Heidi A Diefes-Dux

List of Publications by Year
in descending order

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122	1,261	686830	476904
papers	citations	13 h-index	29 g-index

123	123	123	862
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Reflection types and students' viewing of feedback in a firstâ€year engineering course using standardsâ€based grading. Journal of Engineering Education, 2022, 111, 283-307.	1.9	5
2	First-Year Engineering Students' Reflections: Plans and Actions for Meeting Course Learning Objectives. , 2021, , .		0
3	Student self-reported use of standards-based grading resources and feedback. European Journal of Engineering Education, 2019, 44, 838-849.	1.5	4
4	Meaningful Learner Information for MOOC Instructors Examined Through a Contextualized Evaluation Framework. International Review of Research in Open and Distance Learning, 2019, 20, .	1.0	7
5	Cases of Student Reflection within a Course Using Standards-Based Grading. , 2019, , .		4
6	Written feedback provided by first-year engineering students, undergraduate teaching assistants, and educators on design project work. European Journal of Engineering Education, 2019, 44, 179-195.	1.5	4
7	Student Reflection to Improve Access to Standards-Based Grading Feedback. , 2018, , .		5
8	Faculty perception before, during and after implementation of standards-based grading. Australasian Journal of Engineering Education, 2018, 23, 53-61.	0.2	7
9	Relationship Between Time of Class and Student Grades in an Active Learning Course. Journal of Engineering Education, 2018, 107, 468-490.	1.9	9
10	Use of the TRB Research Needs Statements Database in an Introductory Transportation Course. Transportation Research Record, 2017, 2614, 10-17.	1.0	1
11	Utilizing visualization and feature selection methods to identify important learning objectives in a course. , 2017, , .		1
12	A Size and Scale Framework for Guiding Curriculum Design and Assessment. Journal of Engineering Education, 2017, 106, 431-453.	1.9	6
13	Using pre-course survey responses to predict sporadic learner behaviors in advanced STEM MOOCs work-in-progress. , 2017, , .		1
14	Instructor outcomes of teaching a STEM MOOC. , 2017, , .		3
15	Integrating analytics and surveys to understand fully engaged learners in a highly-technical STEM MOOC. , 2016, , .		6
16	Models for early prediction of at-risk students in a course using standards-based grading. Computers and Education, 2016, 103, 1-15.	5.1	211
17	Selecting Effective Examples to Train Students for Peer Review of Openâ€Ended Problem Solutions. Journal of Engineering Education, 2016, 105, 585-604.	1.9	3
18	Surveying the motivations of groups of learners in highly-technical STEM MOOCs. , 2016, , .		5

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19	Student reflections on standards-based graded assignments. , 2016, , .		2
20	Engineers' written feedback on design. , 2016, , .		0
21	Two elementary schoolsâ€™ developing potential for sustainability of engineering education. International Journal of Technology and Design Education, 2016, 26, 309-334.	1.7	14
22	The Continuing Effort to Enhanced Learning of Mechanical Behavior of Materials via Combined Experiments and nanoHUB Simulations: Learning Modules for Sophomore MSE Students. MRS Advances, 2016, 1, 3721-3726.	0.5	1
23	Students and Engineering Educators' Feedback on Design. , 2015, , 26.1430.1.		3
24	Introducing engineering in elementary education: A 5â€year study of teachers and students. British Journal of Educational Technology, 2015, 46, 1015-1019.	3.9	5
25	There's more than one way to analyze feedback on design. , 2015, , .		0
26	Enhanced Learning of Mechanical Behavior of Materials via Combined Experiments and nanoHUB Simulations: Learning Modules for Sophomore MSE Students. Materials Research Society Symposia Proceedings, 2015, 1762, 31.	0.1	4
27	The Relationship between Studentsâ€™ Performance on Conventional Standardized Mathematics Assessments and Complex Mathematical Modeling Problems. International Journal of Research in Education and Science, 2015, 2, 239.	0.8	5
28	The Effects of Integrated Science, Technology, and Engineering Education on Elementary Students' Knowledge and Identity Development. School Science and Mathematics, 2014, 114, 380-391.	0.5	40
29	First-year engineering students' nanotechnology awareness, exposure and motivation before and after educational interventions. , 2014, , .		0
30	Influence of teaching assistants' motivation on student learning. , 2014, , .		1
31	Mini workshop — Developing engineers for a changing world through modeling and simulation-based pedagogy. , 2014, , .		0
32	Student peer feedback on design. , 2014, , .		0
33	First-year engineering students' self-reported knowledge of nanotechnology — The development of a coding scheme. , 2014, , .		1
34	Development and validation of a Nano Size and Scale Instrument (NSSI). , 2014, , .		2
35	IN-SERVICE TEACHER PROFESSIONAL DEVELOPMENT IN ENGINEERING EDUCATION:. , 2014, , 233-258.		15
36	Studentsâ€™ Perceptions of and Responses to Teaching Assistant and Peer Feedback. Interdisciplinary Journal of Problem-based Learning, 2014, 9, .	0.2	5

