Xiaoming Zhai

List of Publications by Year
in descending order

27 papers	814 citations	14 h-index	26 g-index
27 all docs	27 docs citations	27 times ranked	431 citing authors

706676

620720

#	Article	IF	Citations
1	Assessing Argumentation Using Machine Learning and Cognitive Diagnostic Modeling. Research in Science Education, 2023, 53, 405-424.	1.4	17
2	Re-validating a Learning Progression of Buoyancy for Middle School Students: A Longitudinal Study. Research in Science Education, 2022, 52, 1761-1789.	1.4	2
3	Examining adultsâ€™ web navigation patterns in multi-layered hypertext environments. Computers in Human Behavior, 2022, 129, 107142.	5.1	8
4	Assessing highâ€school students' modeling performance on Newtonian mechanics. Journal of Research in Science Teaching, 2022, 59, 1313-1353.	2.0	8
5	Applying machine learning to automatically assess scientific models. Journal of Research in Science Teaching, 2022, 59, 1765-1794.	2.0	32
6	Examining Humansâ€™ Problem-Solving Styles in Technology-Rich Environments Using Log File Data. Journal of Intelligence, 2022, 10, 38.	1.3	3
7	A Meta-Analysis of Machine Learning-Based Science Assessments: Factors Impacting Machine-Human Score Agreements. Journal of Science Education and Technology, 2021, 30, 361-379.	2.4	32
8	Advancing automatic guidance in virtual science inquiry: from ease of use to personalization. Educational Technology Research and Development, 2021, 69, 255-258.	2.0	10
9	On the Validity of Machine Learning-based Next Generation Science Assessments: A Validity Inferential Network. Journal of Science Education and Technology, 2021, 30, 298-312.	2.4	20
10	Practices and Theories: How Can Machine Learning Assist in Innovative Assessment Practices in Science Education. Journal of Science Education and Technology, 2021, 30, 139-149.	2.4	30
11	Using Machine Learning to Score Multi-Dimensional Assessments of Chemistry and Physics. Journal of Science Education and Technology, 2021, 30, 239-254.	2.4	26
12	Validating a partial-credit scoring approach for multiple-choice science items: an application of fundamental ideas in science. International Journal of Science Education, 2021, 43, 1640-1666.	1.0	9
13	A Framework of Construct-Irrelevant Variance for Contextualized Constructed Response Assessment. Frontiers in Education, 2021, 6, .	1.2	3
14	Developing a Learning Progression of Buoyancy to Model Conceptual Change: A Latent Class and Rule Space Model Analysis. Research in Science Education, 2020, 50, 1369-1388.	1.4	26
15	Assessing computational thinking: A systematic review of empirical studies. Computers and Education, 2020, 148, 103798.	5.1	284
16	From substitution to redefinition: A framework of machine learningâ€based science assessment. Journal of Research in Science Teaching, 2020, 57, 1430-1459.	2.0	38
17	Understanding How the Perceived Usefulness of Mobile Technology Impacts Physics Learning Achievement: a Pedagogical Perspective. Journal of Science Education and Technology, 2020, 29, 743-757.	2.4	26
18	Evaluation of construct-irrelevant variance yielded by machine and human scoring of a science teacher PCK constructed response assessment. Studies in Educational Evaluation, 2020, 67, 100916.	1.2	23

#	Article	IF	Citations
19	Applying machine learning in science assessment: a systematic review. Studies in Science Education, 2020, 56, 111-151.	3.4	92
20	Assessing learning in technology-rich maker activities: A systematic review of empirical research. Computers and Education, 2020, 157, 103944.	5.1	41
21	Motivating preservice physics teachers to low-socioeconomic status schools. Physical Review Physics Education Research, 2020, 16, .	1.4	3
22	Examining the Uses of Student-Led, Teacher-Led, and Collaborative Functions of Mobile Technology and Their Impacts on Physics Achievement and Interest. Journal of Science Education and Technology, 2019, 28, 310-320.	2.4	13
23	Understanding the relationship between levels of mobile technology use in high school physics classrooms and the learning outcome. British Journal of Educational Technology, 2019, 50, 750-766.	3.9	22
24	Becoming a teacher in rural areas: How curriculum influences government-contracted pre-service physics teachers' motivation. International Journal of Educational Research, 2019, 94, 77-89.	1.2	8
25	Oneâ€toâ€one mobile technology in high school physics classrooms: Understanding its use and outcome. British Journal of Educational Technology, 2018, 49, 516-532.	3.9	21
26	Teachersâ€™ use of learning progression-based formative assessment to inform teachersâ€™ instructional adjustment: a case study of two physics teachersâ€™ instruction. International Journal of Science Education, 2018, 40, 1832-1856.	1.0	13
27	Developing effective and accessible activities to improve and assess computational thinking and engineering learning. Educational Technology Research and Development, 0, , 1.	2.0	4