David F Treagust

List of Publications by Year
in descending order

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246 papers	11,474 citations	36203 51 h-index	37111 96 g-index
252 all docs	252 docs citations	252 times ranked	4083 citing authors

#	Article	IF	Citations
1	Immersive virtual reality for science learning: Design, implementation, and evaluation. Studies in Science Education, 2023, 59, 205-244.	3.4	32
2	High School and Preservice Chemistry Teacher Education Studentsâ€™ Understanding of Voltaic and Electrolytic Cell Concepts: Evidence of Consistent Learning Difficulties Across Years. International Journal of Science and Mathematics Education, 2022, 20, 1859-1882.	1.5	7
3	Supporting the development of scientific understanding when constructing an evolving explanation. Disciplinary and Interdisciplinary Science Education Research, 2022, 4, .	1.6	3
4	Analysis and Characterization of Student Interactions in a Remote Laboratory: Measurement of the Enthalpy and Entropy of Vaporization of <i>n</i>-Octane. Journal of Chemical Education, 2022, 99, 1201-1210.	1.1	4
5	Design and Validation of an Instrument to Measure Studentsâ€™ Interactions and Satisfaction in Undergraduate Chemistry Laboratory Classes. Research in Science Education, 2021, 51, 1039-1053.	1.4	10
6	Development and validation of an instrument for assessing high-school studentsâ€™ perceptions of socio-scientific issues-based learning in biology. Learning Environments Research, 2021, 24, 223-237.	1.8	5
7	Scientific Concepts within Reach of Young Learners: Support from the Educational Research Literature. Physical Sciences Forum, 2021, 2, 58.	0.3	0
8	Discipline-specific cognitive factors that influence grade 9 studentsâ€™ performance in chemistry. Chemistry Education Research and Practice, 2021, 22, 813-841.	1.4	5
9	What studentsâ€™ diagrams reveal about their sense-making of plate tectonics in lower secondary science. International Journal of Science Education, 2021, 43, 2684-2705.	1.0	4
10	Indonesian Biology Teachersâ€™ Perceptions about Socio-Scientific Issue-Based Biology Instruction. Asia-Pacific Science Education, 2021, 7, 452-476.	0.7	3
11	Process-Oriented Guided Inquiry Learning (POGIL) as a Culturally Relevant Pedagogy (CRP) in Qatar: a Perspective from Grade 10 Chemistry Classes. Research in Science Education, 2020, 50, 813-831.	1.4	14
12	Determining the Intelligibility of Einsteinian Concepts with Middle School Students. Research in Science Education, 2020, 50, 2505-2532.	1.4	18
13	Student perceptions of instruction sheets in face-to-face and remotely-operated engineering laboratory learning. European Journal of Engineering Education, 2020, 45, 491-515.	1.5	9
14	Perceptions of the relative importance of student interactions for the attainment of engineering laboratory-learning outcomes. Australasian Journal of Engineering Education, 2020, 25, 155-164.	0.2	5
15	The features of norms formed in constructing student-generated drawings to explain physics phenomena. International Journal of Science Education, 2020, 42, 1362-1387.	1.0	4
16	A sustained multidimensional conceptual change intervention in grade 9 and 10 science classes. International Journal of Science Education, 2020, 42, 703-721.	1.0	20
17	Teaching thermal physics to Year 9 students: the thinking frames approach. Physics Education, 2020, 55, 035007.	0.3	5
18	Sequential patterns of studentsâ€™ drawing in constructing scientific explanations: focusing on the interplay among three levels of pictorial representation. International Journal of Science Education, 2020, 42, 677-702.	1.0	11

