

# **Springer Education Innovation Book Series**

## **Series Editors**

Wing On LEE

David Wei Loong HUNG

Laik Woon TEH

## **Executive Editor**

Dennis KWEK

# Aims and Scope – Springer Education Innovation Book Series

---

Education holds the key to unlock human resources that a society needs to survive and flourish. This is particularly salient in a borderless knowledge economy. For the past decades, the sterling performance of economies such as Hong Kong, Finland, Japan, Singapore and Taiwan in international studies (e.g. TIMSS, PIRLS and PISA) has channeled much attention away from the traditional centers of education research in America and Western Europe. Researchers, policy makers and practitioners all over the world wish to understand how education innovations propel the emerging systems from good to great to excellent, and how different their trajectories were compared to the systems in America and Western Europe.

The *Education Innovation Book Series*, published by Springer, will delve into education innovations enacted by the Singapore education system and situate them in both the local and the broader international contexts. Primary focus will be given to pedagogy and classroom practices; education policy formulation and implementation; school and instructional leadership; and the context and interface between education research, policy and practice. We believe that the latter is critical in making education innovations come to bear. Each volume will document insights and lessons learned based on empirical research (both quantitative and qualitative) and theoretical analyses. Implications to research, policy and professional practice will be surfaced through comparing and synthesizing Singapore's experience with those of successful systems around the world.

The audience of the edited volumes and monographs published in this series includes researchers, policy makers, practitioners and students in the fields of education and teacher education, and public policies related to learning and human resources.

## Series Editors

Wing On LEE

David Wei Loong HUNG

Laik Woon TEH

*Office of Education Research*

*National Institute of Education*

*Nanyang Technological University*

*Singapore*

## Executive Editor

Dennis KWEK

*Office of Education Research*

*National Institute of Education*

*Nanyang Technological University*

*Singapore*

More information about this series at <http://www.springer.com/series/10092>

Tzu-Bin Lin • Victor Chen • Ching Sing Chai  
Editors

# New Media and Learning in the 21st Century

A Socio-Cultural Perspective

 Springer

*Editors*

Tzu-Bin Lin  
Department of Education  
National Taiwan Normal University  
Taiwan

Victor Chen  
National Institute of Education  
Nanyang Technological University  
Singapore

Ching Sing Chai  
National Institute of Education  
Nanyang Technological University  
Singapore

ISSN 2211-4874                      ISSN 2211-4882 (electronic)  
Springer Education Innovation Book Series  
ISBN 978-981-287-325-5              ISBN 978-981-287-326-2 (eBook)  
DOI 10.1007/978-981-287-326-2

Library of Congress Control Number: 2015930255

Springer Singapore Heidelberg New York Dordrecht London

© Springer Science+Business Media Singapore 2015

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made.

Printed on acid-free paper

Springer Science+Business Media Singapore Pte Ltd. is part of Springer Science+Business Media ([www.springer.com](http://www.springer.com))

## Series Editors' Foreword

We are pleased to present *New Media and Learning in the 21st Century* co-edited by Tzu-Bin Lin, Ching Sing Chai and Victor Chen, as the seventh volume of the Springer Series on Education Innovation. In this volume, the editors and authors investigate issues related to how new media can be integrated into learning and how it may have a bearing on our classroom practice. We use the term “integration” carefully because the traditional view of technology is in how it is integrated into the curriculum. However, this volume questions this assumption of a prescribed and existing curriculum. Perhaps new media radically requires a different curriculum – one which overhauls traditional conceptions of schooling to one that is expansive to the authentic real-world contexts, seamlessly integrating formal and informal learning.

Existing education has been institutionalized as a core that is very much in-grained in current schooling practices. On the other hand, our new generation of students has become digital natives and has been engaged in activities in the new media space beyond our imagination. However, we cannot also assume that the power of enculturation into conventional schools and society has waned much. Perhaps there is a role for both conventional and new media, and a hybridization might occur over time and space. We see aspects of this in incremental reform efforts. Such examples include Edmodo (a Facebook like interface as a learning management system) and the Flipped Classroom with the view of acknowledging the learning orientations of digital natives.

This book deals with issues in the intersection of new media and education. It confronts this issue not with a fashionable perspective in the support of new media outlooks and the digital native, but delves into the tensions – the pushes and the pulls – the old and the new. We are proud to introduce this volume which begins the conversation on this new media literacy and the theorization of education and learning.

National Institute of Education  
Nanyang Technological University  
Nanyang, Singapore

Wing On Lee  
David Wei Loong Hung  
Laik Woon Teh



# Preface

Editing this volume represents our common interest in the field of new media and learning. We would like to thank all the contributors for having worked together patiently with us on getting this meaningful volume published. Also, we appreciate the hard work on editing and publishing offered by Lawrence Liu in Springer and staff in the Office of Education Research in the National Institute of Education. We believe that this volume can provide a broad understanding in the entangled relation between new media and learning. In the process of editing this volume, we increased our understanding of this field. It is a fruitful journey to all of us. We expect the readers of this volume to enjoy reading it. The horizon of academic works in this field keeps expanding and this volume may trigger more dialogues and research.

