Science In Primary 5 Moe

This volume presents how high performing education systems over the world are constantly innovating their educational policies to nurture their citizens for the challenges of the future economy and the anticipation of the unknown. This volume includes a state-of-the-art review of the literature in this field, several commissioned focal chapters focusing on the distinctive case of Singapore and internationally commissioned chapters of several other accomplished education systems around the world. A comparative study of Singapore against other high performing education systems is included to provide greater insights to the possible applications to other education systems.

Progress in Psychological Science around the World, Volumes 1 and 2, present the main contributions from the 28th International Congress of Psychology, held in Beijing in 2004. These expert contributions include the Nobel laureate address, the Presidential address, and the Keynote and State-of-the-Art lectures. They are written by international leaders in psychology from 25 countries and regions around the world. The authors present a variety of approaches and perspectives that reflect cutting-edge advances in psychological science. This second volume builds on the coverage of neural, cognitive, and developmental issues from the first volume, to address social and applied issues in modern psychology. The topics covered include: educational psychology and measurement, health psychology, and social and cultural psychology. Organizational, applied, and international psychology are also discussed. Progress in Psychological Science around the World, with its broad coverage of psychological research and practice, and its highly select group of world renowned authors, will be invaluable for researchers, professionals, teachers, and students in the field of psychology.

This edited volume is a state-of-the-art comparison of primary science education across six East-Asian regions; namely, the People's Republic of China, Republic of Korea, Republic of China, Hong Kong SAR, Japan, and Singapore. While news of educational policies, classroom teaching, assessment, and other educational innovations here often surface in the international media, this book brings together for the first time relevant information regarding educational systems and strategies in primary science in East Asia. Above all, it is a readable yet comprehensive survey—readers would have an accurate sense of what has been accomplished, what has not worked so well, and what remains to be done. Invited experts in comparative education research and/or science education also provide commentary by discussing common themes across the six regions. These types of critical synoptic reviews add much value by enabling readers to understand broad commonalities and help synthesize what must surely be a bewildering amount of very interesting albeit confusing body of facts, issues, and policies. Education in East Asia holds many lessons (both positive and negative) to offer to the rest of the world to which this volume is a timely contribution to the literature.

This is a much-needed book for educators who want to learn more than just the surface features of lesson study, to deepen the process and learning. Bringing together current knowledge and resources from lesson study practitioners and researchers all over the world, this book provides models and examples of how teachers can learn more deeply and how to support them to learn more in lesson study. The chapters connect current research/educational theories to classroom practices and are filled with examples to illustrate how deeper learning looks with lesson study; for example, highlighting the research process, paying attention to educative talk, using of case pupils (students) as the teachers' focus, doing kyozai kenkyuu well, facilitatig mock-up lessons and so forth. This is not a basic "how-to" handbook of lesson study, and readers can choose chapters with topics of interest to learn and use the new ideas promptly in their work. Coming from the global network of lesson study educators, the book not only provides new learning guides but also provides stories of how lesson study has been adopted in different cultures and educational contexts.

This book discusses the scope of science education research and practice in Asia. It is divided into five sections: the first consists of nine chapters providing overviews of science education in Asia (China, Lebanon, Macau, Malaysia, Mongolia, Oman, Singapore, Taiwan, and Thailand). The second section offers chapters on content analysis of research articles, while the third includes three chapters on assessment and curriculum. The fourth section includes four chapters on innovative technology in science education; and the fifth section consists of four chapters on professional development, and informal learning. Each section also has additional chapters providing specific comments on the content. This collection of works provides readers with a starting point to better understand the current state of science education in Asia.