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19	Studentsâ€™ understanding of the emergent processes of natural selection: the need for ontological conceptual change. International Journal of Science Education, 2020, 42, 1485-1502.	1.0	10
20	â€˜Even though it might take me a while, in the end, I understand itâ€™: a longitudinal case study of interactions between a conceptual change strategy and student motivation, interest and confidence. Disciplinary and Interdisciplinary Science Education Research, 2020, 2, .	1.6	1
21	Analytical framework for student-generated drawings. International Journal of Science Education, 2019, 41, 2296-2322.	1.0	25
22	Using a Discrepant Event to Facilitate Preservice Elementary Teachersâ€™ Conceptual Change about Force and Motion. Eurasia Journal of Mathematics, Science and Technology Education, 2019, 15, .	0.7	8
23	An Analysis of the Visual Representation of Redox Reactions in Secondary Chemistry Textbooks from Different Chinese Communities. Education Sciences, 2019, 9, 42.	1.4	6
24	Interactive Immersive Virtual Reality to Enhance Studentsâ€™ Visualisation of Complex Molecules. , 2019, , 51-64.		16
25	Understanding interactions in face-to-face and remote undergraduate science laboratories: a literature review. Disciplinary and Interdisciplinary Science Education Research, 2019, 1, .	1.6	26
26	A multidimensional framework of conceptual change for developing chemical equilibrium learning. AIP Conference Proceedings, 2018, , .	0.3	0
27	Effects of a Mathematics Cognitive Acceleration Program on Student Achievement and Motivation. International Journal of Science and Mathematics Education, 2018, 16, 183-202.	1.5	2
28	Adjusting claims as new evidence emerges: Do students incorporate new evidence into their scientific explanations?. Journal of Research in Science Teaching, 2018, 55, 526-549.	2.0	24
29	Developing an understanding of undergraduate student interactions in chemistry laboratories. Chemistry Education Research and Practice, 2018, 19, 1186-1198.	1.4	13
30	Primary School Teachersâ€™ Understanding of Science Process Skills in Relation to Their Teaching Qualifications and Teaching Experience. Research in Science Education, 2017, 47, 257-281.	1.4	19
31	Inquiry-Based Chemistry Education in a High-Context Culture: a Qatari Case Study. International Journal of Science and Mathematics Education, 2017, 15, 1017-1038.	1.5	14
32	Studentsâ€™ attitudes, self-efficacy and experiences in a modified process-oriented guided inquiry learning undergraduate chemistry classroom. Chemistry Education Research and Practice, 2017, 18, 340-352.	1.4	49
33	Science Teachersâ€™ Use of a Concept Map Marking Guide as a Formative Assessment Tool for the Concept of Energy. Educational Assessment, 2017, 22, 95-110.	0.6	14
34	Content knowledge development in a chemistry teacher preparation program: A current potentials and challenges. AIP Conference Proceedings, 2017, , .	0.3	1
35	Learning Optics with Multiple Representations: Not as Simple as Expected. Models and Modeling in Science Education, 2017, , 123-138.	0.6	6
36	An alternative approach to student assessment for engineeringâ€“laboratory learning. Australasian Journal of Engineering Education, 2017, 22, 81-94.	0.2	12

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37	Multiple representations and studentsâ€™ conceptual change in science. , 2017, , 121-128.		9
38	Using metacognitive strategies in teaching to facilitate understanding of light concepts among year 9 students. Research in Science and Technological Education, 2016, 34, 253-272.	1.4	4
39	Commentary: Developments and Reforms in Science Education for Improving the Quality of Teaching and Research. , 2016, , 119-128.		0
40	Latent constructs of the students' assessment of their learning gains instrument following instruction in stereochemistry. Chemistry Education Research and Practice, 2016, 17, 309-319.	1.4	12
41	Comments on Section 2: Significant contributions to research on learning and assessment. , 2016, , 181-186.		0
42	Teacher Leadership: Promoting a Reflective Practice Model. , 2016, , .		0
43	The Physical Security Professional: Formulating a Novel Body of Knowledge. Journal of Applied Security Research, 2015, 10, 385-410.	0.8	3
44	Is it harder to know or to reason? Analyzing two-tier science assessment items using the Rasch measurement model. Asia-Pacific Science Education, 2015, 1, .	0.7	19
45	Second-Year College Studentsâ€™ Scientific Attitudes and Creative Thinking Ability: Influence of a Problem-Based Learning (PBL) Chemistry Laboratory Course. , 2015, , 217-233.		6
46	On the Significance of Conceptual Metaphors in Teaching and Learning Science: Commentary on Lancor; Niebert and Gropengiesser; and Fuchs. International Journal of Science Education, 2015, 37, 958-965.	1.0	12
47	What Do You Know about Alternative Energy? Development and Use of a Diagnostic Instrument for Upper Secondary School Science. International Journal of Science Education, 2015, 37, 210-236.	1.0	16
48	Influence of Particle Theory Conceptions on Pre-service Science Teachersâ€™ Understanding of Osmosis and Diffusion. Journal of Biological Education, 2015, 49, 232-245.	0.8	6
49	Science Teacher Education in Australia: Initiatives and Challenges to Improve the Quality of Teaching. Journal of Science Teacher Education, 2015, 26, 81-98.	1.4	21
50	Preparing Chemistry Education Research Manuscripts for Publication. ACS Symposium Series, 2014, , 299-332.	0.5	2
51	Studentsâ€™ Learning Strategies With Multiple Representations: Explanations of the Human Breathing Mechanism. Science Education, 2014, 98, 840-866.	1.8	43
52	Thai Grade 10 Students Conceptual Understanding of Chemical Bonding. Procedia, Social and Behavioral Sciences, 2014, 143, 657-662.	0.5	1
53	Measuring Student Attitude and Knowledge in Technology-Rich Biology Classrooms. Journal of Science Education and Technology, 2014, 23, 98-107.	2.4	13
54	The Efficacy of Problem-based Learning in an Analytical Laboratory Course for Pre-service Chemistry Teachers. International Journal of Science Education, 2014, 36, 79-102.	1.0	33

