AI for Blended Learning Workshop

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Editors:

- Elad Yacobson [1] iD

- Tanya Nazaretsky [1] iD

- Armando M.Toda [2] iD

- Alexandra I.Cristea [2] iD

- Giora Alexandron [1] iD

1: Weizmann Institute of Science, Rehovot, Israel

2: Durham University, Durham, UK

Corresponding Editor:

Elad Yacobson
Weizmann Institute of Science, Rehovot, Israel
elad.yacobson@weizmann.ac.il

Preface

This volume contains the proceedings of the AIBL (Artificial Intelligence for Blended Learning) workshop. This workshop was co-located with the sixteenth European conference on technology enhanced learning (ECTEL 2021), held online due to the COVID-19 pandemic, on 20 – 24 September, 2021.

The rationale behind this workshop is that most of the research on personalized learning tends to focus on learning environments that are designed for the individual learner, such as Massive Open Online Courses (MOOCs) that offer (mainly) academic level content, or Intelligent Tutoring Systems that teach core skills (e.g., K-6 Math). However, in K-12, most of the learning occurs in blended-learning environments, where teachers employ a variety of online and offline activities, combine individual and group work with frontal teaching, and other modalities. Thus, there is a sharp contrast between where most of the learning happens, and where most of AIED/EDM research is conducted. The COVID effect reinforced our understanding that online learning cannot substitute, but only complement, a human teacher. This workshop will enable participants to share ideas, insights and tools regarding the use of artificial intelligence that supports and empowers teachers in providing personalized instruction in blended learning environments.

Program and contributions:

The AIBL workshop was a one-day workshop held on September 20, 2021. Contributions were organized into two sessions, as follows:

Session 1:

- ***Learning analytics based formative assessment: Gaining insights through interactive dashboard components in mathematics teaching***

  Kholod Abu-Raya and Shai Olsher

- ***Classification in math class: using convolutional neural networks to categorize student cognitive demand***

  Victoria Delaney and Jai Bhatia

- ***Participatory design of feedback mechanism in a physics blended-learning environment***

  Elad Yacobson, Armando M.Toda, Alexandra I.Cristea and Giora Alexandron

Session 2:

- ***Confirmation bias and trust: Human factors that influence teachers' adoption of AI-based educational technology***

  Tanya Nazaretsky, Mutlu Cukurova, Moriah Ariely and Giora Alexandron

- ***Towards continuity of personalization in a large blended course***

  Sergey Sosnovsky and Almed Hamzah

Program Committee:

- Elad Yacobson iD
- Tanya Nazaretsky iD
- Dr. Armando M.Toda iD
- Prof. Alexandra I.Cristea iD
- Dr. Giora Alexandron iD
- Dr. Shai Olsher iD
- Dr. Arnon Hershkovitz iD