

Table of Contents

Computational Thinking Activities in High Schools to Enhance Interest and Skills in Programming	1
<i>Izzah Sakinah Ahmad, Sim Tze Ying, Corrienna Abdul Talib and Sian Lun Lau</i>	
Transforming Traditional Universities into Entrepreneurial Universities: Four Key Strategies for Meeting the Needs of the Knowledge Economy	9
<i>Mohammed Riyaz Ahmed, Venkata Siva Reddy R, Bharathi S H and Manuel Castro</i>	
Developing Industry-Focused Internet-of-Things Course for Wireless Access Networks.....	17
<i>Akram Al-Hourani, Bassel Al-Homssi and Andrew Valentine</i>	
Strategies to Enhance Educators' Soft Skills: The Role of Managers	21
<i>Ahmed Al-Sa'Di, Parina Yamjal, Esraa Ahmad and Cam Allott McPhee</i>	
Exploring Opportunities and Challenges of using ChatGPT in Professional Writing Instruction	27
<i>Zainab Al-Zaghir, Atheer Matroud, Khaled Abdalgader and Najla Alnaqbi</i>	
Active Distance Learning: How Student Perceptions Affect Academic Performance	33
<i>Shamma Alwheibi, Abdulhadi Shoufan and Asli Hassan</i>	
Effectiveness of Resilience Support in an Online PBL Class for Business Planning based on Circular Economy(CE).....	41
<i>Maki Arame and Kin'Ya Tamaki</i>	
Difficulty-Adjusted Quizzes: An Effectiveness Analysis	47
<i>Aryobarzan Atashpendar and Steffen Rothkugel</i>	
Problem-based Learning: A Catalyst for Teacher and Student Motivation in K-12 Schools	53
<i>Ousman Badjie and Dr. Yogesh Velankar</i>	
Exploring the Effects of Digital Storytelling-Enhanced Scenario-Based Learning on Students' Learning Outcomes	57
<i>Shurui Bai, Yingxue Liu, Yanjie Song and Jeffrey Scott Cross</i>	
Classroom Audio Analysis for Estimating Engagement of the students.....	64
<i>Hidangmayum Bebina Devi, Piyush Bhatia, Xiaohui Yuan, Prakash Duraisamy and Tushar Sandhan</i>	
Foundations of an AI-based, cross-plattform companion app for lifelong learning optimization	69
<i>Dominik Bernd Oliver Boesl, Teresa Achtenberg and Lisa Bergler</i>	
STEM identity development: Examining the effect of informal summer learning experience on middle school students	73
<i>Hank Boone, Danxu Wang, Emma Regentova, Venkatesean Muthukumar, Sj Kim and Jonathan Hilpert</i>	
Towards the Development of Qualities of Online Programming Teachers Instrument	80
<i>Rex Bringula and Mideth Abisado</i>	

Online Teaching Programming Classes during COVID-19 Pandemic: A Scoping Review... 83 <i>Rex Bringula, Manuel Garcia, Annaliza Catacutan-Bangit, Marilou Jamis and Avonn Nova</i>	
AI-driven Teacher Analytics: Informative Insights on Classroom Activities..... 91 <i>Oscar Canovas, Felix J. Garcia Clemente and Federico Pardo</i>	
Ready, Set, Go! Teachers' Perceptions of Technology Integration in University-level Physical Education Through Mobile Apps: A Mixed Methods Study..... 99 <i>Tabatha Cantú Reyna and Asad Abbas</i>	
An Experiment on Leveraging ChatGPT for Online Teaching and Assessment of Database Students 104 <i>Nancy Carr, Farjahan Shawon and Hasan Jamil</i>	
E-Quiz: Empowering Educators with a Self-Contained and Programmable Online Exam System..... 112 <i>Chung Chan, Chao Zhao, Wai Tong Chau, Yu Zhou, Qihang Liang and Michael Lim</i>	
A Design of Artificial Intelligence Education..... 120 <i>H Anthony Chan, Paul Hodgson, William Cheung, Lapli Chan, Hilman Tam and Kin Kei Tsang</i>	
