the creation of content to actively use media to engage audiences (Jenkins, 2009). Therefore, participants who are equipped with MIL skills can help shape today’s digital society and draw their own conclusions from the media and information that structures their culture, instead of simply accepting these media messages as unchangeable facts. Hence, possessing MIL skills can further the gap between those who participate in the culture, and those who do not because they have not acquired the necessary analytical and technical skills to do so (Jenkins, 2009).

UNESCO has focused on issues of media literacy since the 1960’s, but acknowledged in the early 2000’s that technology was changing the role of media in society and that soon, individuals would need to possess new skills to make sense of new types of communication and ways to access information (Frau-Meigs, 2007). In knowledge societies, information includes and depends on the process of communication, and as a result, media literacy and information literacy are intrinsically connected (Lau, 2013). Livingstone et al. (2008) argued that despite their traditionally divergent disciplinary backgrounds, the object of inquiry in both media literacy and information literacy started to be united to understand “the public’s understanding of and effective engagement with media, information and communication technologies of all kinds” (p. 2). Koltay (2011) declared that one of the most salient commonalities between media literacy and information literacy was the analytical and critical thinking skills needed to interact with media and information.
UNESCO (2013) conjoined both media literacy and information literacy using the overlap of critical and analytical thinking practices in a new media & information literacy (MIL) framework. UNESCO recognized that for some, information literacy would be considered the broader area of study with media literacy as part of it, while for others media literacy would be seen as the broader field with information literacy as part of it. UNESCO’s MIL framework, therefore, sought to bridge these two terms together in light of the converging platforms that constitute 21st century communication systems, such as Internet-based media and information platforms, and proposed MIL as the umbrella term encompassing all other literacies, such as visual literacy and digital literacy. MIL is a broad transliteracy concept because it is meant to adapt to the ever-evolving...
technologies and communication needs of a specific time or place. It can be applied to traditional media (e.g., books, print newspapers, television) as well as to contemporary media (e.g., Internet, online media), and offers the flexibility to be used in future information systems, regardless of their technology base or scope. Overall, MIL represents a set of analytical competencies that can transfer from one communication system to another and reflect the technological needs of 21st century digital communications. Given the scope of this encyclopedia, this chapter focuses specifically on digital communication and technology in the 21st century while acknowledging that MIL can be applied to and practiced in more traditional communication systems as well.

MEDIA AND INFORMATION LITERACY

A 21st Century Competency

Thanks to web-based technologies and digital media in the 21st century, individuals have more and more opportunities to become creators of knowledge and to take part in societal issues rather than simply being passive consumers of information (Buckingham, 2015; Lankshear & Knobel, 2008). UNESCO’s media & information literacy framework provides a set of competencies, or in other words a set of knowledge, skills, and attitudes, that aim to empower citizens to critically evaluate and understand the contents of today’s media and information systems (UNESCO, 2013). Because MIL relies on a combination of technical, analytical, and creative skills, it is a literacy that transcends media and type of information. That is, one can apply MIL skills while reading a novel or a newspaper, while watching television shows and advertisements, while surfing the Internet, or while engaging with others on social media. Because of the multi-faceted aspect of online communications in the 21st century and the increasing reliance on the multimodal transmission of information (e.g., visual, textual, audio, etc.), this chapter emphasizes MIL competencies in the context of digital communication.

It is important to note that in the context of 21st century communication, the term media corresponds to the means by which information is delivered, and can be both professionally produced content—typically labeled as “the media”—or user-generated content. Furthermore, UNESCO (2013) described information literacy as the skills required to seek, evaluate and create information for personal, social, educational, or professional needs (Wilson et al., 2013). Together, being literate in terms of media and information, therefore, involves the ability to recognize the power of media, to evaluate the content of the information they convey, and to produce user-generated content (Moeller et al., 2011; Wilson et al., 2013). UNESCO (2013) summarized these MIL components under three main competencies: access and retrieval, understanding and evaluation, and creation and sharing (UNESCO, 2013). These competencies, along with their sub-skills, are represented in figure 2.

While analytical skills are central to MIL to evaluate media content, developing the retrieval and the creative aspect of MIL skills also relies on a set of technical skills that are intrinsically linked to technology and information systems in the 21st century (Davies, 2011; Jenkins, 2009; Wilson et al., 2013). Understanding how to access and retrieve information, along with knowing how to create and share personal content online depends on the mastery of technological and computing abilities. These skills are reviewed in the following section.

Media and Information Literacy in a Technology-Driven World

In today’s digitally connected world, technology is pervasive from the use of social media (e.g., Facebook, Youtube, Snapchat, etc.) to the widespread presence of mobile devices (e.g., smartphones, laptops, tablets, etc.). A recent survey found that 95% of teenagers go online on
a daily basis, 72% of all teens spend time with friends via social media, and 79% of all teens use instant messages with their friends (Lenhart, et. al, 2015). These staggering numbers highlight the need for young individuals to understand issues related to privacy and security on the Internet, as the risks they encounter in relation to anonymity, persuasion, or cyber-bullying grow exponentially (Livingstone & Brake, 2010).

