Volume 18, 2019

The mission of the Journal of Information Technology Education: Innovations in Practice is to:

- publish cutting edge practices early, often before generalizable studies become available,
- expose the reader to a broad range of mindsets, emerging views, and unique tactics,
- provide all those who submit manuscripts for publication with useful, timely feedback by making the review process constructive,
- continue as the most authoritative journal in the field of leading edge research involving IT and education, and
- acknowledge and embrace the diversity of teaching and learning models in use around the world

JITE is an academically peer reviewed journal. All submissions are blind refereed by three or more peers. JITE is published in print by subscription and its articles also appear online free of charge on the web site [http://JITEiip.org](http://JITEiip.org)

(CC BY-NC 4.0) The articles in this journal are licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](http://creativecommons.org/licenses/by-nc/4.0/). When you copy and redistribute this paper in full or in part, you need to provide proper attribution to it to ensure that others can later locate this work (and to ensure that others do not accuse you of plagiarism). You may (and we encourage you to) adapt, remix, transform, and build upon the material for any non-commercial purposes. This license does not permit you to use this material for commercial purposes.

**ISSN: online 2165-316X; print 2165-3151**
**ISBN: 978-1-68110-046-3**

Published by the Informing Science Institute
131 Brookhill Ct., Santa Rosa, California USA
phone: +1-707-537-2211
[http://informingscience.org](http://informingscience.org)
Digital Literacy in Higher Education: A Case Study of Student Engagement with E-Tutorials Using Blended Learning
Claire McGuinness, Crystal Fulton ................................................................. 1-28

Enhancing Student Learning in Cybersecurity Education using an Out-of-class Learning Approach
Hwee-Joo Kam, Pairin Katerattanakul ............................................................... 29-47

Concept–based Analysis of Java Programming Errors among Low, Average and High Achieving Novice Programmers
Philip Olu Jegede, Emmanuel Ajayi Olajubu, Adekunle Olugbenga Ejidokun, Isaac Oluwafemi Elesemoyo ................................................................. 49-59

Changing the Learning Environment: Teachers and Students’ Collaboration in Creating Digital Games
Noga Magen-Nagar, Hanna Shachar, Osnat Argaman ..................................... 61-85

Creating Infographics Based on the Bridge21 Model for Team-based and Technology-mediated Learning
Pınar Nuhoğlu-Kibar, Kevin Sullivan, Buket Akkoyunlu ................................ 87-111