Keith S Taber

List of Publications by Year
in descending order

149 papers	8,076 citations	109321 35 h-index	58581 82 g-index
182 all docs	182 docs citations	182 times ranked	5637 citing authors

#	Article	IF	Citations
1	The Use of Cronbachâ€™s Alpha When Developing and Reporting Research Instruments in Science Education. Research in Science Education, 2018, 48, 1273-1296.	2.3	4,062
2	Revisiting the chemistry triplet: drawing upon the nature of chemical knowledge and the psychology of learning to inform chemistry education. Chemistry Education Research and Practice, 2013, 14, 156-168.	2.5	289
3	BUILDING THE STRUCTURAL CONCEPTS OF CHEMISTRY: SOME CONSIDERATIONS FROM EDUCATIONAL RESEARCH. Chemistry Education Research and Practice, 2001, 2, 123-158.	2.5	176
4	An alternative conceptual framework from chemistry education. International Journal of Science Education, 1998, 20, 597-608.	1.9	169
5	Multiple frameworks?: Evidence of manifold conceptions in individual cognitive structure. International Journal of Science Education, 2000, 22, 399-417.	1.9	127
6	Learning quanta: Barriers to stimulating transitions in student understanding of orbital ideas. Science Education, 2005, 89, 94-116.	3.0	126
7	Learning Processes in Chemistry: Drawing Upon Cognitive Resources to Learn About the Particulate Structure of Matter. Journal of the Learning Sciences, 2010, 19, 99-142.	2.9	109
8	Shifting sands: a case study of conceptual development as competition between alternative conceptions. International Journal of Science Education, 2001, 23, 731-753.	1.9	96
9	Beyond Constructivism: the Progressive Research Programme into Learning Science. Studies in Science Education, 2006, 42, 125-184.	5.4	90
10	Case studies and generalizability: grounded theory and research in science education. International Journal of Science Education, 2000, 22, 469-487.	1.9	88
11	The secret life of the chemical bond: studentsâ€™ anthropomorphic and animistic references to bonding. International Journal of Science Education, 1996, 18, 557-568.	1.9	84
12	Mediating mental models of metals: Acknowledging the priority of the learner's prior learning. Science Education, 2003, 87, 732-758.	3.0	76
13	Teaching and learning the concept of chemical bonding. Studies in Science Education, 2010, 46, 179-207.	5.4	75
14	Modelling Learners and Learning in Science Education. , 2013, , .		74
15	The Mismatch between Assumed Prior Knowledge and the Learner's Conceptions: A typology of learning impediments. Educational Studies, 2001, 27, 159-171.	2.4	73
16	Learnersâ€™ Mental Models of the Particle Nature of Matter: A study of 16â€yearâ€old Swedish science students. International Journal of Science Education, 2009, 31, 757-786.	1.9	71
17	Ethical considerations of chemistry education research involving â€˜human subjectsâ€™. Chemistry Education Research and Practice, 2014, 15, 109-113.	2.5	70
18	Towards a Curricular Model of the Nature of Science. Science and Education, 2008, 17, 179-218.	2.7	68

