CHAPTER 2

Teaching the Ethical Use of Information as an MIL Skill

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2.1 INTRODUCTION

What do educators need to know about teaching the ethical use of information? This chapter deals with teaching the ethical use of information as a media and information literacy (MIL) skill. To be able to use information ethically, educators and students must equip themselves with principles that can be applied as information literacy skills to our information landscape. The concepts of ethics and information literacy are examined and the connection between the learning environment and the adoption of ethical information literacy skills is discussed. The teaching frameworks of informed learning (Bruce, 2008) and guided inquiry (Kuhlthau, Maniotes, & Caspari, 2012) are explored, along with learning scenarios, as a means of orchestrating the adoption of ethical information literacy behavior.

2.2 ETHICS

The term *ethics* occurs in many examples of standards and guidelines that address the acquisition, use, dissemination, and impact of information. The term is used as a simple way to highlight the recognition of right and wrong conduct in relation to handling information and as a more complex concept that identifies a principled approach to dealing with increasingly sophisticated information technology and its ever-changing global environment. As educators we have the opportunity to address the principles and standards needed to make wise decisions when dealing with the complexity of information issues of our 21st century. We recognize that the values of a community may vary across cultures. However, in a complex information environment, there are principles and values that we need to establish and reinforce. The educational community fosters engagement with these values in our learning environment and provides the means to learn and understand ethical information literacy behavior.

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2.3 INFORMATION LITERACY

An appreciation of teaching the ethical use of information as a literacy skill begins with an appreciation of the evolution of information literacy. In the United States, the concept of information literacy has evolved from a simple definition that referred to the approach of using reference resources to find information, through a recognition by the Association of College and Research Libraries (ACRL) of the American Library Association (ALA, 1989) definition that being information-literate meant being equipped with a set of abilities requiring individuals to "recognize when information is needed and have the ability to locate, evaluate, and effectively use the needed information" (ACRL, 2000, p. 2), to a grouping of "threshold concepts" and "foundational ideas" that are intended to address the "dynamic and often uncertain information ecosystem in which all of us work and live" (ACRL, 2015, p. 2).

With the 2007 publication of *Standards for the 21st Century Learner* the American Association of School Librarians (AASL) recognized that the "definition of information literacy has become more complex as resources and technologies have changed" (p. 3) and highlighted that "multiple literacies, including digital, visual, textual, and technological, have now joined information as crucial skills for this century" (p. 3). An expanded definition of information literacy seeks to address a wider, more encompassing reach throughout a path of lifelong learning:

> *Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning.*
>
> **ACRL (2015, p. 3)**

The Canadian Library Association (CLA, 2014) adopted *Standards of Practice for School Library Learning Commons in Canada* that articulate five core standards of practice to "drive best teaching and learning through the Library Learning Commons" (p. 8). The fourth standard, Fostering Literacies to Empower Life-Long Learners, applies an expanded "notion of literacy" that includes "digital literacy and citizenship" (pp. 17–18), recognizing that students must develop a range of literacy skills that includes personal responsibility. Accompanying the range of literacy skills is a continuum of growth indicators that identify the various competencies students would achieve throughout the various stages of exploring, emerging, evolving, and established.

The International Federation of Library Associations (IFLA, 2006) notes that there is a difference among languages in handling the concept of information literacy and the use of information *competency* is more easily recognized outside the English-speaking nations (p. 9). A recommendation by the European Council (2006) of the European Union identified eight key competences for lifelong learning (see Table 2.1).

These competences are recognized as "a combination of knowledge, skills and attitudes appropriate to the context. They are particularly necessary for personal fulfilment and development, social inclusion, active citizenship and employment" (European Council, 2006, Summary). Of the eight competences, competences four, five, six, and seven relate to the use of information. The acknowledgment of personal

