Troy D Sadler

List of Publications by Year
in descending order

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107 papers	8,830 citations	71102 41 h-index	48315 88 g-index
110 all docs	110 docs citations	110 times ranked	2879 citing authors

#	Article	IF	Citations
1	Informal reasoning regarding socioscientific issues: A critical review of research. Journal of Research in Science Teaching, 2004, 41, 513-536.	3.3	880
2	Beyond STS: A research-based framework for socioscientific issues education. Science Education, 2005, 89, 357-377.	3.0	750
3	Patterns of informal reasoning in the context of socioscientific decision making. Journal of Research in Science Teaching, 2005, 42, 112-138.	3.3	452
4	What Do Students Gain by Engaging in Socioscientific Inquiry?. Research in Science Education, 2007, 37, 371-391.	2.3	441
5	Situated learning in science education: socioâ€scientific issues as contexts for practice. Studies in Science Education, 2009, 45, 1-42.	5.4	421
6	The morality of socioscientific issues: Construal and resolution of genetic engineering dilemmas. Science Education, 2004, 88, 4-27.	3.0	376
7	Student conceptualizations of the nature of science in response to a socioscientific issue. International Journal of Science Education, 2004, 26, 387-409.	1.9	349
8	The significance of content knowledge for informal reasoning regarding socioscientific issues: Applying genetics knowledge to genetic engineering issues. Science Education, 2005, 89, 71-93.	3.0	313
9	Socioscientific Argumentation: The effects of content knowledge and morality. International Journal of Science Education, 2006, 28, 1463-1488.	1.9	297
10	Advancing reflective judgment through Socioscientific Issues. Journal of Research in Science Teaching, 2009, 46, 74-101.	3.3	242
11	Scientific literacy, PISA, and socioscientific discourse: Assessment for progressive aims of science education. Journal of Research in Science Teaching, 2009, 46, 909-921.	3.3	239
12	Relating Narrative, Inquiry, and Inscriptions: Supporting Consequential Play. Journal of Science Education and Technology, 2007, 16, 59-82.	3.9	235
13	A threshold model of content knowledge transfer for socioscientific argumentation. Science Education, 2006, 90, 986-1004.	3.0	227
14	Socioscience and ethics in science classrooms: Teacher perspectives and strategies. Journal of Research in Science Teaching, 2006, 43, 353-376.	3.3	213
15	Multiâ€level Assessment of Scientific Content Knowledge Gains Associated with Socioscientific Issuesâ€based Instruction. International Journal of Science Education, 2010, 32, 1017-1043.	1.9	152
16	Learning science through research apprenticeships: A critical review of the literature. Journal of Research in Science Teaching, 2010, 47, 235-256.	3.3	148
17	Contextualizing Nature of Science Instruction in Socioscientific Issues. International Journal of Science Education, 2012, 34, 2289-2315.	1.9	148
18	Moral Sensitivity in the Context of Socioscientific Issues in High School Science Students. International Journal of Science Education, 2009, 31, 279-296.	1.9	135