Grading Generative AI-based Assignments Using a 3R Framework..... 128 <i>Henry Chan</i>	
Exploring the Factors and Moderators Influencing the Use of Radar Visualisation of Student Performance from Parents' Perspective 133 <i>Ka Ian Chan, Patrick Cheong-Iao Pang and Wei Wei</i>	
Flipping the Script: Reflection on Implementing the Flipped Classroom in Mathematics .. 141 <i>Nawal Chanane, Jiansheng Cui, Catherine Hassell Sweatman, Victor Miranda, Nuttanan Wichitaksorn, Wenjun Zhang, Patricio Maturana-Russel, Robin Hankin and Roopak Sinha</i>	
Reflective Insights: Flipping Learning in Engineering and ICT Courses 145 <i>Nawal Chanane, Jiansheng Cui, Anubha Kalra, Matthew Kuo, Lorenzo Garcia, Loulin Huang, Tet Chuan Lee, Ashwin Polishetty, Max Ramos, Xue Jun Li, Adnan Al-Anbuky, Martin Stommel, Minh Nguyen and Roopak Sinha</i>	
An Exploration of Self-Regulation Learning Practices and Its Effectiveness with Kahoot! Incorporated into Electronics Teaching 149 <i>Pei-Hua Chang, Su-Fen Cheng, Chi-Wei Cheng, Chieh-Yu Hung and Jing-Jou Tang</i>	
Designing Worksheet for Using ChatGPT: Towards Enhancing Information Retrieval and Judgment Skills 155 <i>Li Chen and Atsushi Shimada</i>	
Assessing the Efficacy of Virtual Teaching versus Face-to-Face Instruction and the Dunning-Kruger Effect: A Ten-semester Comparative Analysis 159 <i>Pit Ho Patrio Chiu, Ka Yan So and Kai Pan Mark</i>	
Entrepreneurship Programs to Connect University Classrooms to Industry..... 166 <i>Babak Dastgheib-Beheshti and Michael Nizich</i>	

A multimodal approach to mitigate cheating in online assessments.....	170
<i>Lamees Elhiny, Xinfeng Ye, Sathiamoorthy Manoharan and Ulrich Speidel</i>	
VirtualSign: Revolutionizing Accessibility and Inclusivity in Education through Automatic Sign Language Translation.....	174
<i>Paula Escudeiro, Nuno Escudeiro and Márcia Gouveia</i>	
Project-Based Learning in the Development of a Job-Matching Website for Women in STEM.....	180
<i>Amanda Fontes, Henrique Paiva and Lilian Berton</i>	
A Novel Remote FPGA Lab Platform Using MCU-based Controller Board.....	188
<i>Naoki Fujieda and Atsuki Okuchi</i>	
Designing An Overseas Experiential Course in Data Science.....	194
<i>Hua Leong Fwa and Graham Ng</i>	
Sustainability Projects with a Community Partner, a social norm nudging effort.....	201
<i>Benjamin Gan, Thomas Menkhoff and Eng Lieh Ouh</i>	
Class Participation, Using Technology to Enhance Efficiency and Fairness.....	208
<i>Benjamin Gan and Eng Lieh Ouh</i>	
Rethinking the Course Design of Information Theory in Engineering Education.....	216
<i>Yayu Gao and Aoyu Hu</i>	
An Optimal Grouping and Regrouping Method for Effective Collaborative Learning: Leveraging the Group Dynamics.....	223
<i>Soheila Garshasbi, Mahmood Asgari, Sarah Howard, Sabine Graf and Jun Shen</i>	
Effects of Augmented Reality Gamification on Students' Intrinsic Motivation and Performance.....	230
<i>Amarpreet Gill, Derek Irwin, Dave Towey, Yanhui Zhang, Bingze Li, Linjing Sun, Zhichao Wang, Wanling Yu, Ruiqi Zhang and Yaxin Zheng</i>	
Gameful Experience (GAMEX) for Students' Meaningful Learning.....	238
<i>Talia Gonzalez-Cacho, Karen Hinojosa Hinojosa and Asad Abbas</i>	
Educative impact of a remote laboratory to experience industrial robotics.....	242
<i>Cecilia Gonzalez-Espinoza, Alberto Venzor-Mendoza, Octavio Lasso-Lopez and Camilo Lozoya</i>	
