

CONTENTS

<i>Preface</i>	xi
<i>The genesis of this book</i>	xiv
<i>Acknowledgements</i>	xvi
<i>Foreword</i>	xvii
1 The critical need for creative Technologies education	1
Matt Bower, Garry Falloon, Jihyun Lee, and Tianchong Wang	
2 Philosophy, theory, and pedagogy of Technologies education	12
Thembi Mason, Lincoln Gill, Belinda von Mengersen, Leanne Cameron, Jon Mason, and Jubilee Smith	
3 Creativity and creative thinking	29
Bronwyn Tregenza, Jodie Torrington, Shaun Nykvist, and Sarah Prestridge	
4 Systems thinking, design thinking, computational thinking, and critical thinking	44
Christopher N. Blundell, Leanne Cameron, Michelle Mukherjee, Dung Tran, Ben Zunica, and Bronwyn Tregenza	
5 Students as creative designers with technology	59
Kim Rowston, Peter Murphy, and Belinda von Mengersen	
6 Students as multimodal designers and authors	76
Garry Falloon, Rachael Adlington, Len Unsworth, Jose Hanham, and Karen Woo	
7 Students as designers with Augmented Reality	93
Stefan Schutt, Walter Barbieri, Antoni Cantone, Damian Maher, and Amber McLeod	

8 Students as designers with Virtual Reality	107
Jason Zagami, Zi Siang See, Paul Unsworth, Damian Maher, Jo Blannin, and Nana Osei Bonsu	
9 Students as designers of digital games	122
Damian Maher, David A. Martin, Natalie McMaster, Stefan Schutt, and Ben Zunica	
10 Students as designers with robotics and control systems	138
Katie Waters, David A. Martin, Natalie McMaster, Ben Zunica, Bronwyn Tregenza, and Martin Levins	
11 Students as designers with 3D design and fabrication technologies	157
Carol Puddicombe, Rob Rouse, Marco Tolomei, and David Ellis	
12 Students as makers using technologies	172
David Ellis, Rob Rouse, Kim Rowston, Carol Puddicombe, Belinda von Mengersen, and Martin Levins	
13 Students as digital designers in Engineering	190
Matthew Daniel Christie, Belinda von Mengersen, Martin Levins, and Carol Puddicombe	
14 Inclusive Technologies education	208
Shaun Nykvist, Damian Maher, Natalie McMaster, and Martin Levins	
15 Assessment in creative Technologies education	223
Emily Ashcroft, Lincoln Gill, and Coral Campbell	
16 Creative Technologies education - lessons learnt and future directions	239
Matt Bower, Garry Falloon, Peter Murphy, Jon Mason, Thembi Mason, Kim Rowston, Leanne Cameron, Jihyun Lee, and Tianchong Wang	
<i>Index</i>	253