

Contents

Contributions in: Life Long Learning, Constructive Approach, STEM, Invention, Creativity, e-Learning, Innovation, Curriculum Design, Academic Performance, Flipped Classroom, PBL, Design Teams, Additive Manufacturing, Cooperative Learning, Blended Learning, Teaching Workshop, Lean Construction, Medical Devices, Robotics, Engagement, Aptitude Test, Motivation, Communication Skills

Ahmad Ibrahim	1567	Editorial
Francisco Falcone, Ana Vazquez Alejos, Javier García Cenoz and Antonio Lopez-Martin	1568–1583	Implementation of Higher Education and Life Long Learning Curricula based on University-Industry Synergic Approach
Rejhan Nišić, Edis Mekić and Emir Pećanin	1584–1593	Constructive Development of Physical Laboratory Exercises Without Manual as an Attitude Changing Approach
Feng-Kuang Chiang, Liyan Wang, Jingjing Zhang, Xiaomei Yan, Yehong Yang and Li Chen	1594–1604	Mapping STEM Education from 25 Years of NSF-Funded Projects
Valeriy Likholetov and Sergei Aliukov	1605–1617	Problems in Engineering Education, Engineering and Invention
Yasemin Tekmen-Araci and Blair Kuys	1618–1629	The Impact of Excessive Focus on Performance During Engineering Design Process on Creativity
Maria Assumpció Rafart, Andrea Bikfalvi, Josep Soler and Jordi Poch	1630–1641	Impact of Using Automatic E-Learning Correctors on Teaching Business Subjects to Engineers
Catherine T. Amelink, Kirsten A. Davis and Bevelee Watford	1642–1655	Learning Experiences that Facilitate Innovation and Workforce Preparation: Exploring the Impact of In-Class and Extracurricular Activities
Teresa Redomero, Valeria Caggiano, Jose-Luis Poza-Lujan and Vincenzo Antonio Piccione	1656–1666	Fostering and Assessing Soft Skills of Engineering Students
Paul Bazelais, David John Lemay and Tenzin Doleck	1667–1672	The Effects of Testing on Academic Outcomes of College Students in an Electricity and Magnetism Course
L. Moreno-Ruiz, D. Castellanos-Nieves, B. Popescu Braileanu, E. J. González-González, José Luis Sánchez-De La Rosa, C. L. O. Groenwald and C. S. González-González	1673–1683	Combining Flipped Classroom, Project-Based Learning, and Formative Assessment Strategies in Engineering Studies
Shun Takai and Marcos Esterman	1684–1697	A Review of Team Effectiveness Models and Possible Instruments for Measuring Design-Team Inputs, Processes, and Outputs
Gustavo Capilla-González, Héctor Plascencia-Mora, Israel Martínez-Ramírez, Valentina Arévalo-Arredondo and Josué U. Villalpando-Hernández	1698–1702	A Comparative Study of the Impact of Using Additive Manufacturing as a Learning Tool on the Multi-View Drawing of Geometrical Components
Josh Tenenberg	1703–1724	Factors Affecting Free Riding on Teams: Implications for Engineering Education
Larisa Olesova and Dazhi Yang	1725–1737	Engineering Students' Cognitive Learning and Perceptions in a Blended Learning Course
Nick A. Stites, Edward Berger, Jennifer DeBoer and Jeffrey F. Rhoads	1738–1757	A Cluster-Based Approach to Understanding Students' Resource-Usage Patterns in an Active, Blended, and Collaborative Learning Environment
Allen C. Estes, Stephen J. Ressler, Camilla M. Saviz, Brock E. Barry, Carol L. Considine, Norman D. Dennis, Jr., Scott R. Hamilton, David S. Hurwitz, Tanya Kunberger, Thomas A. Lenox, Tonya Nilsson, James J. O'Brien, Jr., Robert J. O'Neill, David A. Saftner, Kelly Salyards, Ronald W. Welch, Dion K. Coward and Leslie E. Nolen	1758–1786	The ASCE ExCEED Teaching Workshop: Assessing 20 Years of Instructional Development
Dilsen Kuzucuoglu, Bilal Umut Ayhan and Onur Behzat Tokdemir	1787–1802	Integrating Lean Construction into the Civil Engineering Curriculum
Licia Di Pietro, Ermes Botte, Riccardo Granati, Stefano Moroni, Matilde Tomasi, Giovanni Vozzi and Carmelo De Maria	1803–1815	Teaching Design Standards and Regulations on Medical Devices Through a Collaborative Project-Based Learning Approach
Sheng-Jen ("Tony") Hsieh	1816–1826	Development and Evaluation of Remote Virtual Teach Pendant for Industrial Robotics Education

Denise R. Simmons, Nathaniel J. Hunsu and Olusola O. Adesope	1827–1838	Enabling Multi-Dimensional Measurement of Student Engagement in Engineering Learning Environments
Diana Bairaktarova and David Reeping	1839–1850	Development and Psychometrics of a Freely Available Mechanical Aptitude Test
Antoni Perez-Poch, Fermín Sánchez-Carracedo, Núria Salán and David López	1851–1858	Cooperative Learning and Embedded Active Learning Methodologies [®] for Improving Students' Motivation and Academic Results
John R. Haughery, D. Raj Raman, Joanne K. Olson and Steven A. Freeman	1859–1871	Robots, Motivation, and Academic Success
Javier Senent-Aparicio, Patricia Jimeno-Sáez, Mauricio Arias, Leonard O'Driscoll, Julio Pérez-Sánchez, Loreto León, Francisco J. Alcalá and David Pulido-Velázquez	1872–1880	Preparation of Technical Posters as a Tool to Improve Transversal Competences of Civil Engineering Studies
	1881	Guide for Authors