On the possibility of measuring learner's facial expressions in on-demand learning environments in junior high school students.....	247
<i>Satori Hachisuka, Kayoko Kurita and Shinichi Warisawa</i>	
AnaVu: A scalable Anatomical 3D visualization system for classroom teaching.....	251
<i>Pawan Harish, Jayanthi Sivaswamy, Priyanka Srivastava, Doris George Yohannan, Sirisha Bandi, Sarada Devi Sattiraju and P.J. Narayanan</i>	
Exploring Design Thinking and Innovation in Cross-Curricular Trips: A Case Study.....	258
<i>Abdullah Aamir Hayat, Mohan Rajesh Elara, Zaki Saldi, Qian Huang, Ameer Kaur and Thijs Willems</i>	

Predicting the Use Behavior of Higher Education Students on ChatGPT: Evidence from the Philippines	266
<i>Alexander Hernandez, Mideth Abisado, Ramon Rodriguez and Joseph Marvin Imperial</i>	
Students' Reflective Learning in the Prototyping Process in STEM Education	273
<i>Chun-Yu Hou, Biyun Huang, Morris Jong, Eric Luk and Ching-Sing Chai</i>	
Explicitly Introducing ChatGPT into First-year Programming Practice: Challenges and Impact	280
<i>Minjie Hu, Tony Assadi and Hamid Mahrooian</i>	
A pedagogical approach of "Learning from Failure" for engineering students: observation and reflection on a Robotics Competition (RoboRoarZ-Edition 2)	286
<i>Qian Huang, Aameek Kaur, Bhagya Samarakoon, Thijs Willems, King Wang Poon and Mohan Rajesh Elara</i>	
The Use of Loose Parts as Media in Improving Problem-Solving, Critical Thinking and Creativity Skills of K2 Students at Kindergarten XYZ Jakarta, Indonesia	291
<i>Shely Theo Claudia Hutajulu and Samuel Lukas</i>	
Impact of innovative workshops to inspire students to pursue a STEM career	296
<i>Ricardo Ipiña Sifuentes, Eduardo Bonilla Bustillo, Ángel Iván Hernández Aguirre, Germán Domínguez Solís, Alfonso Ávila Ortega, Alicia Minerva Ortiz Rojas and Vianney Lara Prieto</i>	
Leveraging Artificial Intelligence with Zone of Proximal Development: An ARCS Motivational E-Learning Model	303
<i>Matilda Isaac, Dolapo Shodipo, Muhammad Ateeq, Hadyan Hafizh and Bintao Hu</i>	
Incorporating Intercultural and Interdisciplinary Methods in a Project-based Learning Course to Foster Global Leading Engineers	311
<i>Akiko Ito, Dina Grib, Reiko Furuya and Susumu Hara</i>	
Exploring Team-based Classroom Experiences in Virtual Reality	314
<i>Nisha Jain, Chien Ching Lee, Songjia Shen, Chek Tien Tan, Karin Avnit and Jeannie Lee</i>	
Online Tutoring and Plagiarism-Aware Authentic Assessment of Database Design Assignments	322
<i>Hasan Jamil</i>	
Engaged Student Learning with Gamified Labs: A New Approach to Hardware Security Education	327
<i>Robert Karam, Srinivas Katkooari and Mehran Mozaffari Kermani</i>	
Plagiarism and AI Assistance Misuse in Web Programming: Unfair Benefits and Characteristics	331
<i>Oscar Karnalim, Hapnes Toba, Meliana Christianti Johan, Erico Darmawan Handoyo, Yehezkiel David Setiawan and Josephine Alvina Luwia</i>	
Teaching Design Thinking to a Large Cohort, A Process Perspective	336
<i>Aameek Kaur, Qian Huang, Thijs Willems, Abdullah Aamir Hayat and Mohan Rajesh Elara</i>	

Authentic Assessment of Programme Learning Outcomes in Infocomm Technology	340
<i>Ryan Kirwan, Nisha Jain and Vivek Balachandran</i>	
DIY Wind Turbines: A Low-Cost Smart ICPS for Educational Research	347