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55	Secondary Studentsâ€™ Stable and Unstable Optics Conceptions Using Contextualized Questions. Journal of Science Education and Technology, 2014, 23, 238-251.	2.4	21
56	Learner perceptions of the introduction of computer-assisted learning in mathematics at a peri-urban school in South Africa. Learning Environments Research, 2014, 17, 95-111.	1.8	4
57	An Exploration of Secondary Studentsâ€™ Mental States When Learning About Acids and Bases. Research in Science Education, 2014, 44, 133-154.	1.4	17
58	Prospective pedagogy for teaching chemical bonding for smart and sustainable learning. Chemistry Education Research and Practice, 2014, 15, 435-446.	1.4	26
59	Secondary Biology Teachersâ€™ Use of Different Types of Diagrams for Different Purposes. Models and Modeling in Science Education, 2014, , 103-121.	0.6	8
60	Evaluation of the Predict-Observe-Explain Instructional Strategy to Enhance Studentsâ€™ Understanding of Redox Reactions. , 2014, , 265-286.		12
61	School and University Partnerships: The Role of Teacher Education Institutions and Primary Schools in the Development of Preservice Teachersâ€™ Science Teaching Efficacy. Australian Journal of Teacher Education, 2014, 39, .	0.4	18
62	Which form of assessment provides the best information about student performance in chemistry examinations?. Research in Science and Technological Education, 2013, 31, 49-65.	1.4	8
63	DESIGN, DEVELOPMENT AND VALIDATION OF A MODEL OF PROBLEM SOLVING FOR EGYPTIAN SCIENCE CLASSES. International Journal of Science and Mathematics Education, 2013, 11, 1157-1181.	1.5	8
64	Introduction to Multiple Representations: Their Importance in Biology and Biological Education. Models and Modeling in Science Education, 2013, , 3-18.	0.6	57
65	FIFTH GRADE STUDENTS ENGAGED IN A COOPERATIVE LEARNING ENVIRONMENT: EVALUATING THEIR ABILITY TO DETERMINE THE STATUS OF THEIR OWN CONCEPTIONS ABOUT MATTER. Cosmos, 2013, 08, 167-185.	0.4	2
66	Secondary Studentsâ€™ Understanding of Genetics Using BioLogica: Two Case Studies. Models and Modeling in Science Education, 2013, , 269-292.	0.6	4
67	Conclusion: Contributions of Multiple Representations to Biological Education. Models and Modeling in Science Education, 2013, , 349-367.	0.6	11
68	How to Outline Objectives for Chemistry Education and how to Assess Them. , 2013, , 37-65.		9
69	Understanding of Basic Particle Nature of Matter Concepts by Secondary School Students Following an Intervention Programme. Innovations in Science Education and Technology, 2013, , 125-141.	0.1	1
70	Conceptual Change: Still a Powerful Framework for Improving the Practice of Science Instruction. , 2012, , 43-54.		31
71	HIGH SCHOOL STUDENTSâ€™ PROFICIENCY AND CONFIDENCE LEVELS IN DISPLAYING THEIR UNDERSTANDING OF BASIC ELECTROLYSIS CONCEPTS. International Journal of Science and Mathematics Education, 2012, 10, 1325-1345.	1.5	17
72	Relationship between affect and achievement in science and mathematics in Malaysia and Singapore. Research in Science and Technological Education, 2012, 30, 225-237.	1.4	29

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73	Evaluation of Studentsâ€™ Understanding of Thermal Concepts in Everyday Contexts. International Journal of Science Education, 2012, 34, 1509-1534.	1.0	38
74	Understanding needs embodiment: A theoryâ€guided reanalysis of the role of metaphors and analogies in understanding science. Science Education, 2012, 96, 849-877.	1.8	115
75	How Can Conceptual Change Contribute to Theory and Practice in Science Education?. , 2012, , 107-118.		48
76	Assessment of electrochemical concepts: a comparative study involving senior high-school students in Indonesia and Japan. Research in Science and Technological Education, 2011, 29, 169-188.	1.4	18
77	Evaluation of an intervention instructional program to facilitate understanding of basic particle concepts among students enrolled in several levels of study. Chemistry Education Research and Practice, 2011, 12, 251-261.	1.4	25
78	Diagnostic assessment in chemistry. Chemistry Education Research and Practice, 2011, 12, 119.	1.4	5
79	UNDERSTANDING ACIDâ€"BASE CONCEPTS: EVALUATING THE EFFICACY OF A SENIOR HIGH SCHOOL STUDENT-CENTRED INSTRUCTIONAL PROGRAM IN INDONESIA. International Journal of Science and Mathematics Education, 2011, 9, 1439-1458.	1.5	18
80	A short history of the Science and Mathematics Education Centre at Curtin University. Cultural Studies of Science Education, 2011, 6, 725-735.	0.9	0
81	Possible Pathways for Conceptual Development Related to Energy and the Human Body. , 2011, , 29-42.		0
82	EVALUATING STUDENTSâ€™ UNDERSTANDING OF KINETIC PARTICLE THEORY CONCEPTS RELATING TO THE STATES OF MATTER, CHANGES OF STATE AND DIFFUSION: A CROSS-NATIONAL STUDY. International Journal of Science and Mathematics Education, 2010, 8, 141-164.	1.5	42
83	Evaluating Secondary Studentsâ€™ Scientific Reasoning in Genetics Using a Twoâ€Tier Diagnostic Instrument. International Journal of Science Education, 2010, 32, 1073-1098.	1.0	119
84	Evaluation of Students' Conceptual Understanding of Malaria. International Journal of Science Education, 2010, 32, 2497-2519.	1.0	11
85	Kinetics of acid reactions: making sense of associated concepts. Chemistry Education Research and Practice, 2010, 11, 267-280.	1.4	5
86	Why Models are Advantageous to Learning Science. Educacion Quimica, 2009, 20, 12-17.	0.1	17
87	A stratified study of studentsâ€™ understanding of basic optics concepts in different contexts using twoâ€tier multipleâ€choice items. Research in Science and Technological Education, 2009, 27, 253-265.	1.4	60
88	Introduction: Macro, Submicro and Symbolic Representations and the Relationship Between Them: Key Models in Chemical Education. Models and Modeling in Science Education, 2009, , 1-8.	0.6	105
89	Emphasizing Multiple Levels of Representation To Enhance Students' Understandings of the Changes Occurring during Chemical Reactions. Journal of Chemical Education, 2009, 86, 1433.	1.1	18
90	Students' dilemmas in reaction stoichiometry problem solving: deducing the limiting reagent in chemical reactions. Chemistry Education Research and Practice, 2009, 10, 14-23.	1.4	26

