Chapter 10
Ethical Aspects of Information Literacy in Artificial Intelligence

Selma Leticia Capinzaiki Ottonicar

 https://orcid.org/0000-0001-6330-3904
Sao Paulo State University (UNESP), Brazil

Ilídio Lobato Ernesto Manhique
Sao Paulo State University (UNESP), Brazil

Elaine Mosconi

 https://orcid.org/0000-0001-5579-9997
Université de Sherbrooke (UdeS), Canada

ABSTRACT

The purpose is to analyse information literacy to provide ethical insight into artificial intelligence. The methodology was based on a systematic literature review of SCOPUS, Web of Science, Library and Information Science Abstracts, and Science Direct. The results demonstrated that there are only a few studies about the topic, so there is a research opportunity about this type of literacy and its ethical aspects in the context of artificial intelligence. As a conclusion, information literacy is crucial to the development of critical thinking in technology use. Information literacy should be applied in artificial intelligence courses to discuss ethical aspects of technology.

INTRODUCTION

The fourth industrial revolution or Industry 4.0 (I4.0) is based on the connection between machines, networks and humans (Adolphs & Epple, 2017; Almada-Lobo, 2015; Schwab, 2016). One part of I4.0 is artificial intelligence (McCarthy et al., 1956), which has improved individuals' lives through the human-machine interaction. Despite its potential, artificial intelligence has created some ethical concerns. This technology has implications for cybersecurity and data privacy. Therefore, there is a dichotomy because artificial intelligence influences society both positively and negatively.

Artificial intelligence is a topic of research of many fields, so it can be considered multidisciplinary. The topic of this chapter is artificial intelligence in the context of Ethics, Information Science and Computer Science fields. Only a few researches have studied artificial intelligence in a multidisciplinary perspective, hence this chapter helps to fill this knowledge gap. Information Science is a useful lens, since it values the union of different knowledge.

Information Literacy is a very well-known topic in the field of Information Science. It is the ability to access, evaluate and use information to construct critical thinking. Ethics is a relevant aspect of information literacy (Vitorino & Piantola, 2011) because it guides individuals' behavior in society. An ethical approach to information has been recognized by Information Literacy Competency Standards for Higher Education of American College & Research Association (ACRL). This organization considers that an information literate person understands economic, legal and social aspects of information use. Furthermore, ACRL (2000) understands that information literacy helps individuals to access and use information in an ethical and legal way.

Information literacy allows people to interpret information issues in a critical way (Belluzzo, 2014; Yafushi, 2015; Ottonicar, Valentim & Feres, 2016) and it is the means through which people experience information (Demasson, Patritdge & Bruce, 2016). It helps to develop critical thinking (Grafstein, 2017), so it is a sociocultural element to allow individuals to deal with complex contexts (Lloyd, 2007).

Many countries have introduced laws and public policy focused on information literacy. However, those actions are still limited, because the obscurity of the current social system can create illusions in peoples' minds (Slayton, 2018). The use of ethical aspects of information literacy (Vitorino & Piantola, 2011) is the first step to face the dichotomy of artificial intelligence. Professionals need to understand the consequences of artificial intelligence to society. Bostron (2016) criticizes our society and compares humans to "children who play with a bomb".

Based on these ideas, this book chapter has the following question: how can information literacy contribute to an ethical development of artificial intelligence?

21 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/ethical-aspects-of-information-literacy-in-artificial-intelligence/268494

Related Content

Profits or Employment: Priorities of Future Managers
Grzegorz Wojtkowiak (2018). *International Journal of Sustainable Entrepreneurship and Corporate Social Responsibility (pp. 18-31).*
www.irma-international.org/article/profits-or-employment/219266

Financial Education and Inclusion: The Role of Banks
Omar Alonso Patiñoand Laura Marcela Patiño Gutiérrez (2019). *International Journal of Sustainable Entrepreneurship and Corporate Social Responsibility (pp. 57-72).*
www.irma-international.org/article/financial-education-and-inclusion/228991

Preparing Future Physicians to Adapt to the Changing Health Care System: Promoting Humanism through Curricular Design
Joanna Lauren Drowosand Sarah K. Wood (2017). *Medical Education and Ethics: Concepts, Methodologies, Tools, and Applications (pp. 1555-1574).*
www.irma-international.org/chapter/preparing-future-physicians-to-adapt-to-the-changing-health-care-system/167355

The Relational Trends to Sustainability
Rinaldo C. Michelini Di San Martino (2017). *International Journal of Sustainable Entrepreneurship and Corporate Social Responsibility (pp. 13-26).*
www.irma-international.org/article/the-relational-trends-to-sustainability/203606

Engineering Ethics Education: Issues and Student Attitudes
Balamuralithara Balakrishnan (2015). *Contemporary Ethical Issues in Engineering (pp. 133-143).*
www.irma-international.org/chapter/engineering-ethics-education/125176