2020 International Conference on Artificial Intelligence and Education (ICAIE 2020)

Tianjin, China 26 – 28 June 2020



IEEE Catalog Number:

ISBN:

CFP2077J-POD 978-1-7281-9920-7

Copyright © 2020 by the Institute of Electrical and Electronics Engineers, Inc. All Rights Reserved

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

 IEEE Catalog Number:
 CFP2077J-POD

 ISBN (Print-On-Demand):
 978-1-7281-9920-7

 ISBN (Online):
 978-1-7281-6659-9

Additional Copies of This Publication Are Available From:

Curran Associates, Inc 57 Morehouse Lane Red Hook, NY 12571 USA Phone: (845) 758-0400

Phone: (845) 758-0400 Fax: (845) 758-2633

E-mail: curran@proceedings.com Web: www.proceedings.com



2020 International Conference on Artificial Intelligence and Education (ICAIE) ICAIE 2020

Table of Contents

Preface xvi Committee Members xvii
Reviewers xviii
Artificial Intelligence Technology and Educational Applications
Influence of Different Convolutional Neural Network Settings on the Performance of MNIST Handwritten Digits Recognition .1
Peer Assessment Based on the User Preference Matrix 7. Zhisen Fan (Guangdong University of Foreign Studies), Meixiu Lu (Guangdong University of Foreign Studies), and Xia Li (Guangdong University of Foreign Studies)
Research on the Strategy for Constructing Smart Kindergarten System .11
Analysis and Visualization of Online Learning Data Based on Crowd Sensing .15. Zhongxian Bai (Communication University of Zhejiang)
A Review of Human Behavior Recognition Based on Deep Learning .19
Design and Implementation of Intelligent Learning Companion System Based on WeChat Mini Program 24
The Application of Artificial Intelligence Video Feedback System in Tennis Teaching in Colleges and Universities 28
C-GRU: A Parallel Neural Network for Malicious Traffic Classification .32

Exploration and Practice on Industrial Robot Experimental Teaching Based on Virtuality and Reality Combination .88
Classroom Behavior Recognition Based on Improved Yolov3 .93. Yiwen Zhang (College of Information Engineering Sichuan Agricultural), Zhe Wu (College of Information Engineering Sichuan Agricultural), Xianjin Chen (College of Information Engineering Sichuan Agricultural), Longzhi Dai (College of Information Engineering Sichuan Agricultural), Zhiyao Li (College of Information Engineering Sichuan Agricultural), Xiaolan Zong (College of Information Engineering Sichuan Agricultural), and Tao Liu (College of Information Engineering Sichuan Agricultural)
The Change of Teachers' Role in Teaching under the Environment of " Artificial Intelligence +" .98
Human Behavior Recognition Based on Attention Mechanism 103
Future Education Trend Learned from the Covid-19 Pandemic: Take «Artificial Intelligence» Online Course as an Example .108
Research on the Teaching of "Internet plus Continuing Education" from the Perspective of AI .112
On the Chinese Development of Computer-Assisted Translation under the Background of Artificial Intelligence .116
Research on the Evaluation Eystem of Talent's Ability Based on Computer Simulation Technology .118
Yong Chen (Army Engineering University), Zhong Hua Cheng (Army Engineering University), and Rongcai Wang (Army Engineering University)
Research on Intelligent Development of Sports Product .123
Dual Flow Framework on Bimodality Emotion Recognition Based on Facial Expression and Eye Movement .127
Technology)

Innovation and Practice Study on the System of "General Education Electives" for Application-Oriented Universities from the Perspective of "First-Class Courses" in the Era of Artificial Intelligence .134
Analysis and Research on the Market of College AI Customized Creative Souvenirs .138
Research on Information Interaction Intervention and Collaborative Classification Model Construction in Artificial Intelligence Environment .1.42
Artificial Intelligence Legal Consulting Based on Categorization .148
Design of Volunteer Service System Based on Intelligent Recommendation Service .152
Design and Implementation of Intelligent Experiment Management Platform Based on Internet of Things 156
Future Education and Information Education
A Study on the Causes and Effects of Indonesian Children's Neglect through Computer Analysis of Big Data 160
Analysis of the Impact of Abuse on Children by Using Big Data Method in Computer - A Case Study in Jakarta, Indonesia .164
Research on the Status and Impact of Underage Girls' Arranged Marriage through Computer Collection and Analysis -Indonesia's Poor Areas as an Example .168
A Computer Software SPSS Study on the Effect of Taste Preference on Anxiety of Preschool Children .172