<i>Matthew Kuo, Roopak Sinha, Ramon Lewis, Charlie Cumming, Robin Alarcon and Chandan Sharma</i>	
Entrepreneurship education initiatives and methods for evaluating their effectiveness	351
<i>Karin Kurata, Hiromasa Ohnishi and Jun Sato</i>	
How Helpful do Novice Programmers Find the Feedback of an Automated Repair Tool?	357
<i>Oka Kurniawan, Christopher M. Poskitt, Ismam Al Hoque, Norman Tiong Seng Lee, Cyrille Jégourel and Nachamma Sockalingam</i>	
Improving Immersive Virtual Reality Training of Bioreactor Operations using Gamification	363
<i>Benjamin Kwok, Adriel Yeo, Adison Wong, Bernard Loo and Jeannie Lee</i>	
Digital Intervention for Collaborative and Human-Centered Activities in Design-Based Learning Scenarios	371
<i>Jérémy La Scala, Isabelle Vonèche-Cardia and Denis Gillet</i>	
Sustainability Reporting and Sharing on Websites of Sino-Foreign Cooperative Universities	379
<i>Nai Yeen Gavin Lai, Yan Zhang, Kok-Hoong Wong, Lih Jiun Yu and Hooi Siang Kang</i>	
Reimagining Online Coding Assessment Throughout the Pandemic: The Role of Auto-Grading and Enquiry Features	386
<i>Pauli Lai</i>	
A New Frontier in AI-Assisted English Oral Presentation Assessment	392
<i>Pauli Lai, Julia Chen, Vicky Man and Chi Ho Chan</i>	
Effectiveness of Hackathons to cultivate Sustainability Mindset among Engineering and Computing Students	400
<i>Sian Lun Lau, Tze Ying Sim, Mikhail Ola Adisa and Jari Porras</i>	
Enhancing Critical Thinking and Engagement through Puzzle Box Integration in Virtual Reality-based Digital Game-Based Learning	404
<i>Boon Giin Lee, Huimin Tang and Fei Fang</i>	
Exploring the Fusion of Mixed Reality and Digital Game-Based Learning: The Case of Puzzle Box Games for Education	412
<i>Boon Giin Lee, Huimin Tang and Xinlei Wen</i>	
User experience on a virtual patient chatbot for physiotherapy student training	420
<i>Chien Ching Lee, Malcolm Yoke Hean Low, Liming Lu, Hwee Hoon Lee and Benjamin Soon</i>	
Scaffolding Critical Reflection using a critical thinking framework and micromodule	426
<i>Chien Ching Lee and Erick Tan</i>	
Health Diagnosis of Gear Based on Artificial Intelligence Deep Learning and Rigid-Flexible Coupling Dynamics Model	430
<i>Dongtai Li, Jie Zhang, Shuhao Lu and Yihao Hu</i>	

Comparing Attitudes Towards Mobile App Development between International Students and Domestic Japanese Students	436
<i>Zilu Liang</i>	
Harnessing E-Portfolio Creation for Exam Success, Student Engagement, and Satisfaction	442
<i>Jingjing Lin</i>	
ChatGPT and Moodle Walk into a Bar: Capabilities, Integration, Use Cases, and Challenges	450
<i>Jingjing Lin</i>	
A 5G Comprehensive Practical Teaching Laboratory Plan and Implementation	458
<i>Gang Lu, Kan Yu and Yimin Lu</i>	
Virtual Training on Remote Piloting: A Mobile Drone Simulator for Empowering Beginning Learners to Practice Visual Line of Sight Operations.....	462
<i>Eric Luk, Sunny Poon, Morris Jong, James Au, Chin-Ching Tsai and Vincent Tam</i>	
Using Educational Robotics to Support Active Learning Experiences and Foster Computational Thinking Skills among Non-STEM University Students	466
<i>Vladimir Macko, Kristoffer Bergram, Pascal Felber and Adrian Holzer</i>	
Product Competitor Analysis for First Year Engineering Students	474
<i>Kuntinee Maneeratana, Suvanchai Pongsugitwat, Nattaporn Tonanon, Peerapat Thongnuek, Charasphat Preuksarattanawut, Sirikanya Phongtongjalearn and Danupol Hoonsopon</i>	