Table 2.1 Key competences for lifelong learning

Key competence	Essential knowledge, skills, and attitudes
Communication in the mother tongue	The ability to express and interpret concepts, thoughts, feelings, facts, and opinions in both oral and written form (listening, speaking, reading, and writing) and to interact linguistically in an appropriate and creative way in a full range of societal and cultural contexts
Communication in foreign languages	Involves, in addition to the main skill dimensions of communication in the mother tongue, mediation and intercultural understanding. The level of proficiency depends on several factors and the capacity for listening, speaking, reading, and writing
Mathematical competence and basic competences in science and technology	The ability to develop and apply mathematical thinking in order to solve a range of problems in everyday situations, with the emphasis being placed on process, activity, and knowledge. Basic competences in science and technology refer to the mastery, use, and application of knowledge and methodologies that explain the natural world. These involve an understanding of the changes caused by human activity and the responsibility of each individual as a citizen

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Table 2.1 (Continued)

Key competence	Essential knowledge, skills, and attitudes
Digital competence	The confident and critical use of information society technology and thus basic skills in information and communication technology
Learning to learn	Related to learning, the ability to pursue and organize one's own learning, either individually or in groups, in accordance with one's own needs, and awareness of methods and opportunities
Social and civic competences	Social competence refers to personal, interpersonal, and intercultural competence and all forms of behavior that equip individuals to participate in an effective and constructive way in social and working life. It is linked to personal and social well-being. An understanding of codes of conduct and customs in the different environments in which individuals operate is essential. Civic competence, and particularly knowledge of social and political concepts and structures (democracy, justice, equality, citizenship, and civil rights), equips individuals to engage in active and democratic participation
Sense of initiative and entrepreneurship	The ability to turn ideas into action. It involves creativity, innovation, and risk-taking, as well as the ability to plan and manage projects in order to achieve objectives. The individual is aware of the context of his/her work and is able to seize opportunities that arise. It is the foundation for acquiring more specific skills and knowledge needed by those establishing or contributing to social or commercial activity. This should include awareness of ethical values and promote good governance
Cultural awareness and expression	Appreciation of the importance of the creative expression of ideas, experiences, and emotions in a range of media (music, performing arts, literature, and the visual arts)

Recommendation 2006/962/EC of the European Parliament and of the Council of Dec. 18, 2006.

responsibility and sensitivity to societal interactions is interwoven throughout all eight of these competences. The multifaceted nature of information competency is clearly demonstrated.

Underlying the use of definitions to describe information literacy and/or competence is the recognition that there is an ethical foundation to the use of information, both individually and as a society; there are consequences to how we handle information, both individually and as a society.

2.4 PLACING ETHICS IN INFORMATION LITERACY COMPETENCES

As a core competence for information literacy, ethics maintains a high profile. As one of the common beliefs in the AASL (2007) *Standards for the 21st Century Learner*:

> *Ethical behaviour in the use of information must be taught. In this increasingly global world of information, students must be taught to seek diverse perspectives, gather and use information ethically, and use social tools responsibly and safely. (p. 2)*

And again in the use of skills, resources, and tools, the idea that being a member of our democratic society requires ethical participation:

Learners use skills, resources, and tools to:

1. Inquire, think critically, and gain knowledge.
2. Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.
3. Share knowledge and participate ethically and productively as members of our democratic society.
4. Pursue personal and esthetic growth. (AASL, 2007, p. 3).

In the ACRL (2000) *Information Literacy Competency Standards*, the ethical use of information was recognized as Standard Five (see Table 2.2).

With the broadened ACRL (2015) *Framework for Information Literacy* perspective, the ethical use of information resides within each of the seven foundational concepts (see Table 2.3).

With the background and transition of concepts established, let's combine the concepts as ethical information literacy behavior since literacy involves awareness to inform practice and the development of skills to apply practice. We will discuss what that means and how we can transfer these concepts to others, and build an ethical foundation for the use of information.

Table 2.2 ACRL information literacy competency standard five (ACRL, 2000, p. 14)

Performance indicators	Outcomes
1. The information-literate student understands many of the ethical, legal and socio-economic issues surrounding information and information technology	a. Identifies and discusses issues related to privacy and security in both the print and electronic environments b. Identifies and discusses issues related to free versus fee-based access to information c. Identifies and discusses issues related to censorship and freedom of speech d. Demonstrates an understanding of intellectual property, copyright, and fair use of copyrighted material
2. The information-literate student follows laws, regulations, institutional policies, and etiquette related to the access and use of information resources	a. Participates in electronic discussions following accepted practices (eg, "Netiquette") b. Uses approved passwords and other forms of ID for access to information resources c. Complies with institutional policies on access to information resources d. Preserves the integrity of information resources, equipment, systems, and facilities e. Legally obtains, stores, and disseminates text, data, images, or sounds f. Demonstrates an understanding of what constitutes plagiarism and does not represent work attributable to others as his/her own g. Demonstrates an understanding of institutional policies related to human subjects research
3. The information-literate student acknowledges the use of information sources in communicating the product or performance	a. Selects an appropriate documentation style and uses it consistently to cite sources b. Posts permission-granted notices, as needed, for copyrighted material

The information-literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally.