Taiwan  
Singapore  
Singapore

Tzu-Bin Lin  
Victor Chen  
Ching Sing Chai





# Contents

<b>1</b>	<b>Emerging Practices and Issues of New Media and Learning</b> .....	<b>1</b>
	Tzu-Bin Lin, Victor Chen, and Ching Sing Chai	
<b>2</b>	<b>Do We Really Need Media Education 2.0? Teaching Media in the Age of Participatory Culture</b> .....	<b>9</b>
	David Buckingham	
<b>3</b>	<b>Learning, Becoming, Embodying: A Review of Embodiment in an Era of Learning with Contemporary Media</b> ...	<b>23</b>
	Azilawati Jamaludin	
<b>4</b>	<b>Games-to-Teach or Games-to-Learn: Addressing the Learning Needs of Twenty-First Century Education Through Performance</b> .....	<b>37</b>
	Yam San Chee	
<b>5</b>	<b>Issues and Challenges of Enacting Game-Based Learning in Schools</b> .....	<b>67</b>
	Mingfong Jan, Ek Ming Tan, and Victor Chen	
<b>6</b>	<b>The Digital Textbook in South Korea: Opportunities and Challenges</b> .....	<b>77</b>
	Hyeonseon Jeong and Amie Kim	
<b>7</b>	<b>The Construction of Media in Education Policies: A Comparative Study of Singapore and Taiwan</b> .....	<b>93</b>
	Tzu-Bin Lin and William Choy	
<b>8</b>	<b>Forecast the Scarcity of Game Generation: Digital Game Literacy</b> ..	<b>109</b>
	Tsung-Yen Chuang and Chia-Min Tsai	
<b>9</b>	<b>Effects of Digital Gaming Among Children and Adolescents in Singapore: A Summary of Research Findings</b> ....	<b>129</b>
	Angeline Khoo, Vivian Hsueh-Hua Chen, and Choo Hyekyung	

<b>10</b>	<b>Is It Still <i>King Lear</i>? English Teachers and the E-reader Phenomenon</b> .....	145
	Andy Goodwyn	
<b>11</b>	<b>Towards a Web 2.0 TPACK Lesson Design Framework: Applications of a Web 2.0 TPACK Survey of Singapore Preservice Teachers</b> .....	161
	Joyce Hwee Ling Koh and Ching Sing Chai	
<b>12</b>	<b>Learning by Doing in the Digital Media Age</b> .....	181
	Lynde Tan and Beaumie Kim	
<b>13</b>	<b>Singapore Youth’s Digital Culture of Informal Learning</b> .....	199
	Rose Yee Hing Liang and Li-Yi Wang	
	<b>Index</b> .....	213

# Contributors

**David Buckingham** Department of Social Sciences, Loughborough University, Loughborough, UK

**Ching Sing Chai** National Institute of Education, Nanyang Technological University, Singapore

**Yam San Chee** National Institute of Education, Nanyang Technological University, Singapore

**Victor Chen** National Institute of Education, Nanyang Technological University, Singapore

**Vivian Hsueh-Hua Chen** Nanyang Technological University, Singapore

**William Choy** National Institute of Education, Nanyang Technological University, Singapore

**Tsung-Yen Chuang** Department of Information and Learning Technology, National University of Tainan, Tainan, Taiwan

**Andy Goodwyn** Institute of Education, University of Reading, Reading, UK

**Choo Hyekyung** Department of Social Work, National University of Singapore, Singapore

**Azilawati Jamaludin** National Institute of Education, Nanyang Technological University, Singapore

**Mingfong Jan** Graduate Institute of Learning and Instruction, National Central University, Taoyuan City, Taiwan

**Hyeonseon Jeong** Department of Korean Education, Gyeongin National University of Education, Anyang, South Korea

**Angeline Khoo** National Institute of Education, Nanyang Technological University, Singapore

**Amie Kim** BK21Plus Institute of Future Education Design, Seoul National University, Seoul, South Korea

**Beaumie Kim** Werklund School of Education, University of Calgary, Calgary, AB, Canada

**Joyce Hwee Ling Koh** Learning Sciences and Technologies Academic Group, National Institute of Education, Nanyang Technological University, Singapore

**Rose Yee Hing Liang** Department of Sociology, Faculty of Arts & Social Science, National University of Singapore, Singapore

**Tzu-Bin Lin** Department of Education, National Taiwan Normal University, Taiwan

**Li-Yi Wang** National Institute of Education, Nanyang Technological University, Singapore

**Ek Ming Tan** English Language Institute of Singapore, Singapore

**Lynde Tan** School of Education, University of Western Sydney, Australia

**Chia-Min Tsai** Department of Information and Learning Technology, National University of Tainan, Tainan, Taiwan