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19	New directions in socioscientific issues research. Disciplinary and Interdisciplinary Science Education Research, 2019, 1, .	2.9	120
20	Promoting Discourse and Argumentation in Science Teacher Education. Journal of Science Teacher Education, 2006, 17, 323-346.	2.5	110
21	Preservice Science Teachersâ€™ Informal Reasoning about Socioscientific Issues: The influence of issue context. International Journal of Science Education, 2010, 32, 2475-2495.	1.9	96
22	Preservice Elementary Teachersâ€™ Science Self-Efficacy Beliefs and Science Content Knowledge. Journal of Science Teacher Education, 2016, 27, 649-673.	2.5	87
23	Learning science content through socio-scientific issues-based instruction: a multi-level assessment study. International Journal of Science Education, 2016, 38, 1622-1635.	1.9	84
24	Moral sensitivity and its contribution to the resolution of socioâ€scientific issues. Journal of Moral Education, 2004, 33, 339-358.	1.5	83
25	Situating Socio-scientific Issues in Classrooms as a Means of Achieving Goals of Science Education. Contemporary Trends and Issues in Science Education, 2011, , 1-9.	0.5	80
26	Student development of modelâ€based reasoning about carbon cycling and climate change in a socioâ€scientific issues unit. Journal of Research in Science Teaching, 2017, 54, 1249-1273.	3.3	75
27	Student Motivation from and Resistance to Active Learning Rooted in Essential Science Practices. Research in Science Education, 2020, 50, 253-277.	2.3	73
28	Evolution of a Model for Socio-Scientific Issue Teaching and Learning. International Journal of Education in Mathematics, Science and Technology, 2016, 5, 75.	0.9	73
29	Social and Ethical Issues in Science Education: A Prelude to Action. Science and Education, 2008, 17, 799-803.	2.7	70
30	Evolution of a Generalist Genotype: Multivariate Analysis of the Adaptiveness of Phenotypic Plasticity. American Naturalist, 1996, 148, S108-S123.	2.1	69
31	Science Teachersâ€™ Use of Mass Media to Address Socio-Scientific and Sustainability Issues. Research in Science Education, 2012, 42, 51-74.	2.3	64
32	Assessment of scientific literacy: Development and validation of the Quantitative Assessment of Socio-Scientific Reasoning (QuASSR). Journal of Research in Science Teaching, 2017, 54, 274-295.	3.3	63
33	Enacting a Socioscientific Issues Classroom: Transformative Transformations. Contemporary Trends and Issues in Science Education, 2011, , 277-305.	0.5	61
34	Socio-scientific Issues-Based Education: What We Know About Science Education in the Context of SSI. Contemporary Trends and Issues in Science Education, 2011, , 355-369.	0.5	60
35	Selecting Socio-scientific Issues for Teaching. Science and Education, 2019, 28, 639-667.	2.7	59
36	Socio-scientific reasoning and environmental literacy in a field-based ecology class. Environmental Education Research, 2019, 25, 388-410.	2.9	59

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37	Interactive patterns and conceptual convergence during student collaborations in science. Journal of Research in Science Teaching, 2008, 45, 634-658.	3.3	56
38	Controversial issues in the science classroom. Phi Delta Kappan, 2017, 99, 45-49.	0.6	51
39	Developing and Using Multiple Models to Promote Scientific Literacy in the Context of Socio-Scientific Issues. Science and Education, 2021, 30, 589-607.	2.7	50
40	Gameâ€Based Curricula in Biology Classes: Differential Effects Among Varying Academic Levels. Journal of Research in Science Teaching, 2013, 50, 479-499.	3.3	49
41	Learning nature of science concepts through a research apprenticeship program: A comparative study of three approaches. Journal of Research in Science Teaching, 2016, 53, 31-59.	3.3	49
42	Socio-scientific Issues in Science Education: Contexts for the Promotion of Key Learning Outcomes. , 2012, , 799-809.		46
43	Pre-service teachersâ€™ science beliefs, attitudes, and self-efficacy: a multi-case study. Teaching Education, 2015, 26, 247-271.	1.3	46
44	Learning Science Content and Socio-scientific Reasoning Through Classroom Explorations of Global Climate Change. Contemporary Trends and Issues in Science Education, 2011, , 45-77.	0.5	44
45	Cognitive diagnostic like approaches using neural-network analysis ofÂserious educational videogames. Computers and Education, 2014, 70, 92-104.	8.3	43
46	Learning natural selection through computational thinking: Unplugged design of algorithmic explanations. Journal of Research in Science Teaching, 2019, 56, 983-1007.	3.3	42
47	â€œI Won't Last Three Weeksâ€• Preservice Science Teachers Reflect on Their Student-Teaching Experiences. Journal of Science Teacher Education, 2006, 17, 217-241.	2.5	40
48	Teachers' implementation of a game-based biotechnology curriculum. Computers and Education, 2013, 66, 11-24.	8.3	39
49	Design of a Socio-scientific Issue Curriculum Unit: Antibiotic Resistance, Natural Selection, and Modeling. International Journal of Designs for Learning, 2016, 7, .	0.2	38
50	Evolutionary theory as a guide to socioscientific decision-making. Journal of Biological Education, 2005, 39, 68-72.	1.5	36
51	Studentsâ€™ perceptions of socio-scientific issue-based learning and their appropriation of epistemic tools for systems thinking. International Journal of Science Education, 2020, 42, 1339-1361.	1.9	36
52	Learning Biology Through Innovative Curricula: A Comparison of Game- and Nongame-Based Approaches. Science Education, 2015, 99, 696-720.	3.0	35
53	High School Student Participation in Scientific Research Apprenticeships: Variation in and Relationships Among Student Experiences and Outcomes. Research in Science Education, 2012, 42, 439-467.	2.3	34
54	Sources of Science Teaching Self-Efficacy for Preservice Elementary Teachers in Science Content Courses. International Journal of Science and Mathematics Education, 2018, 16, 835-855.	2.5	34