Table 2.3 Ethics extracts from ACRL (2015) framework for information literacy

Knowledge practices	Dispositions
Concept: authority is constructed and contextual	
Learners who are developing their information-literate abilities: • Acknowledge they are developing their own authoritative voices in a particular area and recognize the responsibilities this entails, including seeking accuracy and reliability, respecting intellectual property, and participating in communities of practice	Learners who are developing their information-literate abilities: • Develop awareness of the importance of assessing content with a skeptical stance and with a self-awareness of their own biases and worldview
Concept: information creation as a process	
Learners who are developing their information-literate abilities: • Develop, in their own creation processes, an understanding that their choices impact the purposes for which the information product will be used and the message it conveys	Learners who are developing their information-literate abilities: • Understand that different methods of information dissemination with different purposes are available for their use
Concept: information has value	
Learners who are developing their information-literate abilities: • Give credit to the original ideas of others through proper attribution and citation • Understand that intellectual property is a legal and social construct that varies by culture • Articulate the purpose and distinguishing characteristics of copyright, fair use, open access, and the public domain • Make informed choices regarding their online actions in full awareness of issues related to privacy and the commodification of personal information	Learners who are developing their information-literate abilities: • Respect the original ideas of others • Value the skills, time, and effort needed to produce knowledge • See themselves as contributors to the information marketplace rather than only consumers of it • Are inclined to examine their own information privilege

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Table 2.3 (Continued)

Knowledge practices	Dispositions
Concept: research as inquiry	
Learners who are developing their information-literate abilities: • Use various research methods, based on need, circumstance, and type of inquiry • Monitor gathered information and assess for gaps or weaknesses	Learners who are developing their information-literate abilities: • Follow ethical and legal guidelines in gathering and using information • Demonstrate intellectual humility (ie, recognize their own intellectual or experiential limitations)
Concept: scholarship as conversation	
Learners who are developing their information-literate abilities: • Cite the contributing work of others in their own information production	Learners who are developing their information-literate abilities: • Understand the responsibility that comes with entering the conversation through participatory channels
Concept: searching as strategic exploration	
Learners who are developing their information-literate abilities: • Identify interested parties, such as scholars, organizations, governments, and industries, who might produce information about a topic and then determine how to access that information	Learners who are developing their information-literate abilities: • Realize that information sources vary greatly in content and format and have varying relevance and value, depending on the needs and nature of the search

2.5 ETHICAL PRINCIPLES FOR INFORMATION LITERACY

According to Severson (1997), ethical behavior is a "discipline of thinking" (p. 9) that enables us to select the appropriate action in situations that range from simple to complex. While it may be simple to identify right and wrong behavior in situations where we have experience through our upbringing, it can be more challenging in new or complex situations. The expanding world of technology continues to present seemingly new and complex opportunities that outrun our experience.

Applying a discipline of ethical thinking to all situations invokes a more structured and deliberative kind of critical thinking (Severson, 1997, p. 8).

And, critical thinking includes ethical reflection that allows us to place events and situations in a principled context. Ethical behavior does not replace morality or the law, but "it can help guide and educate our moral instincts; steer us away from uncompromising positions; and improve our moral vocabulary so that we might talk and listen better" (p. 13).

A principled approach to ethical behavior provides flexible guidelines for our actions that furnish insights to be applied in specific situations. They enable a deliberative process of application so that informed, creative, and sometimes individualized actions can be taken to fit a particular circumstance. Teaching students ethical principles provides an internal as opposed to external control over their actions, along with a practical understanding of the law where it is appropriate. Severson (1997) identifies four principles of information ethics which can be used to direct responsible behavior in the use of information:

1. Respect for intellectual property;
2. Respect for privacy;
3. Fair representation;
4. Nonmaleficence (doing no harm).

Each of these principles will be examined with emphasis on engaging students toward understanding how they apply to individuals and situations.