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19	Conceptual Resources for Learning Science: Issues of transience and grainâ€size in cognition and cognitive structure. International Journal of Science Education, 2008, 30, 1027-1053.	1.9	68
20	Learning at the Symbolic Level. Models and Modeling in Science Education, 2009, , 75-105.	0.6	67
21	Development of Student Understanding: a case study of stability and lability in cognitive structure. Research in Science and Technological Education, 1995, 13, 89-99.	2.5	66
22	LEARNERSâ€™ EXPLANATIONS FOR CHEMICAL PHENOMENA. Chemistry Education Research and Practice, 2000, 1, 329-353.	2.5	59
23	When the analogy breaks down: modelling the atom on the solar system. Physics Education, 2001, 36, 222-226.	0.5	58
24	The sharingâ€out of nuclear attraction: or â€˜I can't think about physics in chemistryâ€™. International Journal of Science Education, 1998, 20, 1001-1014.	1.9	55
25	Secondary School Studentsâ€™ Epistemic Insight into the Relationships Between Science and Religionâ€"A Preliminary Enquiry. Research in Science Education, 2013, 43, 1715-1732.	2.3	53
26	CONCEPTUALIZING QUANTA: ILLUMINATING THE GROUND STATE OF STUDENT UNDERSTANDING OF ATOMIC ORBITALS. Chemistry Education Research and Practice, 2002, 3, 145-158.	2.5	51
27	Title is missing!. Foundations of Chemistry, 2003, 5, 43-84.	1.1	50
28	COMPOUNDING QUANTA: PROBING THE FRONTIERS OF STUDENT UNDERSTANDING OF MOLECULAR ORBITALS. Chemistry Education Research and Practice, 2002, 3, 159-173.	2.5	47
29	Secondary students' responses to perceptions of the relationship between science and religion: Stances identified from an interview study. Science Education, 2011, 95, 1000-1025.	3.0	45
30	The Insidious Nature of â€˜Hardâ€Coreâ€™ Alternative Conceptions: Implications for the constructivist research programme of patterns in high school studentsâ€™ and preâ€service teachersâ€™ thinking about ionisation energy. International Journal of Science Education, 2011, 33, 259-297.	1.9	44
31	Student Conceptions of Ionic Bonding: Patterns of thinking across three European contexts. International Journal of Science Education, 2012, 34, 2843-2873.	1.9	43
32	Straw Men and False Dichotomies: Overcoming Philosophical Confusion in Chemical Education. Journal of Chemical Education, 2010, 87, 552-558.	2.3	42
33	Finding the optimum level of simplification: the case of teaching about heat and temperature. Physics Education, 2000, 35, 320-325.	0.5	41
34	College Studentsâ€™ Conceptions of Chemical Stability: The widespread adoption of a heuristic rule out of context and beyond its range of application. International Journal of Science Education, 2009, 31, 1333-1358.	1.9	39
35	An explanatory gestalt of essence: studentsâ€™ conceptions of the â€˜naturalâ€™ in physical phenomena. International Journal of Science Education, 1996, 18, 939-954.	1.9	36
36	A Common Core to Chemical Conceptions: Learnersâ€™ Conceptions of Chemical Stability, Change and Bonding. Innovations in Science Education and Technology, 2013, , 391-418.	0.3	36

#	ARTICLE	IF	CITATIONS
37	Student Thinking and Learning in Science. , 0, , .		36
38	Methodological Issues in Science Education Research: A Perspective from the Philosophy of Science. , 2014, , 1839-1893.		35
39	The significance of implicit knowledge for learning and teaching chemistry. Chemistry Education Research and Practice, 2014, 15, 447-461.	2.5	33
40	The ionisation energy diagnostic instrument: a two-tier multiple-choice instrument to determine high school studentsâ€™ understanding of ionisation energy. Chemistry Education Research and Practice, 2005, 6, 180-197.	2.5	32
41	How Students View the Boundaries Between Their Science and Religious Education Concerning the Origins of Life and the Universe. Science Education, 2016, 100, 459-482.	3.0	32
42	Exploring Conceptual Integration in Student Thinking: Evidence from a case study. International Journal of Science Education, 2008, 30, 1915-1943.	1.9	30
43	Studentsâ€™ Conceptions of Ionisation Energy: A Crossâ€cultural Study. International Journal of Science Education, 2008, 30, 263-283.	1.9	29
44	Conceptions of assessment: trainee teachers' practice and values. Curriculum Journal, 2008, 19, 193-213.	1.5	28
45	A research-informed dialogic-teaching approach to early secondary school mathematics and science: the pedagogical design and field trial of the<i>epiSTEMe</i>intervention. Research Papers in Education, 2017, 32, 18-40.	3.0	27
46	UNDERSTANDING IONISATION ENERGY: PHYSICAL, CHEMICAL AND ALTERNATIVE CONCEPTIONS. Chemistry Education Research and Practice, 2003, 4, 149-169.	2.5	26
47	Upper Secondary French Students, Chemical Transformations and the â€œRegister of Modelsâ€ A crossâ€sectional study. International Journal of Science Education, 2008, 30, 807-836.	1.9	26
48	Secondary Studentsâ€™ Thinking about Familiar Phenomena: Learnersâ€™ explanations from a curriculum context where â€˜particlesâ€™ is a key idea for organising teaching and learning. International Journal of Science Education, 2009, 31, 1917-1952.	1.9	26
49	Gender Differences in Science Preferences on Starting Secondary School. Research in Science and Technological Education, 1991, 9, 245-251.	2.5	25
50	Constructivismâ€™s New Clothes: The Trivial, the Contingent, and a Progressive Research Programme into the Learning of Science. Foundations of Chemistry, 2006, 8, 189-219.	1.1	25
51	Experimental research into teaching innovations: responding to methodological and ethical challenges. Studies in Science Education, 2019, 55, 69-119.	5.4	25
52	Constructivism and concept learning in chemistry: perspectives from a case study. Research in Education, 1997, 58, 10-20.	1.1	23
53	Exploring the language(s) of chemistry education. Chemistry Education Research and Practice, 2015, 16, 193-197.	2.5	23
54	CONSTRUCTING CHEMICAL CONCEPTS IN THE CLASSROOM?: USING RESEARCH TO INFORM PRACTICE. Chemistry Education Research and Practice, 2001, 2, 43-51.	2.5	22