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91	Studentsâ€™ understanding of boiling points and intermolecular forces. Chemistry Education Research and Practice, 2009, 10, 265-272.	1.4	39
92	An International Perspective of Monitoring Educational Research Quality: Commonalities and Differences. , 2009, , 107-137.		13
93	Towards a Coherent Model for Macro, Submicro and Symbolic Representations in Chemical Education. Models and Modeling in Science Education, 2009, , 333-350.	0.6	40
94	Linking the Macroscopic, Sub-microscopic and Symbolic Levels: The Case of Inorganic Qualitative Analysis. Models and Modeling in Science Education, 2009, , 137-150.	0.6	15
95	The Efficacy of an Alternative Instructional Programme Designed to Enhance Secondary Studentsâ€™ Competence in the Triplet Relationship. Models and Modeling in Science Education, 2009, , 151-168.	0.6	16
96	An Evaluation of a Teaching Intervention to Promote Studentsâ€™ Ability to Use Multiple Levels of Representation When Describing and Explaining Chemical Reactions. Research in Science Education, 2008, 38, 237-248.	1.4	57
97	Correct Interpretation of Chemical Diagrams Requires Transforming from One Level of Representation to Another. Research in Science Education, 2008, 38, 463-482.	1.4	64
98	NaÃ¯ve Studentsâ€™ Conceptual Development and Beliefs: The Need for Multiple Analyses to Determine what Contributes to Student Success in a University Introductory Physics Course. Research in Science Education, 2008, 38, 111-125.	1.4	17
99	Conceptual change: a discussion of theoretical, methodological and practical challenges for science education. Cultural Studies of Science Education, 2008, 3, 297-328.	0.9	192
100	Compatibility between cultural studies and conceptual change in science education: there is more to acknowledge than to fight straw men!. Cultural Studies of Science Education, 2008, 3, 387-395.	0.9	19
101	The application of a CAL strategy in science and mathematics for disadvantaged Grade 12 learners in South Africa. International Journal of Educational Development, 2008, 28, 596-611.	1.4	7
102	An Investigation into the Relationship between Studentsâ€™ Conceptions of the Particulate Nature of Matter and their Understanding of Chemical Bonding. International Journal of Science Education, 2008, 30, 1531-1550.	1.0	91
103	The Taiwan National Science Concept Learning Study in an International Perspective. International Journal of Science Education, 2007, 29, 391-403.	1.0	35
104	The development of a two-tier multiple-choice diagnostic instrument for evaluating secondary school studentsâ€™ ability to describe and explain chemical reactions using multiple levels of representation. Chemistry Education Research and Practice, 2007, 8, 293-307.	1.4	178
105	Assessing Studentsâ€™ Conceptual Understanding in Science: An introduction about a national project in Taiwan. International Journal of Science Education, 2007, 29, 379-390.	1.0	39
106	The modelling ability of non-major chemistry students and their understanding of the sub-microscopic level. Chemistry Education Research and Practice, 2007, 8, 274-292.	1.4	86
107	Achieving Greater Feedback and Flexibility Using Online Pre-Laboratory Exercises with Non-Major Chemistry Students. Journal of Chemical Education, 2007, 84, 884.	1.1	44
108	Understanding genetics: Analysis of secondary students' conceptual status. Journal of Research in Science Teaching, 2007, 44, 205-235.	2.0	72