Investigation and Analysis of the Mental Health Status of Preschool Teachers in Chongqing, China by Computer Software SPSS .17.6
Influence of Educational Background on the Mental Health of Preschool Teachers in Chongqing, China by Computer Software SPSS 181
Exploration of Multi-level Virtual Simulation Digital Printing Experiment Teaching Model .185 Shi Wang (Dalian Polytechnic University)
Application of Virtual Reality Technology in College Tennis Teaching .189. Jianjian Lin (University of International Relations), Jie Song (Beijing University of Agriculture), and Lihong Sun (Shandong University of Finance and Economics)
The Research on the Application of Big Data in the Credit System of Higher Vocational Colleges .194
Study on the Application and Challenges of Educational Robots in Future Education .198
Hybrid Teaching Practice Based on Internet Platforms ——A Case Study of the Course "Introduction to Tourism" 202
Analysis of Hospital Private Cloud Application Based on SDN .207
Research on the Construction of Course Knowledge Graph of High School Information Technology 211
Research on the Influence of Entrepreneurial Environment on College Students' Entrepreneurial Motivation under the Internet Background 216
Organization of Online Chinese Teaching Activities in Township Primary Schools during the Epidemic: A Case Study Based on Activity Theory .220. Li Shuni (Central China Normal University), Jin Jingya (Central China Normal University), and Zhan Jing (Central China Normal University)
Analysis and Research on the Related Factors of Academic Problems of University Undergraduates from the Perspective of Big Data .225. Wenxian Bian (Nanjing University of Posts and Telecommunications), Yongming Yao (Nanjing University of Posts and Telecommunications), and Yang Cao (University of Posts and Telecommunications)

Study of Blended Learning in College Physics Experiments under the Information Environment.229 Minghui Shao (University of Jinan), Ping Wei (University of Jinan), and Li Gao (University of Jinan)
ESP Course Construction and Learning Behavior Analysis .233. Ya-Mei Zhang (Shandong Institute of Commerce and Technology)
Research on the Teaching Reform of Managing the Software Process Course 237. Aijun Zhen (Tianjin Agricultural University), Guoqiang Ma (Tianjin Agricultural University), Kai Wu (Tianjin Agricultural University), and Yan Liu (Neusoft Education Group)
Research and Practice of X-Ray Chest Film Disease Classification Based on DenseNet .241 Bing-Jin Liang (Guangdong Food and Drug Vocational College), Jian Yin (Sun Yat-Sen University), Yan-Jun Lin (The Seventh Affiliated Hospital of Sun Yat-Sen University), Liang Pan (Guangzhou WiseImage Information Technology Co., Ltd), and Guo-Xiong Lin (Guangzhou WiseImage Information Technology Co., Ltd)
Teaching Reform and Innovation in "College Movie English" Course under the Background of "Internet Plus" 245. Lingjun Zheng (Yangtze Normal University)
Investigation on the Present Situation of University Teachers' Scientific Research Pressure under the Background of Information .249
Research on the Scholarship of Teaching Based on Citespace .253 Qin Wang (Wuhan University of Technology), Jiangjing Xia (Wuhan University of Technology), and Rui Lv (Wuhan University of Technology)
The Construction and Practice of Blended Learning Mode for the Course Market Research Based on WeChat Public Platform .258 Juan Liu (Shandong Women's University)
Research on New Models of "Flipped Classroom" in Higher Education 262
Teaching Practice of C Language Based on SPOC 266. Wenping Chen (Zaozhuang University), Li Xu (Zaozhuang University), and Chaofeng Guan (Zaozhuang University)
A Research on the Construction of Online and Offline Mixed "Golden Class" Based on MOOC+SPOC Mode a Case Study in Business English Reading and Writing(BERW) .270
Discussion on Online Teaching Mode of Colleges and Universities under Multi-platform Integration 27.4 Ling Feng (Taishan University)
Research and Practice of the Application of Information Means in the Teaching of Industrial Design in the Background of Information .278
Practical Study on Blending Teaching Model of College English Based on SPOC .281