The key to developing individuals’ competencies in MIL involves creating awareness of how computerized communication and web-based digital media work. As young citizens become better informed about how information travels over the Internet, they will better understand its implications for privacy and security of information in digital communications. One of the prerequisites for MIL in a digital world is to form a solid foundation of technological skills—often referred to as ICT (Information & Communication Technology) skills (Wilson et al., 2013). For that reason, MIL also has a natural connection to components of computational thinking (CT), which has been suggested to be a 21st century cognitive and creative thinking skill that combines problem solving with principles of computing (Wing, 2006; DeSchryver & Yadav, 2015). For instance, one computational thinking idea that can support the development of MIL involves using “computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends” (College Board, p. 1). One of the key components of MIL is individuals’ ability to access and critically evaluate information, particularly how information can be manipulated to deliver specific messages. As people engage in computational thinking activities to analyze and visualize data, they also develop important MIL practices of how information can be visualized to convey specific messages. Specifically, as individuals create data visualizations or communicate their ideas using a variety of media, they learn to negotiate how to best represent information to their audience, which would be determined by the essence of the message they want to convey for a specific purpose. This process of evaluat-
ing and presenting information to convey the gist of an idea allows individuals to critically assess the authenticity of the information encountered through digital media.

Recently, many nations have come to recognize the need for their youth to acquire technological skills and to prepare them to successfully manage 21st century information. For instance, analyzing scientific claims online, locating relevant research, building arguments from a variety of resources, or producing appropriate media contents are examples of standards now expected from students in the United States (Governors Association Center for Best Practices, 2010; International Society for Technology in Education, 2015; Next Generation Science Standards, 2013). These standards aim to benefit students’ development of academic skills as well as personal and social skills in a digital world. A number of national and international educational organizations have also acknowledged the convergence and importance of student competencies in MIL and the need for students for being responsible users of digital media and information (Governors Association Center for Best Practices, 2010; International Society for Technology in Education, 2015; Next Generation Science Standards, 2013; Partnership for 21st century, 2014).

As an example, the national computer science curriculum in the United Kingdom highlighted the imperative need for students to “understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognize inappropriate content, contact and conduct, and know how to report concern” (Microsoft, 2014, p. 42). Similarly, within the United States of America, College Board has launched a new advanced placement course entitled Computer Science Principles (CSP) that focuses on six computational thinking practices and seven big ideas of computer science. The CSP framework is designed to allow students to understand how digital manipulation and storage of personal information has implications for privacy and security of that data (College Board, 2014). Specifically, the CSP framework focuses on advancing students’ understanding of how the Internet functions and grasping how computing can impact people and societies. While not labeled as MIL skills, there is considerable overlap between media & information literacy practices outlined in the UNESCO framework and the components in both the UK computing curriculum and the US computer science principles frameworks.

However, while using technology effectively to access and assess information and to effectively use media for communication is now considered an essential 21st century skill for students, teaching these digital skills requires educators to exhibit the same competencies themselves (Wilson et al., 2014). For MIL to become a leading practice in the 21st century and for students to acquire these skills, there is an urgent need to prepare educators in MIL instruction. The following section addresses the qualities that educators should possess to successfully integrate MIL in their teaching.

**Educators’ Role in Media and Information Literacy Instruction**

In today’s technology-driven and media-saturated world, educators will play a critical role in addressing the disparities that are emerging between those who can—or cannot—find, analyze, and critically evaluate information and media content to participate in their digital environments (Wilson et al., 2013). UNESCO in particular, envisioned that “initial focus on teachers is a key strategy to achieving a multiplier effect: from information-literate teachers to their students and eventually to society at large” (Wilson et al., 2013, p. 17). Preparing teachers to teach MIL skills is an essential step in order to promote 21st century MIL competencies at a large scale. The UNESCO MIL curriculum framework for teachers describes the competencies that educators should possess and provides examples for educators on how to embed media and information literacy practices in their teaching (Wilson et al., 2013).
According to the UNESCO, teachers should understand the role of media and information in their daily lives; understand media content and its uses; know how to access information effectively and efficiently; critically evaluate information; be familiar with both new and traditional media formats; and be able to situate the sociocultural context of media content (Wilson et al., 2013). UNESCO also identified various dimensions, including policy, curriculum and assessment, pedagogy, and professional training that need to be put into practice for the MIL framework for teachers to be successful (Wilson et al., 2013). For example, educators need to examine educational policies and national standards to better understand what role MIL might play in their own educational context. They also need to learn how to apply MIL to their teaching and understand students’ interactions with media and information in their daily lives. In addition, educators must understand how MIL can be integrated in their school curriculum and how they can assess their students’ acquisition of MIL skills.