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109	When a Bilingual Child Describes Living Things: An Analysis of Conceptual Understandings from a Language Perspective. Research in Science Education, 2007, 37, 291-312.	1.4	10
110	Using Large-scale Assessment Datasets for Research in Science and Mathematics Education: Programme for International Student Assessment (PISA). International Journal of Science and Mathematics Education, 2007, 5, 591-614.	1.5	66
111	Research-based Innovative Units for Enhancing Student Cognitive Outcomes and Interest in Science. , 2007, , 11-26.		5
112	Teaching and Learning with Analogies. , 2006, , 11-24.		87
113	Using Exploratory Talk to Enhance Problem-solving and Reasoning Skills in Grade-7 Science Classrooms. Research in Science Education, 2006, 36, 381-401.	1.4	43
114	Current Realities and Future Possibilities: Language and science literacyâ€"empowering research and informing instruction. International Journal of Science Education, 2006, 28, 291-314.	1.0	261
115	SCIENCE EDUCATION IN INDONESIA: A CLASSROOM LEARNING ENVIRONMENT PERSPECTIVE. , 2006, , 221-246.		3
116	Exploring students' abilities to use two different styles of structural representation in organic chemistry. Canadian Journal of Science, Mathematics and Technology Education, 2005, 5, 133-152.	0.6	11
117	Village Eldersâ€™ and Secondary School Studentsâ€™ Explanations of Natural Phenomena in Papua New Guinea. International Journal of Science and Mathematics Education, 2005, 3, 213-238.	1.5	11
118	An Instrument for Assessing Students' Mental State and the Learning Environment in Science Education. International Journal of Science and Mathematics Education, 2005, 3, 625-637.	1.5	12
119	The effect of integrated course and faculty development: Experiences of a university chemistry department in the Philippines. International Journal of Science Education, 2005, 27, 985-1006.	1.0	21
120	Learning bioscience in nursing education: perceptions of the intended and the prescribed curriculum. Learning in Health and Social Care, 2005, 4, 203-216.	0.6	60
121	Chemistry Teachers' Estimations of Their Students' Learning Achievement. Journal of Chemical Education, 2005, 82, 1565.	1.1	3
122	Studentsâ€™ perceptions of the role of models in the process of science and in the process of learning. Research in Science and Technological Education, 2005, 23, 195-212.	1.4	48
123	Motivational Aspects of Learning Genetics with Interactive Multimedia. American Biology Teacher, 2004, 66, 277-285.	0.1	8
124	The Status of Science Classroom Learning Environments in Indonesian Lower Secondary Schools. Learning Environments Research, 2004, 7, 43-63.	1.8	20
125	Students' Understanding of the Descriptive and Predictive Nature of Teaching Models in Organic Chemistry. Research in Science Education, 2004, 34, 1-20.	1.4	61
126	An Investigation of Science Teaching Practices in Indonesian Rural Secondary Schools. Research in Science Education, 2004, 34, 455-474.	1.4	18

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127	Inquiry in science education: International perspectives. Science Education, 2004, 88, 397-419.	1.8	512
128	SECURING A FUTURE FOR CHEMICAL EDUCATION. Chemistry Education Research and Practice, 2004, 5, 5-14.	1.4	22
129	Conceptual change in learning genetics: an ontological perspective. Research in Science and Technological Education, 2004, 22, 185-202.	1.4	31
130	Major Sources of Difficulty in Students' Understanding of Basic Inorganic Qualitative Analysis. Journal of Chemical Education, 2004, 81, 725.	1.1	7
131	What do students really learn from interactive multimedia? A physics case study. American Journal of Physics, 2004, 72, 1351-1358.	0.3	23
132	Motivational Aspects of Learning Genetics with Interactive Multimedia. American Biology Teacher, 2004, 66, 277.	0.1	19
133	Genetics Reasoning with Multiple External Representations. Research in Science Education, 2003, 33, 111-135.	1.4	79
134	A brief history of a science teacher professional development initiative in Indonesia and the implications for centralised teacher development. International Journal of Educational Development, 2003, 23, 201-213.	1.4	30
135	Investigation of secondary school, undergraduate, and graduate learners' mental models of ionic bonding. Journal of Research in Science Teaching, 2003, 40, 464-486.	2.0	139
136	Learners' mental models of metallic bonding: A cross-age study. Science Education, 2003, 87, 685-707.	1.8	74
137	The role of submicroscopic and symbolic representations in chemical explanations. International Journal of Science Education, 2003, 25, 1353-1368.	1.0	266
138	Science Education: From the past, through the present, to the future. International Journal of Science Education, 2003, 25, 643-644.	1.0	1
139	Learning genetics with computer dragons. Journal of Biological Education, 2003, 37, 96-98.	0.8	10
140	Conceptual change: A powerful framework for improving science teaching and learning. International Journal of Science Education, 2003, 25, 671-688.	1.0	782
141	Using Projects to Teach Structural Engineering. Australian Journal of Structural Engineering, 2003, 4, 211-220.	0.4	6
142	Exploring Tertiary Students' Understanding of Covalent Bonding. Research in Science and Technological Education, 2002, 20, 241-267.	1.4	39
143	Students' understanding of the role of scientific models in learning science. International Journal of Science Education, 2002, 24, 357-368.	1.0	281
144	Supporting change, but also contributing to the problem!. Canadian Journal of Science, Mathematics and Technology Education, 2002, 2, 31-35.	0.6	4