Improving Computing Education through a Holistic Learning Framework: A Focus Group Study.....	480
<i>Bansri Amish Modi, Andrew Cain, Guy Wood-Bradley, Jake Renzella and Laura Tubino</i>	
Evaluating the Professional Development Landscape for Digital Technology Teachers in New Zealand.....	488
<i>Mahsa Mohaghegh and Jitty Varghese</i>	
Using a Virtual Reality Tool for Experimental Learning in Engineering. A Survey of Learner Preferences	494
<i>Arturo Molina-Cristobal, Jolly Atit Shah, Idris Lim and Sajjad Hussain</i>	
Hands-on Activities for Learning Computer Networks and Information Security in CS0 Course.....	499
<i>Hiroyuki Nagataki, Shizuka Shirai, Tomohiro Nishida, Atsushi Ono and Haruo Takemura</i>	
A Collaborative English Learning System with Role Reversal Feature.....	502
<i>Tetsufumi Nakata, Emmanuel Ayedoun and Masataka Tokumaru</i>	
Vocational Education and Training (VET) System and Social Justice in Australia	508
<i>Mani Nallasamy</i>	
Instilling Computational Thinking in Undergraduate Students Across Multiple Disciplines through an Adaptive Gamified e-Learning Platform	511
<i>Andrew Keong Ng, Indriyati Atmosukarto, Julia Kwok Lee Teo and Ashraaf Bin Amran</i>	

Implementation of Sostek Application with Curriculum Intervention for the Development of Sustainability Competencies of Graduating Students	518
<i>Martha Elena Nunez Lopez, Miguel X. Rodriguez-Paz and Asad Abbas</i>	
A Real-time Distance Learning System for Alpine Skiing Using Virtual Reality	523
<i>Shigeharu Ono, Hideaki Kanai, Erwin Wu and Hideki Koike</i>	
From Pedagogy to Andragogy to Heutagogy: Students Becoming Engineers.....	531
<i>Cesar Ortega-Sanchez</i>	
Leveraging ChatGPT to Enhance Computational Thinking Learning Experiences.....	535
<i>Abdessalam Ouazki, Kristoffer Bergam and Adrian Holzer</i>	
Consideration of On-Demand Online Exam-Taking Methods that Promote Continuous Learning	542
<i>Takuro Ozaki, Takashi Sato, Yuichi Ohkawa and Takashi Mitsuishi</i>	
Proposed System Design for Cross-Cultural Distance Reciprocal Teaching Using "Kusho" .	550
<i>Tomoe Ozeki, Tetsuya Mouri, Winai Chonnaramutt, Tomomi Sato, Momoko Tsuchiya and Yoshiro Miyata</i>	
Real-Life Project-Based Learning in Introductory Programming: a Game for Cancer Prevention	552
<i>Henrique Paiva, Victor Hayashi, Monica Anastassiou, Maurício Garcia and Flávia Santoro</i>	
The student experience of technology-focused micro-credentials as part of a larger learning journey.....	558
<i>David Parsons, Hayley Sparks, Darcy Vo and Anzel Singh</i>	
Access, Excellence and Scale in India's National Programme for Technology-Enabled Learning (NPTEL): Identifying the Hidden Gaps.....	561
<i>Rachel Philip and Utkarsh Upadhyay</i>	
Work-in-Progress: Relating Logical Thinking Skills to Program Complexity in Children's Programming Education	568
<i>Daisuke Saito, Yui Ono, Mio Ezure, Hironori Washizaki and Yoshiaki Fukazawa</i>	
Using Learning Objective-based Course Modeling for Complete Exercise Generation: From Course Material to an Aggregated Knowledge Representation.....	572
<i>Deniz Schmidt and Max Uzulis</i>	
Cultivating Inclusivity: A Journey Towards Democratizing Cybersecurity Education.....	580
<i>Jordan Schnell, Shuvalaxmi Dass, Jacques Bou Abdo and Moitrayee Chatterjee</i>	