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55	Three levels of chemistry educational research. Chemistry Education Research and Practice, 2013, 14, 151-155.	2.5	22
56	Prioritising paradigms, mixing methods, and characterising the â€˜qualitativeâ€™ in educational research. Teacher Development, 2012, 16, 125-138.	0.7	21
57	Lost and found in translation: guidelines for reporting research data in an â€˜otherâ€™ language. Chemistry Education Research and Practice, 2018, 19, 646-652.	2.5	21
58	Exploring Learnersâ€™ Conceptual Resources: Singapore A Level Studentsâ€™ Explanations in the Topic of Ionisation Energy. International Journal of Science and Mathematics Education, 2007, 5, 375-392.	2.5	20
59	Coordinating Procedural and Conceptual Knowledge to Make Sense of Word Equations: Understanding the complexity of a â€˜simpleâ€™ completion task at the learnerâ€™s resolution. International Journal of Science Education, 2009, 31, 2021-2055.	1.9	20
60	Conceptual resources for constructing the concepts of electricity: the role of models, analogies and imagination. Physics Education, 2006, 41, 155-160.	0.5	19
61	Learning generic skills through chemistry education. Chemistry Education Research and Practice, 2016, 17, 225-228.	2.5	19
62	Girlsâ€™ interactions with teachers in mixed physics classes: results of classroom observation. International Journal of Science Education, 1992, 14, 163-180.	1.9	18
63	Upper Secondary Students' Understanding of the Basic Physical Interactions in Analogous Atomic and Solar Systems. Research in Science Education, 2013, 43, 1377-1406.	2.3	18
64	Secondary school teachersâ€™ perspectives on teaching about topics that bridge science and religion. Curriculum Journal, 2014, 25, 372-395.	1.5	18
65	Recognising quality in reports of chemistry education research and practice. Chemistry Education Research and Practice, 2012, 13, 4-7.	2.5	16
66	The application of the microgenetic method to studies of learning in science education: characteristics of published studies, methodological issues and recommendations for future research. Studies in Science Education, 2017, 53, 45-73.	5.4	16
67	Ionization Energy: Implications of Preservice Teachersâ€™ Conceptions. Journal of Chemical Education, 2009, 86, 623.	2.3	15
68	'Intense, but it's all worth it in the end': The colearner's experience of the research process. British Educational Research Journal, 2002, 28, 435-457.	2.5	14
69	Vive la DiffÃ©rence? Comparing â€œLike with Likeâ€•in Studies of Learnersâ€™ Ideas in Diverse Educational Contexts. Education Research International, 2012, 2012, 1-12.	1.1	14
70	Knowledge, beliefs and pedagogy: how the nature of science should inform the aims of science education (and not just when teaching evolution). Cultural Studies of Science Education, 2017, 12, 81-91.	1.3	14
71	Mediated Learning Leading Developmentâ€"The Social Development Theory of Lev Vygotsky. Springer Texts in Education, 2020, , 277-291.	0.1	14
72	Constructing Active Learning in Chemistry: Concepts, Cognition and Conceptions. , 2014, , 5-23.		14

