Marold Wosnitza · Francisco Peixoto
Susan Beltman · Caroline F. Mansfield
*Editors*

# Resilience in Education

## Concepts, Contexts and Connections

Springer

# Resilience in Education

Marold Wosnitza • Francisco Peixoto
Susan Beltman • Caroline F. Mansfield
Editors

# Resilience in Education

## Concepts, Contexts and Connections

Springer

*Editors*
Marold Wosnitza
Institute of Education
RWTH Aachen University
Aachen, Germany

School of Education
Murdoch University
Perth, WA, Australia

Susan Beltman
School of Education
Curtin University
Perth, WA, Australia

Francisco Peixoto
ISPA-Instituto Universitário/CIE – ISPA
Lisbon, Portugal

Caroline F. Mansfield
School of Education
Murdoch University
Perth, WA, Australia

ISBN 978-3-319-76689-8 ISBN 978-3-319-76690-4 (eBook)
https://doi.org/10.1007/978-3-319-76690-4

Library of Congress Control Number: 2018939552



This Springer imprint is published by the registered company Springer International Publishing AG part of Springer Nature.
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

# Contents

**Part I Introduction**

**1 Resilience in Education: An Introduction** . . . . . 3
Susan Beltman and Caroline F. Mansfield

**Part II Conceptualising Resilience**

**2 (Re)conceptualising Teacher Resilience: A Social-Ecological Approach to Understanding Teachers' Professional Worlds** . . . . . 13
Qing Gu

**3 How Does Apprentice Resilience Work?** . . . . . 35
Jennifer Schwarze and Marold Wosnitza

**4 Great Southern Lands: Making Space for Teacher Resilience in South Africa and Australia** . . . . . 53
Caroline F. Mansfield, Liesel Ebersöhn, Susan Beltman, and Tilda Loots

**5 A Multidimensional View on Pre-service Teacher Resilience in Germany, Ireland, Malta and Portugal** . . . . . 73
Francisco Peixoto, Marold Wosnitza, Joana Pipa, Mark Morgan, and Carmel Cefai

**Part III Researching Resilience in Educational Contexts**

**6 The Interplay Between the Motivation to Teach and Resilience of Student Teachers and Trainee Teachers** . . . . . 93
Lucas Lohbeck

**7 Exploring Canadian Early Career Teachers' Resilience from an Evolutionary Perspective** . . . . . 107
Mylène Leroux

**8 Early Career Teachers in Rural Schools: Plotlines of Resilience** . . . . . 131
Leanne Crosswell, Jill Willis, Chad Morrison, Andrew Gibson, and Mary Ryan

**9 Teachers' Narratives of Resilience: Responding Effectively to Challenging Behaviour** . . . . . 147
Katya Galea

**10 Teacher Resilience in Adverse Contexts: Issues of Professionalism and Professional Identity** . . . . . 167
Maria Assunção Flores

**11 An Exploratory Interview Study of University Teacher Resilience** . . . . . 185
Kerstin Helker, Caroline F. Mansfield, Marold Wosnitza, and Hendrieke Stiller

**12 Teacher Championship of Resilience: Lessons from the Pathways to Resilience Study, South Africa** . . . . . 203
Linda C. Theron

**Part IV Connecting to Practice**

**13 Finding a Place for Resilience in Teacher Preparation** . . . . . 221
Gavin Hazel

**14 Using Online Modules to Build Capacity for Teacher Resilience** . . . . 237
Susan Beltman, Caroline F. Mansfield, Marold Wosnitza, Noelene Weatherby-Fell, and Tania Broadley

**15 Enhancing Teacher Resilience Through Face-to-Face Training: Insights from the ENTREE Project** . . . . . 255
José Castro Silva, Joana Pipa, Cynthia Renner, Margaret O'Donnell, and Carmel Cefai

**16 Enhancing Teacher Resilience: From Self-Reflection to Professional Development** . . . . . 275
Marold Wosnitza, Ralph Delzepich, Jennifer Schwarze, Margaret O'Donnell, Vera Faust, and Vanessa Camilleri

**17 Making It Real and Making It Last! Sustainability of Teacher Implementation of a Whole-School Resilience Programme** . . . . . 289
Toni Noble and Helen McGrath

**18 Promoting Resilience: A European Curriculum for Students, Teachers and Families** . . . . . 313
Valeria Cavioni, Maria Assunta Zanetti, Giusy Beddia, and Mara Lupica Spagnolo

**Part V Conclusion**

**19 Resilience in Education: Emerging Trends in Recent Research** . . . . . 335
Marold Wosnitza and Francisco Peixoto

**Correction to: Resilience in Education** . . . . . C1

# About the Authors

**Giusy Beddia (University of Pavia, Italy)**
Giusy Beddia is a licensed psychologist and ABA (applied behavioural analysis) therapist. She is an expert in learning disabilities. She has been involved in a number of educational projects related to resilience and school readiness at national and international level working with the Department of Brain and Behavioural Science at the University of Pavia (Italy). Presently, she is working in a private health care center that provides psychological treatments for children and young adults with autism.

**Susan Beltman (Curtin University, Australia)**
Susan Beltman is an Associate Professor in the School of Education at Curtin University in Western Australia. Her current research interests involve using qualitative methods (including drawings) to examine mentoring, as well as teacher resilience and identity. She was a team member for an ALTC-funded project Keeping Cool: Embedding Resiliency in the Initial Teacher Education Curriculum, and a project team member for two other resilience projects: a European Union Lifelong Learning Programme project called ENTREE (ENhancing Teacher REsilience in Europe), and an OLT project BRiTE (Building Resilience in Teacher Education). Susan is President of WAIER (Western Australian Institute for Educational Research).