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37	Student Team Solutions to an Openâ€Ended Mathematical Modeling Problem: Gaining Insights for Educational Improvement. Journal of Engineering Education, 2013, 102, 179-216.	1.9	15
38	First-Year students' understanding of direct user in open-ended problem solving activities. , 2013, , .		1
39	Case studies: First-Year engineering nanotechnology-based design projects. , 2013, , .		0
40	Undergraduate and graduate teaching assistants' perceptions of their responsibilities - Factors that help or hinder. , 2013, , .		8
41	Socialization Experiences Resulting from Doctoral Engineering Teaching Assistantships. Journal of Higher Education, 2013, 84, 189-212.	1.9	7
42	First-Year Effects Of An Engineering Professional Development Program On Elementary Teachers. American Journal of Engineering Education, 2013, 4, 67-84.	0.4	24
43	Engineering Identity Development Among Preâ€Adolescent Learners. Journal of Engineering Education, 2012, 101, 698-716.	1.9	85
44	Work in progress: Analysis of change in engineering construct knowledge. , 2012, , .		1
45	First-year engineering students' peer feedback on open-ended mathematical modeling problems. , 2012, , .		3
46	Work in progress: Changes in elementary teachers' Noticing of engineering Pre/Post professional development with engineering. , 2012, , .		1
47	Work in progress: First-year engineering students development of test cases for model development. , 2012, , .		0
48	Problem Formulation within Open-ended Problems: Looking through the Structure-Behavior-Function (SBF) and Novice-Expert (NE) Frameworks. Procedia, Social and Behavioral Sciences, 2012, 56, 160-174.	0.5	4
49	Transforming the First-Year Engineering Experience through Authentic Problem-Solving: Taking a Models and Modeling Perspective. Procedia, Social and Behavioral Sciences, 2012, 56, 314-332.	0.5	1
50	A Framework for Analyzing Feedback in a Formative Assessment System for Mathematical Modeling Problems. Journal of Engineering Education, 2012, 101, 375-406.	1.9	37
51	First-Year Engineering Studentsâ€™ Portrayal of Engineering in a Proposed Museum Exhibit for Middle School Students. Journal of Science Education and Technology, 2012, 21, 304-316.	2.4	3
52	Professional Development Through Engineering Academies: An Examination of Elementary Teachers' Recognition and Understanding of Engineering. Journal of Engineering Education, 2011, 100, 520-539.	1.9	39
53	Mini workshop — A strategy for assessing student work on open-ended problems. , 2011, , .		1
54	What is an Engineer? Implications of Elementary School Student Conceptions for Engineering Education. Journal of Engineering Education, 2011, 100, 304-328.	1.9	194