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73	Constructivism in Education. , 2019, , 312-342.		14
74	LOST WITHOUT TRACE OR NOT BROUGHT TO MIND? - A CASE STUDY OF REMEMBERING AND FORGETTING OF COLLEGE SCIENCE. Chemistry Education Research and Practice, 2003, 4, 249-277.	2.5	13
75	Inquiry teaching, constructivist instruction and effective pedagogy. Teacher Development, 2011, 15, 257-264.	0.7	13
76	Developing an Understanding of Chemistry: A case study of one Swedish student's rich conceptualisation for making sense of upper secondary school chemistry. International Journal of Science Education, 2014, 36, 1107-1136.	1.9	13
77	Analysing symbolic expressions in secondary school chemistry: their functions and implications for pedagogy. Chemistry Education Research and Practice, 2016, 17, 439-451.	2.5	13
78	The Nature of Student Conceptions in Science. , 2017, , 119-131.		13
79	Alternative Conceptions/Frameworks/Misconceptions. , 2015, , 37-41.		13
80	Paying lipâ€service to research? The adoption of a constructivist perspective to inform science teaching in the English curriculum context. Curriculum Journal, 2010, 21, 25-45.	1.5	12
81	Formative conceptions of assessment: trainee teachersâ€™ thinking about assessment issues in English secondary schools. Teacher Development, 2011, 15, 171-186.	0.7	12
82	Alternative Conceptions and the Learning of Chemistry. Israel Journal of Chemistry, 2019, 59, 450-469.	2.3	12
83	Conceptual Frameworks, Metaphysical Commitments and Worldviews: The Challenge of Reflecting the Relationships Between Science and Religion in Science Education. Cultural Studies of Science Education, 2013, , 151-177.	0.2	12
84	The Atom as a Tiny Solar System: Turkish High School Studentsâ€™ Understanding of the Atom in Relation to a Common Teaching Analogy. Innovations in Science Education and Technology, 2013, , 169-198.	0.3	11
85	Understanding differences in trainee teachers' values and practice in relation to assessment. Teacher Development, 2008, 12, 15-35.	0.7	10
86	Constructivism in Education. Advances in Educational Technologies and Instructional Design Book Series, 2016, , 116-144.	0.2	9
87	Meeting Educational Objectives in the Affective and Cognitive Domains: Personal and Social Constructivist Perspectives on Enjoyment, Motivation and Learning Chemistry. , 2015, , 3-27.		8
88	English secondary studentsâ€™ thinking about the status of scientific theories: consistent, comprehensive, coherent and extensively evidenced explanations of aspects of the natural world â€“ or just â€˜an idea someone hasâ€™. Curriculum Journal, 2015, 26, 370-403.	1.5	8
89	Researching moving targets: studying learning progressions and teaching sequences. Chemistry Education Research and Practice, 2017, 18, 283-287.	2.5	8
90	Conceptual integration: a demarcation criterion for science education?. Physics Education, 2006, 41, 286-287.	0.5	7