Mobile technologies are one of the fastest growing areas of technology in education. For learners, they offer an appealing opportunity to transcend teacher-defined knowledge and approaches by being able to access multiple, alternative sources of information anytime and anywhere. While the pace of engagement with and research into the educational applications of mobile technologies has picked up dramatically in the last decade, there is no consolidated view of how to sustain the practices or opportunities that are being explored. Sustainability is a complex but crucial issue in mobile learning as educational institutions are usually required to make substantial investments in mobile devices and associated technologies, time and training to initiate mobile learning programs. The complexity of sustainable mobile learning programs is further exacerbated by the fast pace of change of digital technologies, where with every change, new possibilities are opened up and investments required. In addition, educators are still attempting to reconcile institutions of formal education with informal mobile learning. The book addresses these issues, with a particular focus on: exploring the challenges surrounding the sustainability of mobile learning in K-12 and higher education investigating the importance of sustaining mobile learning for diverse populations of students globally discussing theoretical models for the sustainability of mobile learning providing the reader with strategies for sustaining mobile learning. Presenting new research alongside theoretical models and ideas for practice, the book will appeal to researchers, academics, and postgraduate students in the fields of education and mobile learning, as well as those working in teacher education.

Offers a range of research into how primary classrooms actually work looking at the development of specific curriculum areas and how they can be taught and assessed across the ability range. This authoritative, state-of-the-art Handbook provides an authoritative overview of issues within sexuality education, coupled with ground-breaking discussion of emerging and unconventional insights in the field. With 32 contributions from 12 countries it definitively traces the landscape of issues, theories and practices in sexuality education globally. These rich and multidisciplinary
essays are written by renowned critical sexualities studies experts and rising stars in this area and grouped under four main areas: Global Assemblages of Sexuality Education Sexualities
Education in Schools Sexual Cultures, Entertainment Media and Communication Technologies Re-animating What Else Sexuality Education Research Can Do, Be and Become Importantly, this Handbook does not equate sexuality education with safer sex education nor understand this subject as confined to school based programmes. Instead, sexuality education is understood more broadly and to occur in spaces as diverse as community settings and entertainment media, and via communication technologies. It is an essential and comprehensive reference resource for academics, students and researchers of sexuality education that both demarcates the field and stimulates critical discussion of its edges. Chapter 2 is available open access under a CC BY 4.0 license via link.springer.com.
This book offers an insight into the research and practices of science teaching and learning in the Singapore classroom, with particular attention paid to how they map on to science as inquiry. It provides a spectrum of Singapore’s science educational practices through all levels of its education system, detailing both successes and shortcomings. The book features a collection of research and discourse by science educators in Singapore, organized around four themes that are essential components of approaching science as inquiry: teachers’ ideas and their practices, opportunities and constraints from a systemic level, students’ competencies and readiness to learn through inquiry and the need for greater awareness of the role of informal learning avenues in science education. In addition, the discourse within each theme is enriched by commentary from a leading international academic, which helps to consolidate ideas as well as position the issues within a wider theoretical and international context. Overall, the papers set out important contexts for readers to understand the current state of science education in Singapore. They also highlight strengths and gaps in practices of science as inquiry as well as provide suggestions about how the system can be improved. These research findings are therefore helpful as they provide honest and evidence-based feedback as well as tangible and doable ideas that policy makers, teachers, students and school administrators can adopt, adapt and enhance.
This book examines the principles and practice of authentic assessment. It seeks to answer the following questions. What is authentic assessment? How is authentic assessment different from ‘performance assessment’ or ‘alternative assessment’? How can authentic assessment support learner-centred education, especially when a performance-oriented culture favours pen-and-paper examinations? The book is structured into two major parts. The first, ‘Principles of authentic assessment design’, provides readers with a conceptual explanation of authenticity; the principles for designing quality authentic assessments for valid evidence of student learning; and guidance about how to develop quality rubrics to structure assessment tasks. The second part of the book, ‘Theory into practice’ provides examples developed by teachers to demonstrate an understanding of authentic assessment. The subject areas covered include humanities, languages, mathematics, sciences, character and citizenship. Two case studies are discussed to demonstrate how authentic assessment can be used to comprehensively address key learning objectives in a variety of curriculum contexts. This book provides practitioners with concrete examples on how to develop authentic assessment to suit their context and also enhance their students’ learning. The book will also enable teachers to face assessment challenges present in our changing world.
In a fast-changing, globalising world, the teaching and implementation of a curriculum for Education for Sustainability (EIS) has been a challenge for many teachers. Issues in Teaching and Learning of Education for Sustainability highlights the issues and challenges educators and academics face in implementing EIS and gives examples of what an EIS curriculum may look like and how some institutions translate the theory into practice. Organised into three parts, the volume looks at: the who (EIS for whom), the what (EIS curriculum) and the how (translating from theory to practice). The concluding chapter provides ideas and directions on where the world can proceed regarding sustainability education and how it can help in the teaching and learning of sustainability. Considering social issues such as poverty, education, health, culture and the use of natural resources, this book proposes a different path towards Education for Sustainability. Providing concrete data on the realisation of sustainable development, Issues in Teaching and Learning of Education for Sustainability will be of interest to geographers, geography educators and professionals concerned with Education for Sustainability.
This book makes available original case studies on how institutions developed in Singapore. Up until now, these case studies have been used exclusively in Singapore to teach public governance, and have been well-received in the Singapore Civil Service College's milestone programmes. With this publication, more will be able to access this material. Students, researchers and policy-makers can now use these case studies for pedagogy or to derive insights on Singapore's approach on governance. Designed around the theme of "building institutions", the case studies also present facets of how institutions developed which are universal to management studies. These case studies highlight a core aspect in the development of institutions, namely, how people and organisations change the culture of institutions, how leaders influence their organisations, and how policies define the systems that build institutions. The book contains 5 case studies, each profiling a unique sector and key institution in Singapore. They present how public agencies and leaders helped to build Singapore institutions over the last forty years. Although there are more cases studies on management and strategy than public policy and administration, there is growing interest in Asian case studies, and more specifically, case studies on Singapore public governance. This collection of case studies on Singapore institutions provides the perspective from Singaporean case writers themselves, on the role of government in Singapore's development.
In foreign language education, decisions must be taken on what languages to teach, who will teach them, in which schools (i.e. all, only urban, only rural), in which grades, the number of hours a week, and the cost involved. This book explores the answers to these questions across a number of Asian polities. It illustrates why some of the efforts undertaken are successful and why some are not, why – despite significant investments of time and resources – some students do not seem to acquire the languages being taught, and why some teachers responsible for instruction in the designated foreign languages have problems achieving fluency in the designated language or have other language teaching difficulties. It suggests some strategies various polities might attempt to achieve their stated language learning objectives. This book was originally published as a special issue of Current Issues in Language Planning.
This volume provides an in-depth, comparative examination of how primary mathematics education is influenced by national education reform, policy, local resources, and culture in three different countries. By drawing on first-hand observations and interviews, as well as analysis of policy documents and learning resources, the book considers the viability of transferring best
practices in primary mathematics education across global contexts. Three diverse countries – Ghana, the US, and Singapore – are explored. Similarities and differences are highlighted, and the influence of national and regional initiatives related to pedagogical strategies, teacher education, and cultural expectations are considered, to offer an insightful examination of how best practices might be shared across borders. This book will benefit researchers, academics, and postgraduate scholars with an interest in international and comparative education, mathematics, and educational policy. Those with a specialization in primary mathematics education, including pedagogy and teacher preparation, will also benefit from this book.