2.5.1 Principle of Respect for Intellectual Property

The arena of intellectual property includes a consideration of information as property. At the simplistic end of the spectrum the perspective of information as a commodity relates to being able to identify who "owns" the information or information product. This becomes more complex as "ownership" becomes harder to establish with digital products or when information is reworked into new information products. A determination of intellectual property includes validating or determining the authenticity and reliability of information and presents opportunities to consider the purpose of creating information products and the associated value. According to Warlick (2009) "the ultimate value [of information] is based on its accuracy, validity, and reliability—on its authority" (p. 145).

Rapidly expanding technological developments may make it challenging to determine the authority of information. Where print publications provide hardcopy editions with static publication data, the digital environment makes information more accessible and more

susceptible to manipulation. In the digital environment users can easily operate individually or within groups as information creators, producers, or consumers. Information can be plagiarized more easily and disseminated instantly.

Warlick (2009) suggests that "the best way to help students understand and appreciate information as valuable property is to make them property owners" (p. 140). This could involve having students place the copyright text (Copyright © date by *student name*) at the bottom of the pages, artwork, or media they produce. Discussing the effort it took to produce the product and the courtesy associated with giving credit or asking permission to use the intellectual and creative ideas of others is a way of personalizing the value of information. Students should be encouraged to learn from others, challenge the ideas of others, and explore extensively while acknowledging the work of others in the appropriate way: citations, acknowledgments, footnotes, references, bibliographies.

Conversations with students and class assignments can identify and include specific intellectual property laws such as copyright, fair use, trademarks, and patents along with the value of providing open access to information and the options available under Creative Commons licensing. Consequences associated with unacceptable behaviors such as fraud, theft, deceit, plagiarism, and withholding the results of research can be discussed under the principle of respect for intellectual property.

2.5.2 Principle of Respect for Privacy

Related to the principle of respect for intellectual property is the principle of respect for privacy. As Bodi (1998) notes "the individual decides who has the right or freedom to share in his or her activities or deliberations" (p. 461). Controlling those rights is challenging in a digital environment, and students must learn how to protect their personal information and respect the privacy of others.

Libraries defend the right to privacy through protection of student's circulation records, and a discussion of how personal data profiles are stored in databases for use by other agencies is an important aspect of the respect for privacy. Respect infers personal responsibility and that responsibility extends to being aware and cautious about what we share, how we share, and where that information is located. Privacy policies are distributed regularly by credit card companies, banking institutions,

and online vendors. The consequences of inappropriate sharing of what should be considered private information can be seen with examples of organizations firing employees for inappropriate online displays of personal information, educators being chastised for posting unprofessional photos of themselves in online public spaces, and identity theft of personal data from supposedly encrypted databases. Efforts to protect information integrity, confidentiality, and availability can often conflict with the desire for the benefits of information sharing. Respect for privacy is also a respect for self.

2.5.3 Principle of Fair Representation

Trusting that the product you purchase will function as advertised is an example of the principle of fair representation. We should be able to rely on the information that is presented and trust that if products, such as downloadable software, do not behave as advertised, the vendor will accept responsibility and be accountable. Liability standards should ensure that product risks are mitigated and warranties should provide a form of insurance against product failures. This implies that vendors are honest in their efforts to deliver quality products and accept the consequences for any mistakes. Discussions of client–vendor relationships and, by extension, student–student relationships, place the responsibility for honest transactions in the personal realm.

Presenting opportunities for students to understand the implication of manipulating information, even under the guise of creative misrepresentation, ensures that the principle of fair representation is understood and endorsed.

2.5.4 Principle of Nonmaleficence (Doing no Harm)

Adopting the principle of nonmaleficence means, at a minimum, that "we must never do anything that might contribute to the decline of another person's life or affairs" (Severson, 1997, p. 108). This implies taking responsibility for our actions and understanding the impact of our information interactions, regardless of the environment in which they occur. For example, some people may find it easy to rant and rave via email but wouldn't consider such behavior in person.