Research on Service Innovation of Distance Education Platform under the Background of Coronavirus – Case Study Based on Tencent Classroom 286
Study on the Application of Network Resources in Home Teaching 290. Guoxia Li (Zhengzhou University), Jianjing Mao (Zhengzhou University of Industrial Technology), Dongpo Zhang (Zhengzhou University of Industrial Technology), Jing Yang (Zhengzhou University of Industrial Technology), and Bin Sun (Zhengzhou University of Industrial Technology)
The Concept Change and Organization Transformation of Vocational Education under the Internet Thinking 293. Guohua Zhu (Shanghai University of Finance and Economics-Zhejiang College) and Zhaoxue Wu (University of Science and Technology of China)
Problems and Suggestions of Online Learning for Chemical Engineering Majors in Colleges and Universities 298. Zhe Yue (Wuhan University of Science and Technology), Binbin Shi (Wuhan University of Science and Technology), Chunrun Liu (Wuhan University of Science and Technology), Minghao Bao (Wuhan University of Science and Technology), and Yutian Wu (Wuhan University of Science and Technology)
Technological Empowerment: A Study on New Media's Impact on Participatory Culture in China's Higher Education System .302
Research and Thinking about the Construction of Online Courses .306. Hui Liu (Shanghai University of Electric Power) and Fengyong Li (Shanghai University of Electric Power)
Foreign Language Learners' Preference of E-Learning Methods: An Empirical Study 311
The Intelligent Management of Counselors in Higher Vocational Colleges under the Background of Informatization 316
The Reform of Ideological and Political Course Online Teaching during COVID-19 Outbreak a Case Study of Sichuan Technology and Business University .320
Virtualized Circuit Welding and Simulation Experiment System Based on Unity3D .325
Construction of Agile Teaching Team for Software Engineering Major under Background of New Engineering 329 Jiujiu Yu (Anhui Sanlian University), Jishan Zhang (Anhui Sanlian University), Yun Chen (Anhui Sanlian University), Ning Wu (Anhui Sanlian University), Yingying Mei (Anhui Sanlian University), Canglu Zhu (Anhui Sanlian University), Lili Zhu (Anhui Sanlian University), and Xiaoyu Chu (Anhui Sanlian University)

A Study on the Blended Learning Model of Online Course "Engineering Project Management" .334 *Xiaolei Ji (Jiangsu Open University), Xin Zhou (Jiangsu Open University) and Haiya Zhang (Jiangsu Open University)*

Research on the Construction and Method of Educational Mode

The Difference of Pre-class Preview Time Affects Online Teaching Quality .384
Xinmeng Kang (Beijing City University) and Yajuan Guo (Beijing City University)
Practice and Exploration of Modern Apprenticeship System of Accounting Major—Based on the Mode of "Financial Sharing Center" .388
Research on Evaluation Method of Primary School Science Teaching Based on Students' Emotion 392
Ya-Yun Gong (South China Normal University), Xiao-Yu Tang (South China Normal University), and Si-Rui Liu (South China Normal University)
Geaching Method Research of Practical Course of Certain Artillery Radar Equipment 398
Research on Effective Cooperative Learning Strategies in Group Teaching of Practical Courses 402
Ming Xia (Air Force Communication NCO Academy) and Dan Liu (Air Force Communication NCO Academy)
Research on the Evaluation Index System of Table Tennis Classroom Teaching Based on Core
Tiantian Yin (Northwestern Polytechnical University) and Yue Liang (Dongyuanlu School)
Research and Practice of the Teaching Model of Mechanical Practice Courses in Colleges and Universities Based on "Craftsmanship" 410
Research on the Teaching Mode of Group Cooperative Learning Based on Blackboard .413 Min Song (Beijing Foreign Studies University) and Ying Song (Beijing Foreign Studies University)
The Construction of the Training Mechanism of Marathon Social Instructors Led by Physical Education Majors in Colleges and Universities .417
Analysis of Teaching Evaluation in the Field of Vocational Education in China 421. Wenqian Sun (Shandong Normal University), Xiaomei Yu (Shandong Normal University), Xue Zhang (Shandong Normal University), Lining Liu (Shandong Normal University), and Penglong Zhang (Shandong Normal University)
Case Teaching of Parallel FIR Digital Filter Design Combined Matlab with FPGAs .426 Yi Zheng (Shandong Technology and Business University) and Ping Zheng (Anhui University of Science and Technology)

