Closing the Achievement Gap
An International Perspective

The writing of Closing the Achievement Gap is in response to the growing concern for the improvement of quality education, especially mathematics and science, provided for all students. This book is designed to improve the quality of mathematics and science teaching and learning as well as to increase the access of all students to high-quality instruction in these and other fields. A changing world demands changing skills. Closing the achievement gap between low- and high-achieving students is an important goal of public education. There is no excuse for the perpetual achievement gaps that persist for poor and minority students in schools today. Regardless of race, ethnicity, and economic background all students can succeed at high levels. Several countries have confronted previous inequities and have shown that any school can close their achievement gaps regardless of the community they serve and that all students can achieve at high levels when they are provided with the right opportunities. This book is about understanding the factors that will promote progress and what contributed to the progress in the closing of the achievement gap that has occurred in selected countries. It is about creating opportunities for all students.

Features
► Describes the development and implementation of programs that have worked throughout the world
► Presents strategies for fostering improvement with focus on school-related variables that adversely affect educational outcomes for poor and minority students
► Chapters by renowned researchers of different nationalities, culture and ethnic groups

Fields of interest
Science Education; Mathematics Education

Target groups
Research

Discount group
Professional Non-Medical

Due April 2013
2013. Approx. 200 p. 20 illus. Hardcover
► approx. $139.00
ISBN 978-94-007-4356-4

Active Learning and Understanding in the Chemistry Classroom

Contents
Section I TEACHING AND LEARNING CHEMISTRY.- Part I UNDERSTANDING CHEMISTRY CONCEPTS.- Constructing active learning in chemistry: concepts, cognition and conceptions, Keith S. Taber.- The development of theoretical frameworks for understanding the teaching of chemistry, Gail Chittleborough.- Linking the Macro with the Submicro Levels of Chemistry: The Role of Active Learning by Means of Demonstrations and Experiments, Georgios Tsaparlis.- Teaching Chemistry Conceptually, Vickie M. Williamson.- Debugging Myths about Teaching and Learning Chemistry, Diane M. Bunce.- Part II STUDENTS’ CHARACTERISTICS AND CHEMISTRY LEARNING.- The Role of working memory in making the Learning of Chemistry Accessible and Enjoyable, Norman Reid.- Active Learning Educational Strategies Based on the Differences Between Groups of 16-year-old Students Regarding their Gender and Academic Achievements in Chemistry, Istok Devetak and Saša A. Glavič.- Section II APPROACHES IN CHEMISTRY TEACHING FOR LEARNING WITH UNDERSTANDING.- Part I COOPERATIVE AND COLLABORATIVE LEARNING.- Twenty-five Years of Experience with Cooperative Learning in Chemistry, George M. Bodner and Patricia A. Metz.- Problem Solving through Cooperative Learning in the Chemistry Classroom, Liberato Cardellini. [...] 

Fields of interest
Science Education; Learning and Instruction; Teaching and Teacher Education

Target groups
Research

Discount group
Professional Non-Medical

Due June 2013
2013. X, 397 p. 30 illus., 7 in color. Hardcover
► $129.00
ISBN 978-94-007-6667-9

Due April 2013
2013. Approx. 260 p. 60 illus. Hardcover
► approx. $139.00
ISBN 978-94-007-4365-6

Valuing Assessment in Science Education: Pedagogy, Curriculum, Policy

Contents

Fields of interest
Science Education; Mathematics Education

Target groups
Research

Discount group
Professional Non-Medical

Due April 2013
2013. Approx. 200 p. 20 illus. Hardcover
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ISBN 978-94-007-4356-4
N. Emmerich, Queen’s University Belfast, UK

Medical Ethics Education: An Interdisciplinary Perspective

Contents
Curriculum models for the 21st century

Using Learning Technologies in Higher Education

Changing student profiles and the increasing availability of mainstream and specialized learning technologies are stretching the traditional face-to-face models of teaching and learning in higher education.

Features

► Provides guidance for integrating technology into existing curriculum and building new curricular models
► Furnishes relevant case studies detailing curricular models of the future
► Reflects the most up to date research on teaching and learning for the 21st century and beyond

Contents


Fields of interest

Curriculum Studies; Pedagogic Psychology; Educational Technology

Target groups

Research

Discount group

Professional Non-Medical

Due July 2013

► approx. $189.00

Due May 2013

► approx. $139.00
ISBN 978-94-007-4419-6

Critical Analysis of Science Textbooks

Evaluating instructional effectiveness

Contents


Fields of interest

Science Education; Learning and Instruction

Target groups

Research

Discount group

Professional Non-Medical
Encyclopedia of Mathematics Education

Features
► Provides a comprehensive reference text, covering the range of methodologies, perspectives, foci and cultures of this field of inquiry. Interdisciplinary approach ► Addresses each topic in the field of mathematics education ► Over 500 contributions from leading researchers from around the globe ► Provides comprehensive access to theories and to research in the mathematics education field ► Ongoing updates of research and new developments in the online version of the encyclopedia

Contents to follow

Fields of interest
Mathematics Education; International and Comparative Education; Curriculum Studies

Target groups
Research

Discount group
Professional Non-Medical

Science Education for Diversity

Theory and Practice

Contents
Teaching and Measuring Cognitive Readiness

Contents

Fields of interest
Educational Psychology; Educational Technology

Target groups
Research

Discount group
Professional Non-Medical

Transformation in Mathematics Education

A New Approach

The diversity of research domains and theories in the field of mathematics education has been a permanent subject of discussions from the origins of the discipline up to the present. On the one hand the diversity is regarded as a resource for rich scientific development on the other hand it gives rise to the often repeated criticism of the discipline’s lack of focus and identity. As one way of focusing on core issues of the discipline the book seeks to open up a discussion about fundamental ideas in the field of mathematics education that permeate different research domains and perspectives. The book addresses transformation as one fundamental idea in mathematics education and examines it from different perspectives. Transformations are related to knowledge, related to signs and representations of mathematics, related to concepts and ideas, and related to instruments for the learning of mathematics. The book seeks to answer the following questions: What do we know about transformations in the different domains? What kinds of transformations are crucial? How is transformation in each case conceptualized?