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55	Studentsâ€™ model-based explanations about natural selection and antibiotic resistance through socio-scientific issues-based learning. International Journal of Science Education, 2019, 41, 510-532.	1.9	34
56	The Role of Moral Reasoning in Argumentation: Conscience, Character, and Care. Science & Technology Education Library, 2007, , 201-216.	0.7	33
57	Socioscientific issues in science education: labels, reasoning, and transfer. Cultural Studies of Science Education, 2009, 4, 697-703.	1.3	33
58	Turkish Preservice Science Teachersâ€™ Informal Reasoning Regarding Socioscientific Issues and the Factors Influencing Their Informal Reasoning. Journal of Science Teacher Education, 2011, 22, 313-332.	2.5	31
59	STUDENT INTEREST IN TECHNOLOGY AND SCIENCE (SITS) SURVEY: DEVELOPMENT, VALIDATION, AND USE OF A NEW INSTRUMENT. International Journal of Science and Mathematics Education, 2014, 12, 261-283.	2.5	30
60	Teachersâ€™ Concerns About Biotechnology Education. Journal of Science Education and Technology, 2013, 22, 133-147.	3.9	27
61	A third space for reflection by teacher educators: A heuristic for understanding orientations to and components of reflection. Reflective Practice, 2013, 14, 43-57.	1.4	26
62	Teaching Practices for Enactment of Socio-scientific Issues Instruction: an Instrumental Case Study of an Experienced Biology Teacher. Research in Science Education, 2021, 51, 375-398.	2.3	26
63	Practicality in Virtuality: Finding Student Meaning in Video Game Education. Journal of Science Education and Technology, 2013, 22, 124-132.	3.9	25
64	The linguistic construction of expert identity in professorâ€“student discussions of science. Cultural Studies of Science Education, 2007, 2, 119-150.	1.3	24
65	Measuring Changes in Interest in Science and Technology at the College Level in Response to Two Instructional Interventions. Research in Science Education, 2016, 46, 309-327.	2.3	24
66	High school science teachers' views of standards and accountability. Science Education, 2009, 93, 1050-1075.	3.0	23
67	Measurement of socio-scientific reasoning (SSR) and exploration of SSR as a progression of competencies. International Journal of Science Education, 2020, 42, 2981-3002.	1.9	23
68	Studentsâ€™ Participation in an Interdisciplinary, Socioscientific Issues Based Undergraduate Human Biology Major and Their Understanding of Scientific Inquiry. Research in Science Education, 2013, 43, 1051-1078.	2.3	18
69	Exploring Elementary Teachersâ€™ Perceptions and Characterizations of Model-Oriented Issue-Based Teaching. Journal of Science Teacher Education, 2018, 29, 555-577.	2.5	18
70	Water systems understandings: a framework for designing instruction and considering what learners know about water. Wiley Interdisciplinary Reviews: Water, 2017, 4, e1178.	6.5	17
71	The classroom observation protocol for socioscientific issue-based instruction: development and implementation of a new research tool. Research in Science and Technological Education, 2018, 36, 302-323.	2.5	13
72	Secondary Science and Mathematics Teachersâ€™ Environmental Issues Engagement through Socioscientific Reasoning. Eurasia Journal of Mathematics, Science and Technology Education, 2019, 15, .	1.3	13