The Relationship between Undergraduates' Extroversion, Social Support and College Life Adaptation 433
Yinglun Fu (City University of Macau), Peng Li (ShanDong Polytechnic
College), Shaobo Lv (North China University of Science and
Technology), Yanfei Shen (North China University of Science and
Technology), and Xiaoling Liu (North China University of Science and Technology)
Research on the Construction of Liberal Arts Laboratory in Universities under the
Background of New Liberal Arts Education .439
Research of Evaluation Method for Museum Visit .443
Pengcheng Xu (Shanghai Company Technology Training Center State Grid),
Haifeng Wang (Shanghai Company Technology Training Center State Grid),
Zhengquan Lv (Shanghai Company Technology Training Center State Grid),
and Yijun Chen (Shanghai Company Technology Training Center State Grid)
Convolution Forgetting Curve Model for Repeated Learning .447.
Yanlu Xie (Beijing Language and Culture University), Yue Chen (Beijing
Language and Culture University), and Man Li (Beijing Language and Culture University)
Research on the Application of Shared Mental Model in College Sports Associations to
Enhance Teamwork 455.
Xiaopeng Chi (Beijing Foreign Studies University)
Supplemental Cultivation Plan of Innovation Quality for the Undergraduates of Building
Environment and Energy Engineering in the Applied Technology Universities .459
Qingling Qiu (Wuhan Business University), Yunpeng Hu (Wuhan Business
University), Jiani Liu (Wuhan Business University), Qing Liu (Wuhan
Business University), and Zhao Dong (Wuhan Business University)
Comparative Study of Chinese Mainland and Taiwan Elementary Science Textbooks Based on STS Education Concept 463
Xinman Li (Central China Normal University) and Yuren Lin (Central
China Normal University)
The Influence of Dual Stealth Aircraft Formation Cooperating with Aerial Bombing on the
Performance of Monopulse Radar .467.
Lei Bao (University of Defense Technology), Feng-Rui Li (University of
Defense Technology), Xiang Di (University of Defense Technology), Peng
Chen (University of Defense Technology), Meng Xiao (University of
Defense Technology), and Juan Bai (Air and Missile Defense College,
Air Force Engineering University)
The Construction and Practice of Mixed Teaching Mode of Software Engineering for New
Engineering 471
Mengzi Zhang (Anhui Xinhua University), Shaowei Zhang (Anhui Wenda
University of Information), Xiande Hu (Anhui Xinhua University), and
Shuying Liu (Anhui Xinhua University)
Application Research of Problem-Oriented Teaching Mode in "Construction and Maintenance"
Course 477
Guithat Lung (Army Engineering University Shijiazhuang Campus) Guizhou Lv (Army Engineering University Shijiazhuang Campus)
Consider 20 (11 mg Linguisture of the Conference

Study on Experimental Teaching of Building Environment and Energy Application Engineering .481 Jian Chen (Wuhan University of Science and Technology), Donghua Liu (Wuhan University of Science and Technology), and Guannan Li (Wuhan University of Science and Technology)
Research on the Blended Learning Mode of "Theory + Practice" Curriculum .485
Teaching Ability Improvement Method Based on Error Feedback .489. Fujian Feng (Guizhou Minzu University), Mian Tan (Guizhou Minzu University), Lin Wang (Guizhou Minzu University), Dawen Xia (Guizhou Minzu University), and Feng Pan (Guizhou Minzu University)
Research on the Employment Intention of Medical Undergraduates in Grassroots Units .493 Zhiling Wang (Xi'an Medical University)
Exploration of Task-Driven Blended Teaching of Marketing .497. Hui Li (Beijing City University), Chen Lin (Beijing City University), Qiaoyun Wei (Beijing City University), Cheng Zhang (Beijing City University), Nianwu Zhang (Beijing City University), and Min Guo (Beijing City University)
Discourse Analysis Model for Literary Works Appreciation and Evaluation by Regressive Analysis .503
Analysis of Factors Influencing the Quality of Economics and Management Undergraduate Graduation Thesis Based on Structural Equation — Taking the Universities in Yunnan Province as an Example .506
Treatment and Application of "Student-Evaluating-Teaching" in Colleges and Universities Based on Tensor Decomposition .509. Jiajing Zhang (Anhui Jianzhu University), Zhongqiang Ji (Anhui Jianzhu University), and Jinlan Chen (Anhui Jianzhu University)
Instructional Improvement of Field Practice in the Course of Plant Geography .515
Competency into Practice: Establishing a Blended Learning Environment in EFL Classes .519 Mei Song (National University of Defense Technology), Wenhui Hao (National University of Defense Technology), and Meng Li (National University of Defense Technology)
Investigation and Analysis on the Training Methods of International Skilled Talents in Higher Vocational Education .524
Author Index 529