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91	Non-random thoughts about research. Chemistry Education Research and Practice, 2013, 14, 359-362.	2.5	7
92	A Cross-National Study of Studentsâ€™ Understanding of Genetics Concepts: Implications from Similarities and Differences in England and Turkey. Education Research International, 2016, 2016, 1-14.	1.1	7
93	Developing Chemical Understanding in the Explanatory Vacuum: Swedish High School Studentsâ€™ Use of an Anthropomorphic Conceptual Framework to Make Sense of Chemical Phenomena. Innovations in Science Education and Technology, 2013, , 347-370.	0.3	7
94	Action Research and the Academy: seeking to legitimise a â€˜differentâ€™ form of researchDoing and writing action research, by Jean McNiff and Jack Whitehead , London , Sage , 2009 , 208 pp., Â£22.99 (paperback), ISBN 978-1-84-787175-6. Teacher Development, 2013, 17, 288-300.	0.7	6
95	Affect and Meeting the Needs of the Gifted Chemistry Learner: Providing Intellectual Challenge to Engage Students in Enjoyable Learning. , 2015, , 133-158.		6
96	Advancing chemistry education as a field. Chemistry Education Research and Practice, 2015, 16, 6-8.	2.5	6
97	Identifying research foci to progress chemistry education as a field. Educacion Quimica, 2017, 28, 66-73.	0.1	6
98	Representations and visualisation in teaching and learning chemistry. Chemistry Education Research and Practice, 2018, 19, 405-409.	2.5	6
99	Conceptual confusion in the chemistry curriculum: exemplifying the problematic nature of representing chemical concepts as target knowledge. Foundations of Chemistry, 2020, 22, 309-334.	1.1	6
100	Epistemic Relevance and Learning Chemistry in an Academic Context. , 2015, , 79-100.		6
101	Should physics teaching be a research-based activity?. Physics Education, 2000, 35, 163-168.	0.5	5
102	How Was It for You?: the dialogue between researcher and colearner. Westminster Studies in Education, 2003, 26, 33-44.	0.1	5
103	â€˜Chemical Reactions are Like Hell Becauseâ€¦â€™. , 2016, , 321-349.		5
104	Separating â€˜Inquiry Questionsâ€™ and â€˜Techniquesâ€™ to Help Learners Move between the How and the Why of Biology Practical Work. Journal of Biological Education, 2016, 50, 207-226.	1.5	5
105	Progressing chemistry education research as a disciplinary field. Disciplinary and Interdisciplinary Science Education Research, 2019, 1, .	2.9	5
106	Making claims about learning: a microgenetic multiple case study of temporal patterns of conceptual change in learnersâ€™ activation of force conceptions. International Journal of Science Education, 2020, 42, 1388-1407.	1.9	5
107	Developing teachers as learning doctors. Teacher Development, 2005, 9, 219-236.	0.7	5
108	Patterns in nature: challenging secondary students to learn about physical laws. Physics Education, 2011, 46, 80-89.	0.5	4

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109	Representing Evolution in Science Education: The Challenge of Teaching About Natural Selection. , 2017, , 71-96.		4
110	Who counts as an author when reporting educational research?. Chemistry Education Research and Practice, 2013, 14, 5-8.	2.5	3
111	What is wrong with â€˜practiceâ€™ papers. Chemistry Education Research and Practice, 2016, 17, 639-645.	2.5	3
112	Teaching and Learning Chemistry. , 2017, , 325-341.		3
113	Science Education as a Field of Scholarship. , 2017, , 3-19.		3
114	Beliefs and Science Education. , 2017, , 53-67.		3
115	A web-based ionisation energy diagnostic instrument: exploiting the affordances of technology. Chemistry Education Research and Practice, 2019, 20, 412-427.	2.5	3
116	Scientism, creationism or category error? A crossâ€age survey of secondary school studentsâ€™ perceptions of the relationships between science and religion. Curriculum Journal, 2021, 32, 334-358.	1.5	3
117	Guiding the practice of constructivist teaching. Teacher Development, 2011, 15, 117-122.	0.7	2
118	The international dimension of Chemistry Education Research and Practice. Chemistry Education Research and Practice, 2012, 13, 398-400.	2.5	2
119	Preparing Chemistry Education Research Manuscripts for Publication. ACS Symposium Series, 2014, , 299-332.	0.5	2
120	Constructing and communicating knowledge about chemistry and chemistry education. Chemistry Education Research and Practice, 2014, 15, 5-9.	2.5	2
121	Supplementing the text: the role of appendices in academic papers. Chemistry Education Research and Practice, 2016, 17, 6-9.	2.5	2
122	Is CER best considered a discipline or a field of study? Reply to Hannah Sevian's comment. Educacion Quimica, 2017, 28, 304-306.	0.1	2
123	The Relationship Between Science and Religion: A Contentious and Complex Issue Facing Science Education. , 2017, , 45-69.		2
124	Making Sense of â€˜Making Senseâ€™ in Science Education: A Microgenetic Multiple Case Study. Contributions From Science Education Research, 2017, , 157-166.	0.5	2
125	Pedagogic Doublethink: Scientific Enquiry and the Construction of Personal Knowledge Under the English National Curriculum for Science. , 2018, , 73-96.		2
126	Weak foundations undermine teaching Â‘scaffoldingÂ’. Physics Education, 2005, 40, 115-116.	0.5	1