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145	Development and application of a two-tier multiple choice diagnostic instrument to assess high school students' understanding of inorganic chemistry qualitative analysis. Journal of Research in Science Teaching, 2002, 39, 283-301.	2.0	111
146	The Teaching and Learning of Electrochemistry. , 2002, , 317-337.		15
147	The Particulate Nature of Matter: Challenges in Understanding the Submicroscopic World. , 2002, , 189-212.		42
148	Secondary Students' Perceptions about Learning Qualitative Analysis in Inorganic Chemistry. Research in Science and Technological Education, 2001, 19, 223-234.	1.4	13
149	Using assessment as a guide in teaching for understanding: A case study of a middle school science class learning about sound. Science Education, 2001, 85, 137-157.	1.8	42
150	Title is missing!. Research in Science Education, 2001, 31, 589-615.	1.4	55
151	Learners' Mental Models of Chemical Bonding. Research in Science Education, 2001, 31, 357-382.	1.4	82
152	Title is missing!. Instructional Science, 2001, 29, 45-85.	1.1	39
153	Teaching Chemical Equilibrium in Australian and German Senior High Schools. , 2001, , 143-148.		0
154	A Problem-Based Learning Approach to Science Teacher Preparation. , 2001, , 49-66.		3
155	Learning about atoms, molecules, and chemical bonds: A case study of multiple-model use in grade 11 chemistry. Science Education, 2000, 84, 352-381.	1.8	266
156	A typology of school science models. International Journal of Science Education, 2000, 22, 1011-1026.	1.0	375
157	The development of an instrument for assessing students' perceptions of teachers' knowledge. International Journal of Science Education, 2000, 22, 385-398.	1.0	48
158	The Complexity of Teaching and Learning Chemical Equilibrium (about J. Chem. Educ., 1999, 76, 554-558). Journal of Chemical Education, 2000, 77, 1560.	1.1	0
159	In search of explanatory frameworks: an analysis of Richard Feynman's lecture 'Atoms in motion'. International Journal of Science Education, 2000, 22, 1157-1170.	1.0	55
160	Pre-service Nurses' Understanding of Blood Pressure and the use of the Sphygmomanometer. Advances in Health Sciences Education, 1999, 4, 175-186.	1.7	0
161	Investigating a grade 11 student's evolving conceptions of heat and temperature. Journal of Research in Science Teaching, 1999, 36, 55-87.	2.0	127
162	Teacher training reforms in Indonesian secondary science: The importance of practical work in physics. Journal of Research in Science Teaching, 1999, 36, 357-371.	2.0	11

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163	The Complexity of Teaching and Learning Chemical Equilibrium. Journal of Chemical Education, 1999, 76, 554.	1.1	117
164	Teaching Science Effectively With Analogies: An Approach for Preservice and Inservice Teacher Education. Journal of Science Teacher Education, 1998, 9, 85-101.	1.4	114
165	Learning to teach primary science through problem-based learning. Science Education, 1998, 82, 215-237.	1.8	56
166	Exploring conceptual change in genetics using a multidimensional interpretive framework. Journal of Research in Science Teaching, 1998, 35, 1031-1055.	2.0	142
167	Modelling in Science Lessons: Are There Better Ways to Learn With Models?. School Science and Mathematics, 1998, 98, 420-429.	0.5	83
168	Learning to teach primary science through problem-based learning. , 1998, 82, 215.		2
169	Learning in Science â€" From Behaviourism Towards Social Constructivism and Beyond. , 1998, , 3-25.		234
170	Monitoring teachersâ€™ referents for classroom practice using metaphors. International Journal of Science Education, 1997, 19, 183-192.	1.0	5
171	Analogies in Biology Education: A Contentious Issue. American Biology Teacher, 1997, 59, 282-287.	0.1	35
172	A review of teacher development reforms in Indonesian secondary science: The effectiveness of practical work in biology. Research in Science Education, 1997, 27, 581-597.	1.4	20
173	A multidimensional framework for interpreting conceptual change events in the classroom. Science Education, 1997, 81, 387-404.	1.8	182
174	Student perceptions of the social constructivist classroom. Science Education, 1997, 81, 561-575.	1.8	49
175	Examining the construction process: A study of changes in level 10 students' understanding of classical mechanics. Journal of Research in Science Teaching, 1997, 34, 571-593.	2.0	24
176	Images of electricity: how do novices and experts model electric current?. International Journal of Science Education, 1996, 18, 163-178.	1.0	54
177	Physical and chemical change in textbooks: An initial view. Research in Science Education, 1996, 26, 129-140.	1.4	5
178	Secondary students' mental models of atoms and molecules: Implications for teaching chemistry. Science Education, 1996, 80, 509-534.	1.8	325
179	The role of analogies in promoting conceptual change in biology. Instructional Science, 1996, 24, 295-320.	1.1	48
180	Using an analogical teaching approach to engender conceptual change. International Journal of Science Education, 1996, 18, 213-229.	1.0	105