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55	Work in progress — Interpreting elementary students' advanced conceptions of engineering from the Draw-an-Engineer Test. , 2011, , .		6
56	Work in progress — Using multiple methods to investigate the role of feedback in open-ended activities. , 2011, , .		2
57	The Development of a Systematic Coding System for Elementary Studentsâ€™ Drawings of Engineers. Journal of Pre-College Engineering Education Research, 2011, 1, .	0.3	19
58	Progression of student solutions over the course of a Model-Eliciting Activity (MEA). , 2010, , .		8
59	Challenges to Informed Peer Review Matching Algorithms. Journal of Engineering Education, 2010, 99, 397-408.	1.9	15
60	Generating measures of Engineering Identity Development among young learners. , 2009, , .		9
61	Student reflections on peer reviewing solutions to Model-Eliciting Activities. , 2009, , .		10
62	Development of an Instrument to Measure Undergraduatesâ€™ Nanotechnology Awareness, Exposure, Motivation, and Knowledge. Journal of Science Education and Technology, 2008, 17, 500-510.	2.4	20
63	What is engineering? — An Exploration of P-6 grade teachers’ perspectives. Proceedings - Frontiers in Education Conference, FIE, 2007, , .	0.0	11
64	Young children’s Perceptions of engineers before and after a summer engineering outreach course. Proceedings - Frontiers in Education Conference, FIE, 2007, , .	0.0	14
65	Nanotechnology Awareness of First-Year Food and Agriculture Students following a Brief Exposure. Journal of Natural Resources and Life Sciences Education, 2007, 36, 58-65.	0.3	8
66	Workshop Guided Peer Feedback for Improved Student Team Responses to Open-Ended Engineering Problems. , 2006, , .		0
67	Assessment of Team Effectiveness During Complex Mathematical Modeling Tasks. , 2006, , .		9
68	Development and Assessment of an Undergraduate Curriculum for First-Year International Engineering Students. , 2006, , .		1
69	Engineering a professional community of practice for graduate students in engineering education. , 2006, , .		6
70	A preliminary validation of Attention, Relevance, Confidence and Satisfaction model-based Instructional Material Motivational Survey in a computer-based tutorial setting. British Journal of Educational Technology, 2006, 37, 243-259.	3.9	105
71	Graduate Students' Evolving Ideas on Engineering Education and Engineering Educators. , 2006, , .		1
72	Kirkpatrick's Level 1 Evaluation of the Implementation of a Computerâ€Aided Process Design Tool in a Seniorâ€Level Engineering Course. Journal of Engineering Education, 2004, 93, 321-331.	1.9	7

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73	Development Of Graduate Programs In Engineering Education. , 0, , .		5
74	First Year Engineering Themed Seminar â€“ A Mechanism For Conveying The Interdisciplinary Nature Of Engineering. , 0, , .		7
75	Factors That Help and Hinder Teaching Assistantsâ€™ Ability to Execute Their Responsibilities. , 0, , .		6
76	"Engineering Teaches Problem Solving": Teachers' Perceptions of Student Learning through Engineering Lessons. , 0, , .		1
77	Change in Elementary Student Conceptions of Engineering Following an Intervention as Seen from the Draw-an-Engineer Test. , 0, , .		10
78	Synthesis of clustering techniques in educational data mining. , 0, , .		2
79	Broadening K-8 Teachersâ€™ Perspectives on Professional Development in Engineering Integration in the United States. International Journal of Research in Education and Science, 0, , 331-348.	0.8	7
80	Board # 29 :Research Needs Statements for Project Topic Selection: A Pilot Study in an Undergraduate Civil Engineering Transportation Course. , 0, , .		0
81	Grader Consistency in using Standards-based Rubrics. , 0, , .		3
82	Board 22: Enhancing Minority Middle School Student Knowledge, Literacy, and Motivation in STEM Using Culturally Relevant Contexts. , 0, , .		0
83	Characterization of Techniques used in Industry: The Practice of Complex Problem Solving in Engineering. , 0, , .		1
84	Best Practices for Using Standards-based Grading in Engineering Courses. , 0, , .		7
85	First-Year Engineering Studentsâ€™ Learning of Nanotechnology through an Open-Ended Project. , 0, , .		3
86	Measuring the Effects of Integrating Engineering into the Elementary School Curriculum on Studentsâ€™ Science and Engineering Design Content Knowledge. , 0, , .		9
87	A New Framework For Academic Reform In Engineering Education. , 0, , .		6
88	Standards-Based Grading Derived Data to Monitor Grading and Student Learning. , 0, , .		3
89	Validation of an Instrument to Measure Student Engagement with a Standards-Based Grading System. , 0, , .		3
90	Conceptual Understanding of the Electrical Concepts of Voltage and Current: A Pilot Study of a Method to Create Representations of Studentsâ€™ Mental Models. , 0, , .		0

