The impact of Artificial intelligence (AI) in education is growing at a tremendous rate. With regard to curriculum, the growing influence of AI on society makes it important for students to understand the fundamentals of AI and the application and use of AI in daily life. With regard to implementation, advancements in hardware processing speed, networking, and machine learning algorithms are leading to new tools that can transform teaching and learning. Cloud computing, open databases and APIs to large machine-learning services are making it possible for even young children to experiment with applications that only five years ago were accessible only to researchers at the largest establishments. These curricula and tools can have enormous worldwide influence when they are shared open-access worldwide so that everyone can build on and improve them.

In addition to this transformation, the global COVID-19 pandemic is forcing more and more schools to experiment with online education. This puts a premium on curricula and tools that can lead to effective distance learning and also raises a host of additional considerations for educational technology research and practice.

There is a significant corpus of past scholarship dealing with visions of AI’s impact on education “in the future.” But the changes noted above are happening now. Accordingly, this special issue will focus on work currently in practice: documentation of tools currently in use, empirical studies and assessment of new techniques, and research perspectives.

**Topics of interest include, but are not limited to:**

- Online Learning with AI Application
- AI learning processes and behavior in distance learning
- AI enhanced teaching and learning
- Learning behavioral patterns and analysis in AI e-learning
- Learning strategies of AI education in e-learning environments
- Methods for young students to study AI in K-12
- Methods for undergraduate or graduate students to study AI in high education
- The development or application of conversational AI learning systems
- AI instruction and tools in schools
- AI and the Future of Education
- Development of AI curricula or AI-related learning activities
- Empirical study of using AI as a tutor
- Empirical study of using AI as a tutee
- Empirical study of using AI as a peer
- Innovative application of AI integrated into interdisciplinary learning
Important dates
Submission of proposals and abstracts to Guest Editors: September 30, 2020

Abstract should be between 150 and 250 words in length.

Approval and suggested changes sent to authors by Guest Editor: October 15, 2020
Deadline for authors to submit full articles: December 15, 2020

The full article should conform to the guideline for authors in IRRODL

Distribution to reviewers & decision by the editors: December 15, 2020 - February 15, 2021
Final manuscripts due by the authors: March 28, 2021
Special Issue Publication: To be arranged

Submission URL and guidelines:
http://www.irrodl.org/index.php/irrodl/about/submissions

Special Issue Guest Editors
Dr. Hal Abelson,
Professor, Computer Science and Artificial Intelligence Lab,
Massachusetts Institute of Technology, USA.
Director and PI, MIT App Inventor Group, USA.
Email: hal@mit.edu
URL: https://appinventor.mit.edu/

Dr. Ting-Chia Hsu
Distinguished Professor, Department of Technology Application and Human Resource Development,
National Taiwan Normal University, Taiwan
Email: ckhsu@ntnu.edu.tw
URL: http://all.tahrd.ntnu.edu.tw:8080/eindex.html

Natalie Lao
Post-doctoral Research Associate,, Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology, USA
Email: natalie@mit.edu
URL: https://internetpolicy.mit.edu/team/natalie-lao/