Cyberbullying becomes a convenient method of intimidation because of the distance between persons and the presumed anonymity of the instigator. The impact of violating another person's privacy and causing harm

must be placed in the personal arena where students have an opportunity to reflect on the purpose and consequences of malevolent acts.

The principle of doing no harm extends to an understanding of the impact on society. The unethical abuse of information, through computer viruses, hacking, malware, and phishing, is pervasive and expensive. The impact of these actions can be discussed in the context of adopting the principle of nonmaleficence, and appropriate actions should manifest themselves in the realm of digital citizenship. As Warlick (2009) states:

> *Information is power, and 21st century literacy equips children and adults, learners and teachers with powerful tools. We have at our disposal a global electronic library of information, much of it coming out of our own communities. We are increasingly gaining access to potent digital tools that can access, alter, and communicate that information in infinite and persuasive ways. (p. 148)*

Abusing the ideas of others, tampering with or distorting the ideas of others, or using information to cause harm violates an individual's place in the community of learners and can be harmful to society as a whole. Our place in the larger context of society and our civic responsibilities begin with an acceptance and understanding of self and self-respect. Providing assignments, activities, and discussions that enable perception, processing, and comprehension takes time. But the benefit of becoming reflective thinkers who can tackle issues and synthesize information is paramount. Ethical decisions require rational decision making.

2.6 LEARNING ENVIRONMENT

To openly discuss, confront, and address the ethical challenges in the global world of information, it is important to create a learning environment that models and honors ethical principles while guiding inquiry and encouraging creativity. Much of this depends on the skills, behaviors and attitudes of educators and the culture of the learning environment. Importance should be placed on establishing a learning environment that:

- Encourages the exchange of ideas and concepts;
- Offers a safe place for the debate of ideas;
- Instructs students on the principles underlying the ethical use of information;
- Equips students with the skills and abilities to be information literate;
- Reinforces the need for reflection and synthesis;
- Respects the privacy of individuals;
- Encourages creativity, ingenuity, and lifelong learning.

The learning environment for a community of learners can be established in face-to-face contact or online. Certainly there is a difference in those environments in terms of physical proximity, but a learning environment that nurtures lifelong learning can develop a sense of community that enables open discussion and teaches the ethical use of information.

The difference in environments and potential difference in the sense of "community" is an important discussion point: our social software "spaces" can create communities of practice that enable productive exchanges of information and inspire creativity. Points of netiquette within these spaces are worth debating and, in some communities of practice, a code of behavior will be established to ensure that everyone is treated respectfully. In that way, the likelihood of a dual world where behavior in one does not necessarily reflect behavior in another is diminished. The speed of communication can also alter the relationship among community members. People may not take the time to reflect on the possibility or implications of the unethical use of information. Sensitivity to personal behavior in these various circumstances can be taught.

2.7 TEACHING ETHICS AS A MIL SKILL

Teaching ethical information literacy skills involves considering how to construct our instruction to meet our understanding of how students learn. Two practical models that enable a deep personalization of ethics as an information literacy skill are: informed learning (Bruce, 2008) and guided inquiry (Kuhlthau et al., 2012), based on the information search process (Kuhlthau, 1985, 2004).

Informed learning "proposes that teaching and learning must (a) bring about new ways of experiencing and using information, and (b) engage students with the information practices that are relevant to their discipline or profession" (Bruce, 2008, p. ix). The broad theoretical framework for informed learning consists of six frames that present lenses to focus on how students experience learning in various contexts (see Table 2.4). This emphasis on experience resonates with the constructivist theory of learning that posits we construct meaning and knowledge through interaction between experiences and ideas. Providing learning experiences and providing opportunities to reflect on those experiences deepens student understanding and enables a stronger, more personal conceptual knowledge of the world.