Development of Metaverse Inquiry-Based Learning	584
<i>Takahiro Sekido, Shusen Masuda, Kazuomi Kawato, Keiko Kanazawa, Kentaro Kaneko, Mao Uno, Masahiro Nishiguchi, Koichi Tabuchi, Yi Sun, Tsuyoshi Futami and Toshiki Sumitani</i>	
Rule-Based Error Classification for Analyzing Differences in Frequent Errors.....	588
<i>Atsushi Shirafuji, Taku Matsumoto, Md. Faizul Ibne Amin and Yutaka Watanobe</i>	

Feature Expansion of the Equation Editor in Mathematics Classroom Collaborator (MC2) for Smartphones	595
<i>Shizuka Shirai, Marco Pollanen, Sohee Kang and Tetsuo Fukui</i>	
A Data-Driven Analysis of the Correlation between English Language Proficiency and Academic Performance in Transnational Education	599
<i>Chao Shu, Yue Chen and Kok Keong Chai</i>	
Enhancing Chemistry Laboratory Teaching through Gamification: The IQ-Mobile race ...	604
<i>Angélica-Lizeth Sánchez-López, Luis-Marcelo Lozano-Sanchez, Alejandro Parra-Cordova, Oziel-Rodrigo Camacho-Ornelas, Maria Fernanda Rivas Gastelum and Yocanxóchitl Perfecto Avalos</i>	
Data Science in an Agent-Based Simulation World	608
<i>Satoshi Takahashi and Atsushi Yoshikawa</i>	
Exploring the Role of Reverse Engineering Pedagogy to Integrate Design Thinking and Physics in Interdisciplinary Education	614
<i>Da Yang Tan, Chin Wei Cheah, Chee Huei Lee and Chee Leong Ching</i>	
Applying Structural Equation Modelling in Education Research	621
<i>Jess Tan and Hian Chye Koh</i>	
The Triple Aim of a Semester-Long Course in Science, Technology, and Society	629
<i>Myles Joshua Tan, Alfredo Satriya, Shaira Kee, Michael Aaron Sy and Pinaki Sarder</i>	
The Feature selection and Comparison performance of Student's academic between Random Forest, Naïve bayes and XGboost	636
<i>Preut Thanarat, Waranyoo Kiatjindarat and Chatklaw Jareanpon</i>	
Peer Learning in an Undergraduate Linear Algebra Course - A Social Network Analysis ..	642
<i>Manoj Thulasidas, Kyong Jin Shim and Jonathan Teo</i>	
Automated Essay Grading of Constructive Response Test Responses for Mechanical Engineering Students	650
<i>Do Tien Dung, Farid Triawan, Hideki Mima and Jeffrey S. Cross</i>	
Artificial Intelligence Education – Self guided learning	654
<i>Yu Ting Toh, Wei Yue Ngoh, Sagar Sureka, Ganesh Neelakanta Iyer and Prabhu Natarajan</i>	
Investigating Different Approaches on Online Laboratory Practices	662
<i>Inmaculada Tomeo-Reyes, Zhuoyu Chen, Chamith Wijenayake and Arash Khatamianfar</i>	
Reform of Integrated Circuit Courses Based on the Integration of Industry and Education Systems	670
<i>Mei Song Tong, Fu Long Duan, Xiao Jie Lu and Guo Chun Wan</i>	
Reform of Undergraduate Education with Chat-Bots for Microelectronics Specialty	675
<i>Mei Song Tong, Hao Zheng Lu, Xiao Jie Lu and Guo Chun Wan</i>	
Teaching Reform of Microelectronics Courses by Strengthening STEM Education	681
<i>Mei Song Tong, Ruo Yao Wang, Xiao Jie Lu and Guo Chun Wan</i>	

The impact of gender on female engineering students	686
<i>Fesal Toosy, Zarga Mehmood, Maria Talib, Hafsa Siddiqi, Christothea Herodotou, Stefan Poslad and Khurram Hamid</i>	
Examining the Influence of Auditory Stimuli on Memory Retention Using the Method of Loci	693
<i>Shunki Tsumagari, Satori Hachisuka, Kayoko Kurita and Shinichi Warisawa</i>	