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181	A comparative analysis of analogies in secondary biology and chemistry textbooks used in Australian schools. Research in Science Education, 1995, 25, 221-230.	1.4	36
182	Developing preservice teachers' pedagogical reasoning ability. Research in Science Education, 1995, 25, 291-305.	1.4	19
183	Analogies in chemistry textbooks. International Journal of Science Education, 1995, 17, 783-795.	1.0	48
184	Teachers' Thoughts about Changing to Constructivist Teaching/Learning Approaches within Junior Secondary Science Classrooms. Journal of Education for Teaching, 1994, 20, 97-112.	1.1	27
185	A historical analysis of electric currents in textbooks: A century of influence on physics education. Science and Education, 1994, 3, 131-154.	1.7	33
186	An interpretive examination of high school chemistry teachers' analogical explanations. Journal of Research in Science Teaching, 1994, 31, 227-242.	2.0	92
187	The nature and extent of analogies in secondary chemistry textbooks. Instructional Science, 1994, 22, 61-74.	1.1	58
188	Comment on â€œanalogy, explanation, and educationâ€• Journal of Research in Science Teaching, 1993, 30, 615-617.	2.0	2
189	The presentation of gas properties in chemistry textbooks and as reported by science teachers. Journal of Research in Science Teaching, 1993, 30, 871-882.	2.0	11
190	Teaching with analogies: A case study in grade-10 optics. Journal of Research in Science Teaching, 1993, 30, 1291-1307.	2.0	152
191	Student Knowledge of Health and Fitness Concepts and its Relation to Locus of Control. School Science and Mathematics, 1993, 93, 355-359.	0.5	8
192	The evolution of an approach for using analogies in teaching and learning science. Research in Science Education, 1993, 23, 293-301.	1.4	50
193	Physics for students of physical therapy. Physics Teacher, 1993, 31, 188-189.	0.2	0
194	An Evaluation of Curriculum Materials for Teaching Technology as a Design Process. Research in Science and Technological Education, 1992, 10, 203-217.	1.4	15
195	Science teachersâ€™ use of analogies: observations from classroom practice. International Journal of Science Education, 1992, 14, 413-422.	1.0	103
196	Teachers' degree of satisfaction concerning the implementation of an inquiry-oriented secondary biology course. Journal of Biological Education, 1992, 26, 287-294.	0.8	1
197	Conceptual difficulties experienced by senior high school students of electrochemistry: Electric circuits and oxidation-reduction equations. Journal of Research in Science Teaching, 1992, 29, 121-142.	2.0	148
198	Conceptual difficulties experienced by senior high school students of electrochemistry: Electrochemical (galvanic) and electrolytic cells. Journal of Research in Science Teaching, 1992, 29, 1079-1099.	2.0	143

#	Article	IF	Citations
199	Students' understanding of light and its properties: Teaching to engender conceptual change. Science Education, 1992, 76, 653-672.	1.8	74
200	Primary pre-service teachers' pedagogical reasoning skills. Research in Science Education, 1992, 22, 323-330.	1.4	8
201	Gender-inclusive technology materials for the primary school: A case study in curriculum development. Research in Science Education, 1991, 21, 224-233.	1.4	4
202	Student Achievement and Science Curriculum Development Using a Constructive Framework. School Science and Mathematics, 1991, 91, 172-176.	0.5	52
203	A case study of two exemplary biology teachers. Journal of Research in Science Teaching, 1991, 28, 329-342.	2.0	26
204	Integration of technology in the school curriculum. Research in Science Education, 1990, 20, 272-281.	1.4	0
205	Evaluation of a course designed to teach physics to students of physiotherapy. Research in Science Education, 1990, 20, 316-323.	1.4	1
206	Improving Physics Teaching through Collaborative Research. Research in Science and Technological Education, 1990, 8, 93-101.	1.4	3
207	Implications of research on studentsâ€™ understanding of electrochemistry for improving science curricula and classroom practice. International Journal of Science Education, 1990, 12, 147-156.	1.0	39
208	Measuring students' attitudes and perceptions about technology: A multidimensional concept. Research in Science Education, 1989, 19, 221-230.	1.4	10
209	Teachers' use of analogies in their regular teaching routines. Research in Science Education, 1989, 19, 291-299.	1.4	5
210	Visual Library Research: A Method for Helping Low Achieving Students Learn Science. School Science and Mathematics, 1989, 89, 220-227.	0.5	0
211	Secondary Students' Understanding of Gravity and the Motion of Planets. School Science and Mathematics, 1989, 89, 380-391.	0.5	40
212	Development and application of a diagnostic instrument to evaluate grade-11 and -12 students' concepts of covalent bonding and structure following a course of instruction. Journal of Research in Science Teaching, 1989, 26, 301-314.	2.0	168
213	Grade-12 students' misconceptions of covalent bonding and structure. Journal of Chemical Education, 1989, 66, 459.	1.1	125
214	Students' Knowledge of Energy and Attitudes to Energy Conservation. School Science and Mathematics, 1988, 88, 452-458.	0.5	7
215	Application of a conceptual conflict teaching strategy to enhance student learning of acids and bases. Research in Science Education, 1988, 18, 53-63.	1.4	22
216	Instant use of evidence from collaborative research about physics teaching. Research in Science Education, 1988, 18, 196-204.	1.4	0