Table 2.4 Six frames for informed learning of the ethical use of information (Bruce, 2008)

Content	What should learners know about the subject? Objective: Students will understand ethics related to the use of information and know the resources available for learning and applying the ethical use of information Activities: Lessons dealing with key content in ethics, including relevant information sources and search techniques
Competency	What should learners be able to do? Objective: Students will be able to make ethical decisions in the context of their information world Activities: Build ethical competence by working with a series of ethics cases, determining the key aspects of each case and making decisions about what action would be appropriate
Learning to learn	What does it mean to think like an informed learner? Objective: Use a range of resources to engage with ethical cases and reflect on how your use of information has influenced engagement with the cases Activities: Students work with a series of ethical cases and conduct their own research. Encourage them to work with a range of types of information, people, blogs, research articles, and their own experiences. Ask them to think regularly about what they are learning and how they are using information to learn
Personal relevance	What good is ethical information literacy to me? Objective: Students reflect on how ethics and the information processes they are using may influence their personal lives Activities: Students work with a series of ethical cases and conduct their own research. Encourage them to work with a range of types of information, people, blogs, research articles, and their own experiences. Ask them to think regularly about what they are learning, how they are using information to learn, and where ethical decisions are being made
Social impact	How does the ethical use of information impact society? Objective: Students consider how different ethical decisions may impact society Activities: Students work with a series of ethical cases and conduct their own research. Students are asked to consider how their information-use processes are helping them to see the social implications embedded in the cases
Relational	Focus on bringing about awareness of the critical ways of seeing or experiencing Objective: Students consider the decisions they make in a specific case from a range of perspectives, identifying differences between their own and other's views Activities: Students articulate their own views about the cases and see the different views emerging among peers. Students identify significant differences in the ways in which matters are dealt with and identify what they consider to be relevant information and how that information informs their views

The use of scenarios or cases is fundamental to engaging students with their learning processes and providing students with the opportunity to interact with others, and other perspectives, while reflecting on their responses to a variety of situations. The presentation of scenarios can be used as specific lessons directed toward an understanding of the ethical use of information. Or, they can be used within a research and inquiry framework to operationalize ethical information literacy initiatives at the point of need.

The guided inquiry design framework (Kuhlthau et al., 2012) invites educators to construct the inquiry process as a model, based on Kuhlthau's (1985, 2004) information search process (ISP), with educators participating in the process by guiding and encouraging inquiry. The ISP model is shaped by three realms of behaviors: *affective* (feelings), *cognitive* (thoughts), and *physical* (actions and strategies). The guided inquiry design framework (see Table 2.5) constitutes a series of eight phases that address these behaviors by involving the researcher in a process guided by educators that provides specific opportunities for personal reflection. Reflection is directed toward personal goals, reactions to the experience, skills learned, and processes used. Thus, research is experienced beyond the sheer rigid technicalities of finding information, and involves the searcher (feelings, thoughts, and actions and strategies) through guided steps to understanding what they have accomplished. Using this model effectively integrates the *Six Frames for Informed Learning* in a practical and flexible model of learning.

With the guided inquiry framework as our reference, the entire inquiry experience, unfolding over several sessions, could focus entirely on understanding ethics and build knowledge of ethical principles. Or, specific phases could offer opportunities to present learning through various lenses (informed learning frame):

- *Content* that builds knowledge of ethical principles could be woven into the immerse phase;
- *Competency* can be built with search and evaluation strategies to locate reliable information about a topic and included in the explore, identify, and gather phases;
- *Learning to learn* can be emphasized in the gather and evaluate phases through use of the inquiry logs, inquiry journals, reflection, and self-assessment;
- *Personal relevance* can be the focus of the enquiry phase;

Table 2.5 Guided inquiry design summary (Kuhlthau et al., 2012)

