# Table of Contents

## Preface .......................................................................................................................... x

## Organization .................................................................................................................. xi

## International Program Committee .............................................................................. xii

## Organizers and Sponsor ............................................................................................... xiii

## Keynote Speakers ......................................................................................................... xiv

## E-Learning and Online Learning

- Exploration of Blended Teaching Pattern Based on Hstar and Smart Classroom .................. 3
  Zhaoli Zhang, Taihe Cao, Jiangbo Shu, Min Zhi, Hai Liu, and Zhenhua Li

- A Comparative Research on Online Interaction of Sino-British Learners .......................... 8
  Ming Liu

- An Adaptive Teaching Strategy for Blending Learning and Its Application ...................... 14
  Zhaoli Zhang, Xingfang Zhang, Hai Liu, Jiangbo Shu, and Baolin Yi

- Cloud-Class Blended Learning Pattern Innovation and Its Applications ....................... 19
  Hai Liu, Deli Kong, Zhaoli Zhang, Jiangbo Shu, and Taihe Cao

- Importance-Performance Analysis of e-Learning Technologies in Malaysian Higher Education .......................................................... 24
  William Eng Yong Keong

- Benefits in Utilization of the Internet by Elderly People — Case Study ......................... 29
  Miloslava Černá and Libuše Svobodová

- Do We Really Know What People are Using Their Smartphone for? ............................... 34
  Tony Chin-Leung Chow and Will W. K. Ma

- Student Engagement in Online Learning: A Review ....................................................... 39
  Min Hu and Hao Li

- Learners’ Appeal: An Analysis of Teachers’ Behavior in Online Live Teaching ............. 44
  Chengling Zhao, Hongxia Li, Zihui Jiang, and Zihao Xiong

- Research on Personalized Learning Model under Informatization Environment ............ 48
  Baolin Yi, Dujuan Zhang, Yi Wang, Hai Liu, Zhaoli Zhang, Jiangbo Shu, and Yuegong Lv
Using Augmented Reality to Teach Kindergarten Students English Vocabulary ..........................................................53
   Lap-Kei Lee, Cheuk-Him Chau, Chun-Hin Chau, and Chun-Tim Ng

Empirical Study on the Difference of Teachers’ ICT Usage in Subjects, Grades and ICT Training ..........................................................................................................................58
   Jingyang Rao, Jingjing Xu, Lei Wu, and Yajuan Liu

A Study on Teacher Training Mechanism Supported by Blended Learning from the Perspectives of Communication and Knowledge Management ..........................................................62
   Zhiming Liu and Shan Jia

A Comparative Analysis of Using Local Teaching Material and ICT: Focus on Primary School among Bangladesh and the Philippines ........................................................................67
   Miori Kamidate-Yamaguchi and Kenichi Kubota

Cloud-Terminal Integration Learning Platform and Its Applications in Blended Learning ........................................................................................................................................................................71
   Hai Liu, Yingying Chen, Zhaoli Zhang, Jiangbo Shu, and Zhifei Li

A Synchronization of Blended Learning: A Case Study in Higher Education ........................................................................74
   Kristianus Oktriono

The Design of Blended Learning Model Based on Cloud Classroom ..........................................................................................................................77
   Caifeng Zhu, Xiaojun Sun, and Qi Wei

The Application and Research of Open Experimental Teaching Mode in College Computer Basic Courses ..............................................................................................................................................80
   Wenjun Yu and Huiting Wu

**Online Platform and Environment**

Evaluation Model and System of ICT in Education Based on Gray Fuzzy Method ..........................................................................................................................85
   Di Wu, Chi Zhou, Min Chen, and Jian Xu

Research on the Roles and Characteristics of the Theme-Based Cooperative Learning Members .......................................................................................................................................................................90
   Bo Liu, Xiao Liu, Huijie Cui, and Leiyan Wang

