Contents

Part I  Practice
1  Introduction to the Flipped Classroom .......................... 3
   Carl Reidsema, Roger Hadgraft and Lydia Kavanagh
2  Design Considerations ................................................. 15
   Lydia Kavanagh, Carl Reidsema, Julie McCredden and Neville Smith
3  Technology in the Flipped Classroom .............................. 37
   Dominic McGrath, Anthea Groessler, Esther Fink, Carl Reidsema
   and Lydia Kavanagh
4  Assessing Flipped Classrooms ....................................... 57
   Renee M. Clark and Mary Besterfield-Sacre
5  Reflective and Reflexive Practices in the Flipped Classroom .. 75
   Geoff Greenfield and Paul Hibbert
6  Case Study Framework .................................................. 87
   Lydia Kavanagh, Roger Hadgraft, Carl Reidsema, Neville Smith
   and Dominic McGrath

Part II  Practices
7  Designing an Active Learning Environment Architecture Within
   a Flipped Classroom for Developing First Year Student Engineers . . 97
   Julie McCredden, Carl Reidsema and Lydia Kavanagh
8  Experiences with “Flipping” an Introductory Mechanical
   Design Course ......................................................... 131
   Renee M. Clark, William W. Clark and Mary Besterfield-Sacre
9  Inclusive STEM: Closing the Learning Loop ....................... 151
   Patricia McLaughlin, Cindy O’Malley and Pauline Porcaro
10 Flipping on a Shoestring: A Case Study of Engineering Mechanics at the University of Technology Sydney .......................... 163
Anne Gardner

11 Design, Deployment and Evaluation of a Flipped Learning First-Year Engineering Course .................................................. 177
Abelardo Pardo and Negin Mirriahi

12 Flipped Classes: Drivers for Change, Transition and Implementation ................................................................. 193
Yasir M. Al-Abdeli

13 A Technology-Enabled Flipped Classroom Model .......................... 211
Paul Gagnon, Redante Mendoza and Jan Carlstedt-Duke

14 Flipping a Postgraduate Classroom: Experience from Griffith University ................................................................. 229
Kriengsak Panuwatwanich

15 Flipping the Learning of Subdivision Design for Surveying Students ................................................................. 245
David Mitchell

16 Flipping a Collaborative Classroom to Gain Deeper Understanding of the Health System ............................................. 257
Allyson Mutch, Charlotte Young, Neville Smith, Kate van Dooren, Cassandra Ranatunga, Cathie Gillan, Katie Brooker, Greg Fowler and Lisa Fitzgerald

17 Implications for Pedagogy: Flipping the Classroom to Engage Pre-service Teachers .................................................. 273
Linda-Dianne Willis

18 Flipped Tutorials in Business Courses .................................................. 289
April Wright, Geoff Greenfield and Paul Hibbert
The Flipped Classroom
Practice and Practices in Higher Education
Reidsema, C.; Kavanagh, L.; Hadgraft, R.; Smith, N. (Eds.)
2017, XXI, 307 p. 52 illus., Hardcover
ISBN: 978-981-10-3411-4