Phase	Activity	Librarian role	Teacher role
1. Open	Set an invitational tone with a short but powerful learning event to spark student interest and elicit prior knowledge. Examples: dramatic video, object, photograph, art image. Full group activity	Lead and participate. Carefully consider what will engage this particular group of students at this point in time	Each inquiry community and each inquiry is different so contribute knowledge of this inquiry community to build the opener. Lead and participate
2. Immerse	Guide students to connect with the content and to discover interesting ideas to explore further. Don't overwhelm students with too many facts. Examples: Consider stimulating experiences, such as an episode of https://learninglab.org/ or a television show, reading a stimulating text or a scenario. Combine full group activity with smaller group inquiry circles so students can discuss further. Individually, students begin an inquiry journal	Facilitate the organization and delivery of the experiences. Model the inquiry stance by accepting different perspectives, incomplete ideas, and speculations. Listen for personal connections and interesting ideas. Encourage all voices and provide a supportive and safe environment	Facilitate the organization and delivery of the experiences. Model the inquiry stance by accepting different perspectives, incomplete ideas, and speculations. Listen for personal connections and interesting ideas. Encourage all voices and provide a supportive and safe environment
3. Explore	Students browse various sources of information to explore interesting ideas and prepare to develop their inquiry questions. Explore ideas rather than accumulate facts. Relax, read, and reflect. Utilize inquiry logs and the inquiry journal. Individual time and group inquiry circles	Guide students to browse and scan a variety of sources, read when they find something interesting, and reflect on questions that begin to shape their inquiry	Contribute to a calm, reflective tone, not rushed or deadline-oriented. Help to create an environment that values a thoughtful, attentive, interested approach

4. Identify	Construct an inquiry question that will frame the rest of the inquiry: What is interesting to me? What are my learning goals? How much information is available? How much time do I have? Utilize inquiry logs and the inquiry journal. Individual time and group inquiry circles	Introduce strategies to enable each student to sort through information and ideas to clearly articulate a meaningful inquiry question	Look for evidence that the inquiry is going to move into deep learning
5. Gather	Students collect detailed information from a variety of sources; a time of comprehensive searching that encompasses locating, evaluating, and using a variety of sources of information. Utilize inquiry logs and the inquiry journal. Individual time and group inquiry circles to reflect on their process	Guide students in locating, evaluating, and using information. Concepts approach to ethics and information literacy that introduces skills and strategies	Guide learners to choose what is personally meaningful and compelling about their inquiry question in the information sources
6. Create	Organize learning into a creative presentation. Synthesize all the ideas and reflect on what they have learned. Inquiry chart, inquiry logs, inquiry journal. Individual time and group time. Product examples: videos, blogs, web pages, Power Points, speeches, shadow puppet play, scrapbook, exhibition, interactive activity, artwork	Guide students in creating a meaningful, interesting, clearly articulated, well-documented presentation that tells the story of what they have learned and provides appropriate attribution	Guide students toward synthesizing and communicating their learning

(*Continued*)

Table 2.5 (Continued)

Phase	Activity	Librarian role	Teacher role
7. Share	Share the product that was created, to show what they learned. Individual contributions, inquiry circles, and full group time	Organize share sessions to provide the best conditions for students to learn substantial content from each other	Encourage students to formally present their ideas and help them voice their new knowledge
8. Evaluate	Evaluate achievement of learning goals. Reflection and self-assessment. Analyze data sources. Conference sessions with individual students and full group to explore student learning about process and content	Guide students toward an awareness of how they learned through the process	Involve students in the task of evaluating their learning process
Leaders evaluate and reflect	Librarian and teacher discuss what went well, what could be done differently, and plan for next time		

- *Social impact* could be included in the create and share phases as a way to encourage the identification of ethical principles and discussion with peers;
- *Relational* awareness of various perspectives regarding ethical situations can be built in the open, share, and evaluate phases.

Being mindful of the six frames for informed learning and the guided inquiry process provides a solid framework for building the ethical foundation while building information literacy skills.

2.8 INTEGRATING ETHICS IN TEACHING INFORMATION LITERACY

An information literacy program in a school setting typically focuses on developing the skills for evaluating websites and providing correct attribution for sources. Now, educators can take a broader view and look for those opportunities to anchor the skills within a broader context:

- Move from information literacy instruction as library skills to embedding the process of learning to learn within all elements of interaction with students;
- Place ethical skills instruction in the context of the broader process of information literacy;
- Include ethical scenarios (Denison, 2015) for discussion and personal relevance (http://www.goodcharacter.com/dilemma/archive.html);
- Identify resources for ethical information practices:
  - Common sense education: digital citizenship (https://www.commonsensemedia.org/educators/curriculum);
  - Edutopia's Bullying Prevention (http://www.edutopia.org/blogs/tag/bullying-prevention);
  - Ribble's (2015) Digital Citizenship (http://www.digitalcitizenship.net/);
- Focus on learning outcomes (goal-oriented);
- Motivate for life-long learning.