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91	The Nature of Peer Feedback from First-year Engineering Students on Open-ended Mathematical Modeling Problems. , 0, , .		6
92	Special Session: Next Generation Problem Solving: Results To Date Models And Modeling Using Meas. , 0, , .		3
93	Web Based Technology For Long Term Program Assessment. , 0, , .		0
94	Elementary Teachersâ€™ Two-Year Implementation of Engineering: A Case of Success. , 0, , .		1
95	Examining the Skills and Methods of Graduate Student Mentors in an Undergraduate Research Setting. , 0, , .		1
96	Drag The Green Ion An Interactive Online Quantitative Cellular Biology Learning Module. , 0, , .		1
97	A Comprehensive Beginning Engineering Student Assessment Program. , 0, , .		0
98	Does A Successful Mathematics Bridge Program Make For Successful Students?. , 0, , .		5
99	Laptops In The Lecture To Promote Active Learning. , 0, , .		0
100	K-8 Teachersâ€™ Responses to Their First Professional Development Experience in Engineering. , 0, , .		2
101	Tips For Teaching Obscenely Large Lectures. , 0, , .		0
102	Implementing Change: A Model For Closing The Continuous Improvement Loop The First Time And Every Time. , 0, , .		0
103	You May be Able to Teach Early Classes, but Students May Not be Awake Yet!. , 0, , .		1
104	Boys and Girls Engineering Identity Development in Early Elementary. , 0, , .		0
105	Changes in Elementary Studentsâ€™ Engineering Knowledge Over Two Years of Integrated Science Instruction (Research to Practice). , 0, , .		1
106	Effects of Continuous Teacher Professional Development in Engineering on Elementary Teachers. , 0, , .		0
107	Doctoral Students as Course Instructors: Three Engineering Teaching Assistantsâ€™ Socialization Experiences. , 0, , .		1
108	Elementary School Teachers' Attempts at Integrating Engineering Design: Transformation or Assimilation?. , 0, , .		2

#	Article	IF	Citations
109	First-Year Engineering Studentsâ€™ Communication of Nanotechnology Size & Scale in a Design Challenge. , 0, , .		0
110	First-Year Engineering Team Responses to Feedback on Their Mathematical Models - A Video Study. , 0, , .		0
111	Evaluating Student Responses in Open-Ended Problems Involving Iterative Solution Development in Model-Eliciting Activities. , 0, , .		1
112	Feedback and Assessment of Student Work on Model-Eliciting Activities: Undergraduate Teaching Assistantsâ€™ Perceptions and Strategies. , 0, , .		2
113	Understanding Grader Reliability through the Lens of Cognitive Modeling. , 0, , .		0
114	Pre Eminence In First Year Engineering Programs. , 0, , .		0
115	Model Eliciting Activities: An In Class Approach To Improving Interest And Persistence Of Women In Engineering. , 0, , .		10
116	A First Take on an Individual Data Generation Assignment for Open-ended Mathematical Modeling Problems. , 0, , .		2
117	A Coding Scheme for Measuring Biomedical Engineering Studentsâ€™ Breadth of Exposure to the Discipline. , 0, , .		0
118	Student Responses to and Perceptions of Feedback Received on a Series of Model-Eliciting Activities: A Case Study. , 0, , .		2
119	Graduate Teaching Assistant Written Feedback on Student Responses to Problem Identification Questions within an Authentic Engineering Problem. , 0, , .		4
120	Board # 32 : NSF PRIME Project: Contextualized Evaluation of Advanced STEM MOOCs. , 0, , .		0
121	Realistic Open-Ended Engineering Problem Solving as Sites for Postdoctoral Researcher Training in Course Instruction and Development. , 0, , .		0
122	A Teaching Assistant Training Protocol for Improving Feedback on Open-Ended Engineering Problems in Large Classes. , 0, , .		4