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73	Enacting Co-Designed Socio-Scientific Issues-Based Curriculum Units: A Case of Secondary Science Teacher Learning. Journal of Science Teacher Education, 2021, 32, 85-106.	2.5	13
74	Algorithmic Explanations: an Unplugged Instructional Approach to Integrate Science and Computational Thinking. Journal of Science Education and Technology, 2022, 31, 428-441.	3.9	12
75	Exploring the Sociopolitical Dimensions of Global Warming. Science Activities, 2009, 45, 9-13.	0.6	11
76	Exploring primary students causal reasoning about ecosystems. International Journal of Science Education, 2020, 42, 1799-1817.	1.9	11
77	Consistency of Practical and Formal Epistemologies of Science Held by Participants of a Research Apprenticeship. Research in Science Education, 2013, 43, 2179-2206.	2.3	10
78	Exploring Undergraduatesâ€™ Breadth of Socio-scientific Reasoning Through Domains of Knowledge. Research in Science Education, 2022, 52, 1643-1658.	2.3	10
79	Learning Outcomes Associated with Classroom Implementation of a Biotechnology-Themed Video Game. American Biology Teacher, 2013, 75, 29-33.	0.2	9
80	Teachersâ€™ views on and preferences for meeting their professional development needs in STEM. School Science and Mathematics, 2018, 118, 370-384.	0.9	9
81	Modeling the Emergence of Antibiotic Resistance in Bacterial Populations. American Biology Teacher, 2018, 80, 214-220.	0.2	9
82	The role of affect in science literacy for all. International Journal of Science Education, 2022, 44, 535-555.	1.9	9
83	Student leadership in small group science inquiry. Research in Science and Technological Education, 2014, 32, 281-297.	2.5	8
84	Integrating Scientific Modeling and Socio-Scientific Reasoning to Promote Scientific Literacy. Advances in Educational Technologies and Instructional Design Book Series, 2021, , 31-54.	0.2	8
85	Uma abordagem para o ensino atravÃ©s de QuestÃµes SociocientÃficas e aprendizagem baseada em modelos (SIMBL). EducaÃ§Ã£o E Fronteiras, 2019, 9, 08-26.	0.1	7
86	Student interest, concerns, and information-seeking behaviors related to COVID-19. Disciplinary and Interdisciplinary Science Education Research, 2022, 4, .	2.9	7
87	Using Unplugged Computational Thinking to Scaffold Natural Selection Learning. American Biology Teacher, 2021, 83, 112-117.	0.2	6
88	Supporting Teachers in the Design and Enactment of Socio-Scientific Issue-Based Teaching in the USA. Contemporary Trends and Issues in Science Education, 2020, , 85-99.	0.5	6
89	Socio-Scientific Issues as Contexts for the Development of STEM Literacy. , 2020, , 210-222.		5
90	Introduction to the special issue: A critical examination of the Next Generation Science Standards. Journal of Research in Science Teaching, 2018, 55, 903-906.	3.3	4

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91	Assessment of Socio-scientific Reasoning: Linking Progressive Aims of Science Education to the Realities of Modern Education. Contemporary Trends and Issues in Science Education, 2014, , 101-113.	0.5	4
92	Conceptualizing Student Affect for Science and Technology at the Middle School Level: Development and Implementation of a Measure of Affect in Science and Technology (MAST). Journal of Science Education and Technology, 2017, 26, 534-545.	3.9	3
93	Conceptual framing and instructional enactment of the Next Generation Science Standards: A synthesis of the contributions to the special issue. Journal of Research in Science Teaching, 2018, 55, 1101-1108.	3.3	3
94	A vision for the next phase of JRST. Journal of Research in Science Teaching, 2020, 57, 147-153.	3.3	3
95	Metalogue: Issues in the Conceptualization of Research Constructs and Design for SSI Related Work. Contemporary Trends and Issues in Science Education, 2011, , 79-87.	0.5	3
96	Mission HydroSci. Advances in Game-based Learning Book Series, 2016, , 421-441.	0.2	3
97	Mission HydroSci. , 2019, , 623-643.		3
98	Genetic Variation in Subtropical Populations of Simocephalus (Crustacea:Cladocera). Hereditas, 2004, 123, 1-7.	1.4	2
99	Call for papers: Journal of Research in Science Teaching - Special Issue: A critical examination of the Next Generation Science Standards. Journal of Research in Science Teaching, 2017, 54, 555-557.	3.3	2
100	Socio-scientific Issues for Scientific Literacy â€“ The Evolution of an Environmental Education Program with a Focus on Birds. Environmental Discourses in Science Education, 2017, , 169-185.	1.1	2
101	Data Do Not Speak for Themselves: The Role of Data in Scientific Controversies. Science Activities, 2007, 44, 113-114.	0.6	1
102	Mission HydroSci. , 2017, , .		1
103	Enhancing Pre-service Science Teachersâ€™ Understanding and Practices of SocioScientific Issues (SSIs)-Based Teaching via an Online Mentoring Program. Asian Social Science, 2018, 14, 1.	0.2	1
104	A vision that focuses on diversity and broader impact. Journal of Research in Science Teaching, 2021, 58, 307-309.	3.3	1
105	Metalogue: Balancing Tensions Associated with Extensive Enactment of SSI-Based Teaching. Contemporary Trends and Issues in Science Education, 2011, , 307-312.	0.5	1
106	Introduction to comments and criticisms in response to the Next Generation Science Standards special issue. Journal of Research in Science Teaching, 2019, 56, 516-517.	3.3	0
107	Metalogue: SSI in Undergraduate Science Education. Contemporary Trends and Issues in Science Education, 2011, , 127-131.	0.5	0