Differential Analysis of Biological Information during the Learning of a Second Language and a Programming Language	697
<i>Katsuyuki Umezawa, Takumi Tajima, Makoto Nakazawa, Michiko Nakano and Shigeichi Hirasawa</i>	
Gauging Lecturer LMS Training Video Engagement With YouTube Analytics	701
<i>Leanri van Heerden</i>	
Promoting Girls' Participation in K-12 STEM Education: Current Landscape, Hindering Factors, and Recommendations for Actions	708
<i>Tianchong Wang, Mengmeng Zhang and Yu Gao</i>	
Visualization of potential differences in comprehension by distribution of notes and questions in online programming courses	715
<i>Xiaonan Wang, Yancong Su, Yi Sun, Hidenari Kiyomitsu, Kazuhiro Ohtsuki and Kento Shigyo</i>	
Improving Engineering Accreditation in United States Programs – Investigating Why ABET Accreditation is Superficial and Misguided	723
<i>Frank Washko, William Edwards, Leslie Washko and Shahlaa Al Wakeel</i>	
Work-in-Progress of Exploring High School Students' Science Concept During an Engineering Design Challenge	727
<i>Indah Widiastuti, Feby Andry, Cucuk Budiyanto and Muhammad Akhyar</i>	
An experiential learning approach to learn AI in an online workshop.....	731
<i>Yuan Xu, King Woon Yau, Ching Sing Chai, Thomas K.F. Chiu, Helen Meng, Irwin King, Savio W. H. Wong and Yeung Yam</i>	
Proposal for a Knowledge Map in Programming Education Curriculum for IT Talent Development in Japan	737
<i>Hiroto Yamakawa, Kana Ohashi, Osamu Hasegawa, Haruki Ueno, Akihiro Matsuda and Hiroshi Komatsugawa</i>	
A Brief Scoping Review of Musical Performance Support System in IEEE Study Fields ...	741
<i>Yasumasa Yamauguchi</i>	
A Cognitive and Metacognitive Diagnostic Assessment System: TATSUJIN Test ICT.....	745
<i>Tomohito Yamazaki and Mutsumi Imai</i>	
Design and Practice of Experimental Teaching of Avionics Fire Control System Based on OBE.....	751
<i>Qiming Yang, Jiandong Zhang, Guoqing Shi, Yong Wu, Yaozhong Zhang and Yunhong Ma</i>	

Improvement and Evaluation of a Blockbased Language Environment for Introductory C# Programming Course	758
<i>Zhongke Yang and Minjie Hu</i>	
The Influence of Digital Game-based Learning with a Mathematical Game on Calculation Abilities of Grade 3-4 Students: a Case Study	764
<i>Liu Yinbei and Alex Wing Cheung Tse</i>	
Visualizing Multimodal Programming Attention in Debugging Test	772
<i>Jiayi Zeng, Wei Liu, Ying Zhou, Xinyu Li, Wenqing Cheng and Qi Ruan</i>	
FLOD: Full-Lifecycle Online Judge For Accompanying Programming Teaching	778
<i>Shaoang Zhang, Ji Wu and Qing Sun</i>	
Discovering Teacher Leaders: The Journey to Self-Identification	786
<i>Sophia Zhang, Truman Pham and Herbert Thomas</i>	
The Impact of Generative Artificial Intelligence-based Formative Feedback on the Mathematical Motivation of Chinese Grade 4 Students: a Case Study	789
<i>Wenqi Zheng and Alex Wing Cheung Tse</i>	
Exploring the Performance of Generative AI Tools in Electrical Engineering Education ...	797
<i>Zhaofeng Zhong, Chamith Wijenayake and Chamira Edussooriya</i>	
The Effects of Kindergarten Principals' Digital Leadership on Teachers' Technology Integration during the COVID-19 Pandemic in Western China	803
<i>Jianrong Zhou and Alex Wing Cheung Tse</i>	
The Eye Gaze Feature During Face-to-Face Discussion Between Two People	811
<i>Zhenming Zuo, Satori Hachisuka, Kayoko Kurita and Shinichi Warisawa</i>	