#	Article	IF	Citations
217	Development and use of diagnostic tests to evaluate studentsâ€™ misconceptions in science. International Journal of Science Education, 1988, 10, 159-169.	1.0	522
218	An Investigation of Exemplary Biology Teaching. American Biology Teacher, 1988, 50, 142-147.	0.1	9
219	The teachingâ€learning environment in a studentâ€centred physics classroom. Research Papers in Education, 1988, 3, 217-233.	1.7	4
220	Conflict within dyadic interactions as a stimulant for conceptual change in physics. International Journal of Science Education, 1987, 9, 203-216.	1.0	30
221	Diagnosing secondary students' misconceptions of photosynthesis and respiration in plants using a two-tier multiple choice instrument. Journal of Biological Education, 1987, 21, 203-211.	0.8	209
222	The role of cognitive factors in chemistry achievement. Journal of Research in Science Teaching, 1987, 24, 145-160.	2.0	59
223	Student misconceptions about light: A comparative study of prevalent views found in Western Australia, France New Zealand, Sweden and the United States. Research in Science Education, 1987, 17, 156-164.	1.4	19
224	Development of an instrument for assessing classroom psychosocial environment at universities and colleges. Studies in Higher Education, 1986, 11, 43-54.	2.9	117
225	Validity and use of an instrument for assessing classroom psychosocial environment in higher education. Higher Education, 1986, 15, 37-57.	2.8	117
226	Identification of secondary students' misconceptions of covalent bonding and structure concepts using a diagnostic instrument. Research in Science Education, 1986, 16, 40-48.	1.4	52
227	Evaluating students' misconceptions by means of diagnostic multiple choice items. Research in Science Education, 1986, 16, 199-207.	1.4	102
228	Research data necessary for meaningful review of grade ten high school genetics curricula. Journal of Research in Science Teaching, 1984, 21, 197-209.	2.0	43
229	Research and development centres for science education in the South East Asian and Australasian region. Science Education, 1983, 67, 421-424.	1.8	1
230	Development of Piagetian Infralogical Groupings in High School Students. Journal of Genetic Psychology, 1982, 140, 119-130.	0.6	2
231	What lower secondary students should understand about the mechanisms of inheritance and what they do understand following instruction. Research in Science Education, 1982, 12, 78-88.	1.4	8
232	Utilizing formative evaluation to enhance the understanding of chemistry and the methods and procedures of science. Journal of Research in Science Teaching, 1982, 19, 769-774.	2.0	3
233	A Modular Approach For Teaching The Concept Of Net Energy In The Secondary Science Classroom*. School Science and Mathematics, 1981, 81, 332-336.	0.5	0
234	Gender-related differences of adolescents in spatial representational thought. Journal of Research in Science Teaching, 1980, 17, 91-97.	2.0	11

#	Article	IF	Citations
235	A Laboratory Exercise on Photoperiodic Changes in the Testes of the Mongolian Gerbil. American Biology Teacher, 1980, 42, 242-243.	0.1	0
236	A fourier regression analysis of body temperature of the American opossum,Didelphis virginiana. Journal of Interdisciplinary Cycle Research, 1980, 11, 135-143.	0.2	1
237	Comments and criticism: Comments on â€œthe acquisition of propositional logic and formal operational schemata during the secondary school yearsâ€• Journal of Research in Science Teaching, 1979, 16, 363-367.	2.0	4
238	The circadian rhythm of body temperature of unrestrained oppossums, Didelphis Virginiana. Journal of Thermal Biology, 1979, 4, 251-255.	1.1	6
239	Photoperiodic changes in the testes of the gerbil, Meriones unguiculatus. Acta Theriologica, 1979, 24, 424-427.	1.1	2
240	An analysis of a four-category concept in science using the bower and trabasso model of concept identification. Journal of Research in Science Teaching, 1978, 15, 343-354.	2.0	0
241	Biochemistry for Secondary Students. American Biology Teacher, 1977, 39, 556-559.	0.1	3
242	Learning chemistry through biochemistry. Science Education, 1977, 61, 331-335.	1.8	3
243	Chemistry: A matter of understanding representations. Advances in Research on Teaching, 0, , 239-267.	0.2	43
244	Paradigms in Science Education Research. , 0, , .		1
245	Teaching Science for Conceptual Change. , 0, , .		17
246	Analysis of Studentsâ€™ Diagrams Explaining Scientific Phenomena. Research in Science Education, 0, , 1.	1.4	10