However, promoting MIL skills among students and implementing them in their own teaching can be difficult for teachers to achieve on their own even if they themselves might possess these MIL skills. Progressing from being media and information literate to knowing how to embed MIL in pedagogical practices requires support at various institutional levels, from teacher training for pre-service teachers, to professional development for inservice teachers or educators in non-traditional educational settings. In order to address the growing need for teacher training in media literacy and information literacy (Martens, 2010), a UNESCO international expert group working on the MIL framework suggested that there is an important need to understand teachers’ conceptions of media and information literacy (Pérez Tornero, 2008). While a number of educational reform initiatives, such as the Next Generation Science Standards in the United States or the computer science curriculum in the United Kingdom, have recently integrated MIL-related concepts in their student standards, implementing MIL in teacher education and teacher professional development may require time and institutional changes. The following section offers recommendations that educators can flow on their own as a first step towards the goal of promoting MIL to their students.

**RECOMMENDATIONS FOR EDUCATORS**

Given the current focus on implementing MIL in educational settings, it is critical that teachers understand and adapt to 21st century media and information in order to prepare learners to use technology in their personal, academic, and future professional lives. The following set of recommendations represent active steps that educators can take in order to accomplish that goal.

1. **MIL is an attitude.** Encourage your students to habitually question the information they encounter in their daily lives as well as the media through which the information is conveyed.
2. **MIL is a literacy that transcends types of communication (e.g., books, radio, television, social networks).** Practice it with your students both with traditional and new media.
3. **MIL is knowledge about how information is transmitted.** Teach your students how information is passed on through different media forms.
4. **MIL is an investigative activity.** Show your students the necessary steps to access and retrieve information based on their needs.
5. **MIL is awareness.** Help your students develop an awareness of how traditional and digital media providers transform and distort information to convey specific messages.
6. **MIL is an evaluative skill.** Model to your students how they can assess the veracity of information transmitted through different media.
7. MIL is creative. Encourage and guide students’ creation of media to participate in their digital culture of interest.

In addition, organizations such as the International Society for Technology in Education (http://www.iste.org/standards/ISTE-standards/standards-for-students), and the Partnership for 21st Century Skills (http://www.p21.org/storage/documents/P21_framework_0515.pdf) further explicate some of the MIL competencies that both students and educators should possess to successfully evaluate, use, and create digital information and media in the 21st century. We recommend readers to look at their standards in order to obtain a complete picture of the current landscape in MIL-related skills.

SUMMARY AND FUTURE DIRECTIONS

This chapter discussed the importance of media & information literacy for digital communication in the 21st century. It provided a brief history of the MIL concept, as well as a discussion of the competencies that compose MIL. We also explored the essential role that teachers play in teaching MIL skills in educational settings and presented recommendations for educators to take the first step in embedding MIL principles in their teaching. Overall, this chapter presented an adaptive set of competencies that will help individuals situate themselves within and contribute to today’s digital culture.

Future directions should explore inclusion of MIL within computing concepts, which has been highlighted as an area of importance in the classroom by many scholars (Barr & Stephenson, 2011; Eisenberg et al., 2005; Felini, 2015; Hobbs & Jensen, 2009; Perkovic et al., 2010; Qualls & Sherrell, 2010; Thomas, 2004; Wing, 2006; Yadav et al., 2014). Specifically, future work in this field should examine how exposure to computational thinking constructs also develops students’ MIL skills. As discussed previously, future research should also help to better understand teachers’ conceptions of MIL in order to identify potential challenges and barriers to its integration in teacher education and teacher professional development. Furthermore, future research should also look at the implementation and effectiveness of MIL trainings, such as the UNESCO curriculum for teachers; both at the institutional and the individual level. At the institutional level, research is needed to understand the role that the MIL curriculum could play in teacher education programs, either as a domain-general or as a domain-specific set of skills required of future teachers. At the individual level, studies should look at teachers’ engagement with MIL on a personal level in order to understand teachers’ attitudes towards embedding MIL in their teaching. These future directions will contribute to UNESCO’s overall mission to promote MIL on a global level, while supporting learners’ acquisition of these vital 21st century skills.

REFERENCES


**ADDITIONAL READING**


**KEY TERMS AND DEFINITIONS**

**Competencies:** A set of knowledge, skills and attitudes.

**Computational Thinking:** A way of thinking and solving problems based on computer science concepts.

**Media:** The diverse body of media technologies that reach broad audiences through mass communication.

**Media and Information Literacy:** The skills required to critically access and assess mediated information while understanding media functions in our daily lives.

**Information:** The facts or data conveyed or represented via various media.

**Participatory Culture:** A culture in which individuals are engaged with media instead of simply being passive consumers of information.

**Twenty-First Century Skills:** A set of skills that individuals need to succeed in the 21st century.