Brings teaching primary science to life, with dedicated chapters for chemistry, physics, biology and earth and environmental science.

The twelfth edition of the EFA Global Monitoring Report marking the 2015 deadline for the six goals set at the World Education Forum in Dakar, Senegal, in 2000 provides a considered and comprehensive accounting of global progress. As the international community prepares for a new development and education agenda, this report takes stock of past achievements and reflects on future challenges. There are many signs of notable advances. The pace towards universal primary education has quickened, gender disparity has been reduced in many countries and governments are increasing their focus on making sure children receive an education of good quality. However, despite these efforts, the world failed to meet its overall commitment to Education for All. Millions of children and adolescents are still out of school, and it is the poorest and most disadvantaged who bear the brunt of this failure to reach the EFA targets.

Education in the Global City examines education in Singapore through the critical lens of ‘manufacturing’. The book brings together two disparate fields which inform each other, education and the ‘global city’ and the book’s contributors analyse and critique the manufacturing of Singapore education and Singapore’s global city formation. The collection covers vocational education, language policies, Higher Education, English education, critical thinking, sex education, creativity, and critical feminist scholarship. Collectively, the book pries open the ideology of the manufacturing education system, and points out the tension between the nation and its ideologies, and the ‘global city’ aspirations. It also asks how education contributes to, and is shaped by, the market realities of Singapore’s global city ambitions – which are at odds with the nationalistic local agenda and priorities of nation-building. In interrupting and speaking against the prevailing (and narrow) manufacturing of education for a teleological end, in spite of Singapore’s successful nation-building, this book is an important contribution to critical education scholarship.

