

# Chapter 2

## AI Literacy: Foundations, Importance, and Broader Implications

**Andi Asrifan**

 <https://orcid.org/0000-0002-9934-6129>

*Universitas Negeri Makassar, Indonesia*

**Uswah Mujahidah Rasuna Said**

*Universitas Pendidikan Indonesia, Indonesia*

**Juvrianto Chrissunday Jakob**

 <https://orcid.org/0000-0002-5267-3448>

*Politeknik Negeri Ambon, Indonesia*

**Risman Wanci**

 <https://orcid.org/0000-0002-4270-9849>

*Universitas Famika, Indonesia*

### ABSTRACT

*This chapter explores the pivotal role of AI literacy in equipping individuals and communities to navigate an AI-driven world with confidence, ethical awareness, and informed decision-making. AI literacy encompasses a comprehensive understanding of AI principles, including machine learning, data management, and algorithmic ethics, empowering users to engage judiciously with AI technologies across sectors such as healthcare, finance, and education. By fostering critical thinking and reducing biases, AI literacy safeguards privacy, ensures ethical technology use, and promotes equitable access to AI-driven opportunities. The democratization of AI literacy is highlighted as a catalyst for empowering marginalized communities and enabling equal participation in AI-related dialogues and initiatives. As AI continues to reshape employment landscapes and educational paradigms, the chapter*

DOI: 10.4018/979-8-3693-8252-3.ch002

*underscores the importance of AI literacy in preparing a workforce ready to adapt to evolving technological demands.*

## **INTRODUCTION**

### **Defining AI Literacy**

AI literacy is the knowledge and skills needed to use AI technologies (Cassidy et al., 2023) (Srinivasan & Murthy, 2021) (Wang & Lester, 2023). This knowledge goes beyond understanding AI to include the practical skills needed to navigate and critically engage with AI tools in all aspects of life. AI literacy involves knowing how AI systems work, the data they utilize, the judgments they make, and their potential social impact. AI literacy requires understanding terms like “machine learning,” “neural networks,” and “natural language processing” to understand AI systems' often complex inner workings. Understanding these words helps people make informed judgments about AI-driven personal assistants, recommendation algorithms, and AI's ethical implications in daily life. AI literacy requires technical expertise and critical reasoning. Technical expertise involves comprehending AI algorithms' mechanics and their dependence on massive data sets that drive these systems (Emmert-Streib et al., 2020). However, critical thinking requires analyzing AI outputs, identifying biases, and evaluating AI insights for relevance and trustworthiness. As AI becomes more prevalent in healthcare, education, and finance, understanding its potential and limitations can help users use it wisely. Furthermore, AI literacy stresses ethical considerations in AI use. AI systems influence hiring, lending, and law enforcement decisions; therefore, individuals and communities must be able to question and evaluate their fairness, accountability, and transparency (Bengio et al., 2024). This understanding is crucial to creating a society where people are active participants who can confidently and responsibly negotiate AI's ramifications.

### **The Growing Presence of AI in Daily Life**

AI has become an invisible but powerful force in personal, professional, and societal life (- & Qasim, 2023) (Borenstein & Howard, 2020). AI influences how people use technology and make daily decisions, from voice-activated assistants like Siri and Alexa to personalized recommendation algorithms on Netflix, Amazon, and YouTube. AI is transforming modern life with intuitive, efficient, and tailored interactions. Voice assistants use natural language processing to understand and respond to spoken requests (Ahanin et al., 2022) (Hoy, 2018). These technologies let users make reminders, play music, and manage smart home gadgets using voice

30 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/ai-literacy/365897](http://www.igi-global.com/chapter/ai-literacy/365897)

## Related Content

---

### Trends and Challenges in Formative Assessment of Reading and Writing: Online EAP Contexts

Inanc Karagozand Imelda Bangun (2023). *Emerging Practices for Online Language Assessment, Exams, Evaluation, and Feedback* (pp. 1-20).

[www.irma-international.org/chapter/trends-and-challenges-in-formative-assessment-of-reading-and-writing/325661](http://www.irma-international.org/chapter/trends-and-challenges-in-formative-assessment-of-reading-and-writing/325661)

### Competitive Advantage and Student Recruitment at a Namibian University: A Case Study

Booyesen Sabeho Tubulingane (2020). *International Journal of Technology-Enabled Student Support Services* (pp. 1-19).

[www.irma-international.org/article/competitive-advantage-and-student-recruitment-at-a-namibian-university/270260](http://www.irma-international.org/article/competitive-advantage-and-student-recruitment-at-a-namibian-university/270260)

### Classification of Traffic Events in Mexico City Using Machine Learning and Volunteered Geographic Information

Magdalena Saldana-Perez, Miguel Torres-Ruizand Marco Moreno-Ibarra (2019). *Knowledge-Intensive Economies and Opportunities for Social, Organizational, and Technological Growth* (pp. 141-162).

[www.irma-international.org/chapter/classification-of-traffic-events-in-mexico-city-using-machine-learning-and-volunteered-geographic-information/214330](http://www.irma-international.org/chapter/classification-of-traffic-events-in-mexico-city-using-machine-learning-and-volunteered-geographic-information/214330)

### Teaching and Learning Through Interdisciplinary Pedagogies in a Second Life Environment: Focus on Integration and Assessment

Maureen Ellisand Patricia Anderson (2018). *Handbook of Research on Program Development and Assessment Methodologies in K-20 Education* (pp. 275-303).

[www.irma-international.org/chapter/teaching-and-learning-through-interdisciplinary-pedagogies-in-a-second-life-environment/191668](http://www.irma-international.org/chapter/teaching-and-learning-through-interdisciplinary-pedagogies-in-a-second-life-environment/191668)

## A Systematic Review of Game Designs and Outcomes of Serious Games Targeting Different Groups in Language Learning

Yukun Hou (2023). *International Journal of Technology-Enhanced Education* (pp. 1-19).

[www.irma-international.org/article/a-systematic-review-of-game-designs-and-outcomes-of-serious-games-targeting-different-groups-in-language-learning/323454](http://www.irma-international.org/article/a-systematic-review-of-game-designs-and-outcomes-of-serious-games-targeting-different-groups-in-language-learning/323454)