Contents

Part I  Project Method and Overview

1  The ATC21S Method ................................................................. 3
   Patrick Griffin and Esther Care

Part II  Conceptual Framework for Internet Based Collaborative Assessment Tasks

2  A Framework for Teachable Collaborative Problem Solving Skills ......................................................... 37
   Friedrich Hesse, Esther Care, Juergen Buder, Kai Sassenberg, and Patrick Griffin

3  Assessment of Learning in Digital Networks ........................................ 57
   Mark Wilson and Kathleen Scalise

Part III  Delivery of Collaborative Tasks, Their Scoring, Calibration and Interpretation

4  Collaborative Problem Solving Tasks ........................................ 85
   Esther Care, Patrick Griffin, Claire Scoular, Nafisa Awwal, and Nathan Zoanetti

5  Platforms for Delivery of Collaborative Tasks ................................. 105
   Nafisa Awwal, Patrick Griffin, and Sam Scalise

6  Automatic Coding Procedures for Collaborative Problem Solving ......................................................... 115
   Raymond Adams, Alvin Vista, Claire Scoular, Nafisa Awwal, Patrick Griffin, and Esther Care

7  Task Characteristics and Calibration ............................................ 133
   Patrick Griffin, Esther Care, and Susan-Marie Harding
Part IV  Participating Countries in the Field Work

8  Australia in the Context of the ATC21S Project ........................................... 183
    Esther Care, Claire Scoular, and Myvan Bui

9  Student and Teacher Responses to Collaborative Problem Solving and Learning Through Digital Networks in Singapore ................................................................. 199
    Chew Leng Poon, Sean Tan, Horn Mun Cheah,
    Pik Yen Lim, and Hui Leng Ng

10 Introducing Assessment Tools for 21st Century Skills in Finland ...... 213
    Arto K. Ahonen and Marja Kankaanranta

11 Case Study on the Implementation of ATC21S in the United States ................................................................. 227
    Kathleen Comfort

12 The Adaptation and Contextualization of ATC21S™ by Costa Rica ............................................................. 245
    María Eugenia Bujanda and Elsie Campos

13 ATC21S Trials of Collaborative Problem Solving Tasks in the Netherlands ....................................................... 257
    Diederik Schönau

Part V  Implementation at Classroom and System Levels

14 Linking Developmental Progressions to Teaching ......................... 267
    Kerry Woods, Roz Mountain, and Patrick Griffin

15 Policy Pathways for Twenty-First Century Skills ........................... 293
    Frank Adamson and Linda Darling-Hammond