Online Teaching Platform — Hstar and Its Application in Higher Education ........................................................................95
   Wei Zhang, Hao Chen, Xujun Huang, Hai Liu, and Jiangbo Shu

Study on Factors that Affect College Students’ Acceptance of Cloud-Classroom .........................................................................................99
   Jian Xu, Yajuan Liu, Zhexu Liu, and Jin Zhang

Design and Implementation of ILES for Primary and Secondary Students .........................................................................................103
   Min Chen, Yue Yuan, Jian Xu, Wei Zhao, and Di Wu

DBNCF: Personalized Courses Recommendation System Based on DBN in MOOC Environment .........................................................................................106
   Hao Zhang, Heng Yang, Tao Huang, and Gaoqiang Zhan
**Instructional Technology**

Application of Augmented Reality for Early Childhood English Teaching .......................................................... 111

*Yanyan Chen, Dongbo Zhou, Yu Wang, and Jie Yu*

The Application of Traditional Games to Develop Social and Gross Motor Skills in 6-7 Year-old Children .......................................................................................................................... 116

*Olifia Rombot*

Student Acceptance of Business Process-Experience-based Sand Tables ................................................................. 121

*Xiaofei Dong, Gaoyang Zhang, and River Chu*

Evaluating an Intelligent Tutoring System for Personalized Math Teaching ............................................................. 126

*Bilan Zhang and Jiyou Jia*

Analysis of Urban-Rural Discrepancies in Primary and Secondary School Teachers’ ICT Application Ability in Teaching and Research in China ..................................................................................... 131

*Yingying Zhao, Jian Xu, and Min Chen*

The Development and Application of Mobile Augmented Reality Educational Aid for Preschool Children’s English-Vocabulary Learning ..................................................................................... 135

*Mei Pu and Zheng Zhong*

Factors Analysis on Differences of Teachers’ ICT Usage Between Urban and Rural Region ......................................................................................................................................................................... 139

*Peng Zhou, Ranran He, Yonghui Wang, and Yajuan Liu*

Interactive Visualization and Its Application in Junior Middle School Chemistry Teaching ................................................................. 143

*Zhaoli Zhang, Zhifei Li, Hai Liu, and Jiangbo Shu*

Learning Analytics-Based Evaluation Mode for Blended Learning and Its Applications ................................................. 147

*Baolin Yi, Yi Wang, Dujuan Zhang, Hai Liu, Jiangbo Shu, Zhaoli Zhang, and Yuegong Lv*

**Learning Analytics**

Student Performance Prediction via Online Learning Behavior Analytics ........................................................................ 153

*Wei Zhang, Xujun Huang, Shengming Wang, Jiangbo Shu, Hai Liu, and Hao Chen*

Identifying Students’ Test-Taking Behavioral Patterns in an Online Chinese Reading Assessment System ..................................................................................................................................................................... 158

*Xiaoxue Han, Xiuyun Tian, Hercy N.H. Cheng, Wang-Chen Chang, Calvin C.Y. Liao, and Sanya Liu*

Research on Individualized Learner Model Based on Context-Awareness ........................................................................ 163

*Shihua Huang, Baoyuan Yin, and Ming Liu*

Study on the Regional Disparities of ICT in Education: Based on the Data Analysis of ICT in Education from Hubei Province, China ..................................................................................................................... 168

*Chun Lu, Danxia Xing, and Wenting Zhou*
The Influence of Lecturers’ Competencies Towards Students’ Performance
Motivation: A Case Study at Higher Education ................................................................. 173
   Dian Anggraini Kusumajati, Yustinus Suhardi Ruman, and Kristianus Oktriono

The Use of English in Learning Mathematics for Grade 7 Junior High School ........................................................ 177
   Mario Nugroho Willyarto, David Werhoru, and Antonius A. Gea

The Impact on Knowledge Management System’s Element to the Performance
in Higher Education ........................................................................................................ 180
   Jarot S. Suroso, Sasmoko, and Elisabeth