This book was originally published as a special issue of Discourse: Studies in the Cultural Politics of Education.

PISA 2012 Results: Creative Problem Solving (Volume V) Students' Skills in Tackling Real-Life Problems

Students' Skills in Tackling Real-Life Problems

OECD Publishing

What is the relationship between education and natural disasters? Can education play a role in ameliorating and mitigating them, preparing people in how to respond, and even helping to prevent them? If so, how? Drawing on research carried out in a number of different countries, including Australia, China, India, Japan, the UK and the USA, the contributors consider the role of education in relation to natural disasters. The case studies expand conceptual and empirical understandings of the understudied relationship between education and natural disasters and uncover the potential and the limitations of education for mitigating, responding to, and potentially preventing, natural disasters. The contributors also consider the extent to which so-called natural disasters, such as mudslides caused by deforestation and flooding areas built on known flood plains, are linked to human behaviour and how education can impact on these.

Humans, especially children, are naturally curious. Yet, people often balk at the thought of learning science—the “eyes glazed over” syndrome. Teachers may find teaching science a major challenge in an era when science ranges from the hardly imaginable quark to the distant, blazing quasar. Inquiry and the National Science Education Standards is the book that educators have been waiting for—a practical guide to teaching inquiry and teaching through inquiry, as recommended by the National Science Education Standards. This will be an important resource for educators who must help school boards, parents, and teachers understand “why we can’t teach the way we used to.” “Inquiry” refers to the diverse ways in which scientists study the natural world and in which students grasp science knowledge and the methods by which that knowledge is produced. This book explains and illustrates how inquiry helps students learn science content, master how to do science, and understand the nature of science. This book explores the dimensions of teaching and learning science as inquiry for K-12 students across a range of science topics. Detailed examples help clarify when teachers should use the inquiry-based approach and how much structure, guidance, and coaching they should provide. The book dispels myths that may have discouraged educators from the inquiry-based approach and illuminates the subtle interplay between concepts, processes, and science as it is experienced in the classroom. Inquiry and the National Science Education Standards shows how to bring the standards to life, with features such as classroom vignettes exploring different kinds of inquiries for elementary, middle, and high school and Frequently Asked Questions for teachers, responding to common concerns such as obtaining teaching supplies. Turning to assessment, the committee discusses why assessment is important, looks at existing schemes and formats, and addresses how to involve students in assessing their own learning achievements. In addition, this book discusses administrative assistance, communication with parents, appropriate teacher evaluation, and other avenues to promoting and supporting this new teaching paradigm.

This fifth volume of PISA 2012 results presents an assessment of student performance in problem solving, which measures students’ capacity to respond to non-routine situations in order to achieve their potential as constructive and reflective citizens.

Each volume in the 7-volume series The World of Science Education reviews research in a key region of the world. These regions include North America, South and Latin America, Asia, Australia and New Zealand, Europe and Israel, Arab States, and Sub-Saharan Africa. The focus of this Handbook is on science education in Asia and the scholarship that most closely supports this program. The purpose of this book is to educate the public and alert educational authorities about the alarming international trends in math and science education and to promote STEM education in America so that American students can compete and lead other nations in math and science-the backbone of economic prosperity. We believe that this book will benefit every student, parent, teacher, school, other educational institutions, and the government. It describes the role and responsibilities of students, parents, schools, nonprofit organizations, and government to generate interest and motivate students toward STEM education. This book includes comparison of education system between Japan, Germany, and America, including detailed information of education system of preschools, elementary, middle and high schools, colleges, and universities in America. It also discusses the effect of economic gap and the efforts made by the government to provide equal educational opportunities for all students to reduce disparities. The author believes that the American education system is competitive with other developed nations but needs some adjustments to meet current needs. The STEM education and its implementation is the guru of future technologies.