Other techniques and processes can be used to operationalize ethical information literacy initiatives by weaving competencies into the fabric of the educational curriculum:

- Program approach:
  - Lessons;
  - Series of lessons.
- Vertical alignment K-12: design learning experiences that build knowledge from one grade to the next.

- Integrated reinforcement by integrating learning across the curriculum and across grade levels; iterative approach.
- Reflective learning by encouraging group discussion and personal reflection.
- An inquiry approach that encourages questioning, seeking, and curiosity.
- An inquiry stance that is modeled by displaying the construction of inquiries, exhibiting curiosity, and demonstrating search strategies.
- Presenting useful questions that evoke ethics as an information literacy skill.

An ethical approach to the use of information can be taught within the context of a specific information need, whether it is a research project for a college level or high school assignment, or a simple inquiry of interest from a student in a primary grade. While methods of instruction vary, to be truly effective they depend on three elements: integration (within and across the curriculum), reflection (personally and interactively), and reinforcement (repeated exposure to ethical principles).

As each inquiry opportunity develops and unfolds, educators can encourage an orientation toward ethical principles. As we guide students to understand the ethical foundation underpinning information literacy, the following questions are useful for consideration:

- Is it illegal? (then it probably is unethical);
- Does it violate ethical principles (which ones)?
- Does it bother your conscience or violate your personal values and principles or those of others around you?
- Does it look as though someone is likely to be harmed? (the someone could be you);
- If something terrible happens, could you defend your actions?
- Would this practice continue if it were publicized, for example in the local or college newspaper?

By repeatedly opening the discussion of ethical principles, engaging students through various scenarios, providing the skills to effectively search, evaluate, and determine reliability, encouraging personal reflection, and illuminating the consequences personally and as a society, we can build competency for the ethical use of information.

If we are able to build competency within the K-12 environment, the stage should be set for responsible action beyond high school. Equipped with the necessary skills and an ethical orientation to the use of information the next phases of student growth can include increasingly complex situations where students feel competent in their ability to

understand and respond responsibly. Realistically, this foundation is not always firmly established and the next phase of student learning, at college or university, requires that students understand the research process and appreciate the requirements for and consequences of ethical decision making.

At the college level, faculty rely on academic librarians to provide an orientation to conducting research, obtaining materials, and documenting sources appropriately. Academic integrity policies explicitly define the expectations and consequences for not following these policies. As Sciammarella (2009) observes: "The librarian can function as an intermediary in terms of introducing the student to scholarly information and the practice of acceptable documentation" (p. 24). The librarian can also function as a collaborator with the teaching faculty to develop proactive strategies to address ethical issues that correlate to the educational goals of each academic subject and the respective assignments.

2.9 CONCLUSION

Where does this leave educators throughout the K-20 learning environment? First, it implies that we must be knowledgeable:

- Understand the developmental stages of young people, along with their evolving ability to deal with increasingly more complex ethical issues;
- Accept that providing the socially correct answer to a dilemma does not imply understanding of the underlying ethical issues;
- Be prepared to assist students move from an egocentric perspective to an understanding of different perspectives by investing the time in preparing and sharing decision-making situations that engage students and provide the opportunity to select an appropriate course of action;
- Apply a variety of teaching methods that respond to the variety of student needs and comfort levels: for example, brainstorming, debates, discussions, role-playing, simulations;
- Stay informed about legislative issues related to technology access;
- Stay knowledgeable about the burgeoning technology applications and their use and potential misuse.

Second, be proactive:

- Advocate for regulations and laws that encourage student learning;
- Engage other educators in conversations about teaching strategies, potential areas of ethical concern, and educational resources;

- Educate yourself on the appropriate use of social media and ways to demonstrate a responsible digital footprint;
- Maintain professional development through professional organizations, conferences, print and online publications, and educators blogs, and Twitter posts;
- Seek collaborators within your educational community to coordinate approaches to developing ethical information literacy practices.

Ultimately, as we guide students to develop information competences and become lifelong learners, we are reinforcing skills and attitudes that encourage responsible action; placing ethical principles within the context of information literacy skills may be an effective way of guiding student behavior toward ethical information literacy practices. This becomes an ongoing journey, for ourselves and for our students.

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