Features
➤ The principle of Transformation is used to shape discussions of mathematics theory ➤ Discontinuity in mathematics education is addressed and real world examples given to solve this problem ➤ Teaching and learning geometry provides a context for understanding transformation in mathematics education

Fields of interest
Mathematics Education; Educational Philosophy

Target groups
Research

Discount group
Professional Non-Medical

A Companion to Research in Education

Cover design: D. Kumar, SPI

This volume offers a unique commentary on the diverse ways that educational inquiry is conceived, designed and critiqued. An international team of scholars examines cross-cutting themes of how research in education is conceptualised, characterised, contextualised, legitimised and represented. Contributions include specially commissioned essays, critical commentaries, vignettes, dialogues and cases.

Features
➤ Invaluable guide for advanced students and specialists in educational research ➤ Addresses key debates in the areas of conceptualizing, contextualizing, representing and legitimating educational research ➤ Looks at these key issues in relation to contemporary trends in educational research ➤ Exciting new and needed approach in educational research ➤ Breaks from the standard paradigms and methods ‘coverage’

Contents
1. PART I: CONCEPTUALISING RESEARCH IN EDUCATION.- 2. PART II: CHARACTERISING RESEARCH IN EDUCATION.- 3. PART III: CONTEXTUALISING RESEARCH IN EDUCATION.- 4. PART IV: LEGITIMATING RESEARCH IN EDUCATION.- 5. PART V: REPRESENTING RESEARCH IN EDUCATION.

Fields of interest
Sociology of Education; Philosophy of the Social Sciences; Educational Policy and Politics

Target groups
Research

Discount group
Professional Non-Medical
Teaching Practice and the Practice of Applied Mathematicians

Mathematical Modelling: Connecting to Practice

Teaching Practice and the Practice of Applied Mathematicians provides readers with an overview of recent international research and developments in the teaching and learning of modelling and applications from a variety of theoretical and practical perspectives. There is a strong focus on pedagogical issues for teaching and learning of modelling as well as research into teaching practice. The teaching of applications of mathematics and mathematical modelling from the early years through primary and secondary school and at tertiary level is rising in prominence and prominence in many parts of the world commensurate with an increasing usage of mathematics in business, the environment, industry and everyday life.

Features
- Presents examples of modeling and application in business, the environment, industry and everyday practice
- Presents a broad range of international perspectives on modelling
- Explores the utility of emerging research perspectives

Contents
- Introduction
- Part 1: Overview of Recent International Research and Developments in the Teaching and Learning of Mathematical Modelling and Applications
- Part 2: Pedagogical Issues for Teaching and Learning of Modelling
- Part 3: Research into Teaching Practice

Target groups
- Research

Discount group
- Professional Non-Medical

Concepts of Matter in Science Education

Due May 2013

2013. IX, 76 p. (SpringerBriefs in Education / SpringerBriefs on Key Thinkers in Education) Hardcover
- approx. $179.00
ISBN 978-94-007-6539-9

Due May 2013

2013. IX, 76 p. (SpringerBriefs in Education / SpringerBriefs on Key Thinkers in Education) Softcover
- $49.99

Due June 2013

2013. XX, 618 p. 92 illus., 23 in color. (Innovations in Science Education and Technology, Volume 19) Hardcover
- $179.00
ISBN 978-94-007-5913-8

News 5/2013

G. A. Stillmann, Australian Catholic University, Ballarat, VIC, Australia; G. Kaiser, University of Hamburg, Germany; W. Blum, University of Kassel, Germany; J. Brown, Australian Catholic University, Fitzroy, VIC, Australia (Eds)

Jerome Bruner

Developing a Sense of the Possible

Jerome S. Bruner (1915- ) is one of the best known and most influential psychologists of the twentieth century. He has made significant contributions to cognitive psychology and educational theory. This book presents a brief introduction to Jerome Bruner’s educational ideas and details their influences on our educational discourse and practice. It examines Bruner’s ideas in the context of some key educational issues in the United States since the early twentieth century. Jerome Bruner: Developing a Sense of the Possible will be an inspiration, and vital call to action, to readers looking to better understand today’s instructional and curricular theories. It will help readers gain invaluable insight into the ways teaching and schools can be improved in the future.

Features
- Encourages the audience to read Bruner’s original works by providing background information and some conceptual tools to understand his ideas
- Provides a historical background of Bruner’s work and locate his theory in the context of modern educational theories, particularly in contrast to Dewey’s
- Offers brief explanations and definitions of his key concepts
- Includes appraisals of his ideas by notable researchers (e.g. Nel Noddings, Howard Gardner, and Kieran Egan)

Contents
- Introduction
- Ch. 1 Becoming Bruner
- Ch. 2 Psychology as a Human Science
- Ch. 3 Learning by Discovery
- Ch. 4 From Early Bruner to Later Bruner
- Ch. 5 Improving Our Schools
- Conclusion: Developing a Sense of the Possible

Target groups
- Research

Discount group
- Professional Non-Medical
Early Childhood and Neuroscience - Links to Development and Learning

Contents

Fields of interest
Childhood Education; Child and School Psychology; Neurosciences

Target groups
Research

Discount group
Professional Non-Medical

Due June 2013

2013. X, 225 p. 14 illus., 4 in color. (Educating the Young Child, Volume 7) Hardcover

$129.00
ISBN 978-94-007-6670-9