Understanding the Digital Citizenship Behaviors of College Students from Differing
Socioeconomic Origins .................................................................................................. 184
   Shun Xu, Harrison Hao Yang, Sha Zhu, and Jason MacLeod

Open Education Resources
LSCB-ALS: A New ALS and Its Application in Java Language Learning .................................................. 191
   Baolin Yi, Yuegong Lv, Hai Liu, Zhaoli Zhang, Dujuan Zhang, and Yi Wang

Survey on the Quality Assessment Factors of Educational APP ..................................................... 196
   Xueqing Zeng, Xian Peng, and Chun Lu

Research on the Personalized Recommendation for Tujia Brocade Cultural Resources ........................................ 201
   Gang Zhao, Shuai Lu, Weiwei Wang, Shan Liu, Wenjuan Zhu, and Hui Zan

Reconstructing Undergraduate Courses Based on OER in Public Universities: An
Exploratory Study in Zhejiang University ........................................................................ 205
   Muhua Zhang, Yuqing Guo, Jiajia Yao, and Yan Li

Interactive Learning Resources Based on Cognitive Load: Design and Application ................................ 208
   Huali Yang, Wenyuan Ren, and Tao Huang

A Case Study: Developing a Micro-College Model Using MOOCs for an Underserved
Community ..................................................................................................................... 212
   Jooyoung Voeller

Ubiquitous Learning and Flexible Learning
Blended Learning versus Traditional Learning: A Study on Students’ Learning
Achievements and Academic Press ................................................................................... 219
   Yitong Wei, Yinghui Shi, Harrison Hao Yang, and Jianqing Liu

Improving English Pronunciation Via Automatic Speech Recognition Technology ................................... 224
   Meihui Li, Meiting Han, Zejia Chen, Yiling Mo, Xiujuan Chen, and Xiaobin Liu

Dynamic Technology Tool to Support Active Learning in Mathematics ............................................... 229
   Abdul Hadi Bhatti, Raza Hasan, Alya Al Farsi, and Syed Imran Ali Kazmi

PARACACHE: Educational Simulator for Cache and Virtual Memory .................................................. 234
   Aryani Paramita and Smitha K. G.
Individualization of Teaching in Special Elementary Schools with Using Mobile Touch Devices .......................................................................................................................................................................................... 239
  Vojtěch Gybas, Kateřina Kostoláňová, and Libor Klubal

Using a Modified Jigsaw Technique in E-Learning Laboratory Classes for Engineering Students ...................................................................................................................................................................... 244
  Christina Andersson and Doina Logofatu

Issues and Experience in Blended Learning

The Model of Professional Development Program for The Internationalization of Secondary Education: Case Study in SMA Lokon, North Sulawesi ............................................................................................................................................................................................................. 251
  Ferry Doringin and Sasmoko

An Empirical Study on Blended Learning to Promote the Development of Computational Thinking Ability of College Students ............................................................................................................................................................................................................. 256
  Lihua Liao and Jin Liang

Faculty Support for Effective Flipped Classrooms in Higher Education ............................................................................................................................................................................................................. 261
  Chiaki Iwasaki

A Study of Vocational and Professional Education and Training (VPET) Students and Teachers’ Preferred Support for Technology Based Blended Learning ............................................................................................................................................................................................................. 268
  Ricky Yuk-kwan Ng, Rechell Yee-Shun Lam, Kwan-Keung Ng, and Ivan Ka-Wai Lai

A Study on the Learning Support Service of Blended Learning Under the Environment of Online Open Courses ............................................................................................................................................................................................................. 272
  Fengling Zhou, Chengling Zhao, Zhihui Jiang, and Lu Wang

SAMR Model and Bloom’s Digital Taxonomy Applied in Blended Learning/Teaching of General English and ESP ............................................................................................................................................................................................................. 277
  Jan Netolicka and Ivana Simonova

Author Index ..................................................................................................................................................................................................................................................................................................................................................................................... 283