As teachers we often tend to expect other countries to teach chemistry in much the same way as we do, but educational systems differ widely. At Bielefeld University we started a project to analyse the
approach to chemical education in different countries from all over the world: Teaching Chemistry around the World. 25 countries have participated in the project. The resulting country studies are presented in this book. This book may be seen as a contribution to make the structure of chemistry teaching in numerous countries more transparent and to facilitate communication between these countries. Especially in the case of the school subject chemistry, which is very unpopular on the one hand and occupies an exceptional position on the other hand — due to its relevance to jobs and everyday life and most notably due to its importance for innovation capacity and problem solving – we have to learn from each others’ educational systems.

This book provides a one-stop resource for mathematics educators, policy makers and all who are interested in learning more about the why, what and how of mathematics education in Singapore. The content is organized according to three significant and closely interrelated components: the Singapore mathematics curriculum, mathematics teacher education and professional development, and learners in Singapore mathematics classrooms. Written by leading researchers with an intimate understanding of Singapore mathematics education, this up-to-date book reports the latest trends in Singapore mathematics classrooms, including mathematical modelling and problem solving in the real-world context.

"Moe's new book is not an argument for or against vouchers; it is an analysis of public opinion on vouchers that is likely to be very influential in shaping the movement's future. Moe has written a nuanced and thoughtful treatise that goes beneath the notoriously unreliable single-shot question favored by the media: Do you favor or oppose school vouchers?" —Richard D. Kahlenberg in The Nation "In a brilliant, definitive analysis of the subject, Terry Moe tells us who does—and does not—like vouchers as well as who says they will use them, if the opportunity arises. He illuminates not only the school choice debate but the nature of public opinion more generally," Paul E. Peterson, Harvard University "No book tells us more about how Americans evaluate schools.... This book will be the starting point for anyone interested in any school reform, not just vouchers. A model analysis of public opinion on a public policy."

Despite its small size, Trinidad and Tobago ranks highly on a number of economic development indicators. According to estimates by the IMF, per capita income in T&T was $21,310 in 2014, the third-highest in the Americas, after the US and Canada. Meanwhile, the World Bank categorises T&T as a high-income, non-OECD nation, while the World Economic Forum (WEF), in its reports on global competitiveness, sees T&T as an innovation-driven economy, like the US or the UK.

This comprehensive handbook is the ultimate reference work, providing authoritative and international overviews of all aspects of schools and schooling in Asia. Split into 19 sections it covers curriculum, learning and assessment, private supplementary tutoring, special education, gender issues, ethnic minority education and LGBTQI students in Asian schools. The volume displays the current state of the scholarship for schools and schooling in Asia including emerging, controversial and cutting-edge contributions using a thematic approach. The content offers a broad sweep of the region with a focus on theoretical, cultural and political issues as well as identifying educational issues and priorities, such as curriculum, assessment, teacher education, school leadership, etc., all of which impact students and learning in multiple ways. The Routledge International Handbook of Schools and Schooling in Asia brings together experts in each area to contribute their knowledge, providing a multidimensional and rich view of the issues confronting the region's school and education systems.

This book provides an overview of science education policies, research and practices in mainland China, with specific examples of the most recent developments in these areas. It presents an insiders' report on the status of Chinese science education written primarily by native speakers with first-hand experiences inside the country. In addition, the book features multiple sectional commentaries by experts in the field that further connect these stories to the existing science education literature outside of China. This book informs the international community about the current status of Chinese science education reforms. It helps readers understand one of the largest science education systems in the world, which includes, according to the Programme for International Student Assessment, the best-performing economy in the world in science, math and reading: Shanghai, China.

We offer a unique comparative study of secondary science education in the three countries: Singapore, China, and the USA. This book provides a one-stop resource for mathematics educators, policy makers and all who are interested in learning more about the why, what and how of mathematics education in Singapore. The content is organized according to three significant and closely interrelated components: the Singapore mathematics curriculum, mathematics teacher education and professional development, and learners in Singapore mathematics classrooms. Written by leading researchers with an intimate understanding of Singapore mathematics education, this up-to-date book reports the latest trends in Singapore mathematics classrooms, including mathematical modelling and problem solving in the real-world context.

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