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127	The nature and scope of chemistry education as a field. Chemistry Education Research and Practice, 2012, 13, 159-160.	2.5	1
128	The Learnerâ€™s Thinking. , 2013, , 141-163.		1
129	The end of academic standards? A lament on the erosion of scholarly values in the post-truth world. Chemistry Education Research and Practice, 2018, 19, 9-14.	2.5	1
130	Assigning Credit and Ensuring Accountability. ACS Symposium Series, 2018, , 3-33.	0.5	1
131	Scholarly publishing: a partnership with mutual benefits and individual responsibilities. Chemistry Education Research and Practice, 2019, 20, 8-16.	2.5	1
132	Secondary studentsâ€™ values and perceptions of science-related careers: responses to vignette-based scenarios. SN Social Sciences, 2021, 1, 104.	0.7	1
133	How Was It for You?: the dialogue between researcher and colearner. Westminster Studies in Education, 2003, 26, 33-44.	0.1	1
134	FACILITATING SCIENCE LEARNING IN THE INTER-DISCIPLINARY MATRIX - SOME PERSPECTIVES ON TEACHING CHEMISTRY AND PHYSICS. Chemistry Education Research and Practice, 2003, 4, 103-114.	2.5	0
135	Spontaneous and induced conceptions. Physics Education, 2007, 42, 554-555.	0.5	0
136	Psychology for teachers?. Teacher Development, 2010, 14, 269-278.	0.7	0
137	Learning about science and religion (LASAR) from the Faraday Institute for Science and Religion; http://faradayschools.com/. Physics Teacher, 2011, 49, 462-462.	0.3	0
138	Components of Personal Knowledge: Characterising the Learnerâ€™s Conceptual Resources. , 2013, , 209-230.		0
139	The Learnerâ€™s Memory. , 2013, , 79-117.		0
140	Shifting the culture of science education to teach about the nature of science. Teacher Development, 2014, 18, 124-133.	0.7	0
141	The impact of chemistry education research on practice: a cautionary tale. Chemistry Education Research and Practice, 2014, 15, 410-416.	2.5	0
142	The role of interpretation in inferring student knowledge and understanding from research data. Chemistry Education Research and Practice, 2015, 16, 423-428.	2.5	0
143	Always a matter of interpretation: inferring student knowledge and understanding from research data. Chemistry Education Research and Practice, 2017, 18, 7-12.	2.5	0
144	Building a library of chemistry education volumes. Chemistry Education Research and Practice, 2017, 18, 513-517.	2.5	0

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145	Deciphering Studentsâ€™ Thinking on Ionisation Energy: Utilising a Web-Based Diagnostic Instrument. , 2019, , 149-166.		0
146	Comment on â€œIncreasing chemistry studentsâ€™ knowledge, confidence, and conceptual understanding of pH using a collaborative computer pH simulationâ€•by S. W. Watson, A. V. Dubrovskiy and M. L. Peters, <i>Chem. Educ. Res. Pract</i>., 2020, 21, 528. Chemistry Education Research and Practice, 2020, 21, 1218-1221.	2.5	0
147	Intuitions, Conceptions and Frameworks: Modelling Student Cognition in Science Learning. , 2010, , 163-182.		0
148	Constructive Alternativism: George Kellyâ€™s Personal Construct Theory. Springer Texts in Education, 2020, , 373-388.	0.1	0
149	Developing Intellectual Sophistication and Scientific Thinkingâ€”The Schemes of William G. Perry and Deanna Kuhn. Springer Texts in Education, 2020, , 209-223.	0.1	0