**Cynthia Renner (Breuer) (RWTH Aachen University, Germany)**
After having studied in the teacher training programme at RWTH Aachen University, Cynthia Renner now is a teacher trainee for English Biology and bilingual education. She has written her Diploma thesis on the topic of teacher resilience and was developing materials for the European Union Lifelong Learning Programme project called ENTREE (ENhancing Teacher REsilience in Europe). During her studies, she has specialised herself on promoting orality of students during foreign language courses taking part in the Speak Up! project (a cooperation between RWTH Aachen University and local schools).

**Tania Broadley (Queensland University of Technology, Australia)**
Tania Broadley is an Assistant Dean (Teaching and Learning) and a Professor in the Faculty of Education at Queensland University of Technology. She is Adjunct Associate Professor at Curtin University. Tania provides strategic leadership and is responsible for the quality of design and implementation of initial teacher education, undergraduate and postgraduate courses. Tania previously worked for the Deputy Vice Chancellor (Academic) at Curtin to establish an Institute of academic development and enhance student learning through innovative teaching and technology. Tania continues to conduct research into Teacher Education, which follows on from her background as Lecturer in Educational Technology. Tania is project team member on the Office for Learning and Teaching project BRITE (Building Resilience in Teacher Education).

**Vanessa Camilleri (University of Malta, Malta)**
Dr Vanessa Camilleri is an academic at the Department of Artificial Intelligence, Faculty of ICT, University of Malta. Her expertise is in the area of Human Computer Interactions, with a specialisation in Virtual Worlds and Serious Games. Her areas of interest include Virtual Reality applications for developing emotional intelligence values. Her previous experience in the area of education and pedagogy, as well as educational technologies and use of games for learning, has contributed to her overall academic profile. Her main publications are in the areas of online learning and the use of innovative and emerging technologies for learning. More recently, she has started working on developing virtual reality experiences for teaching and learning purposes related to various aspects of emotional intelligence. Vanessa was team member in the European Union Lifelong Learning Programme project called ENTREE (ENhancing Teacher REsilience in Europe).

**José Castro Silva (ISPA-Instituto Universitário/CIE – ISPA, Portugal)**
José Castro Silva, PhD in Educational Sciences, specialisation in Organisational Leadership is an Assistant Professor at ISPA-Instituto Universitário. He lectures in Educational Psychology, Educational Sciences, and Learning and Motivation, and also has experience with teacher training programmes focused on special education needs and teacher professional development. His current research interests include teacher professional development and well-being, school organisational climate, culture, and health, and information and communication technology in education. He is a team member of the Centre for Educational Research – CIE-ISPA, and project team member of European-funded projects – ENTREE (ENhancing Teacher REsilience in Europe), ERAMUS+ HOPE's (Happiness, Optimism, and Ethos in Schools), and ERAMUS+ SUnStAR (Supporting UNiversity STudents At Risk of dropping out).

**Valeria Cavioni (University of Milano-Bicocca, Milan, Italy)**
Valeria Cavioni (PhD) is a licensed psychologist, psychotherapist, and postdoctoral researcher at the Department of Human Sciences for Education at the University of Milano-Bicocca, Milan, Italy. Her main areas of research include the implementation and assessment of school-based mental health and school readiness

programmes. She has been involved in various national and international projects at the University of Pavia, the National Institute for the Educational Evaluation of Instruction and Training (INVALSI), the Institute for Research and Innovation for the Italian Schools (INDIRE), the Centre for Resilience and Socio-Emotional Health (University of Malta), and local Mental Health Services. She has published numerous papers and books, including the co-author of *Social and Emotional Education in Primary School: Integrating Theory and Research into Practice*.

**Carmel Cefai (University of Malta, Malta)**
Professor Carmel Cefai, Phd (Lond), FBPS, is the Director of the Centre for Resilience and Socio-Emotional Health at the University of Malta. He is Joint Honourary Chair of the European Network for Social and Emotional Competence and joint founding editor of the *International Journal of Emotional Education*. His research interests are focused on how to create healthy spaces which promote the resilience, well-being, and psychological well-being of children and young people, particularly those at risk. He has led various research projects in mental health in schools, risk and resilience in children and young people, children's well-being, and the development of a resilience curriculum for early years and primary schools in Europe (*RESCUR Surfing the Waves: A Resilience Curriculum for Early Years and Primary Schools* published in 7 languages).

**Leanne Crosswell (Queensland University of Technology, Australia)**
Leanne Crosswell (Dr) is a Senior Lecturer in Education at QUT. Her research interests span early career teachers (with a focus on transition to teaching, resilience, and well-being), career change teachers, and mentoring as a dialogic practice. She particularly enjoys working with school communities to develop mentoring programmes, practices, and tools for feedback and evaluation.

**Ralph Delzepich (RWTH Aachen University, Germany)**
Ralph Delzepich is a Research Associate at the Institute for Education at RWTH Aachen University, Germany. His current research interests include online (self) assessment, online learning, and resilience. Ralph worked on several European Union projects in these areas, including the Lifelong Learning Programme project called ENTREE (ENhancing Teacher REsilience in Europe) and the Erasmus+ project PrevDrop (Detecting and Preventing Drop out from Higher Education or Supporting Students to Switch successfully to VET) and currently working on the development of self-reflection and learning tools for students in national and international contexts.

**Liesel Ebersöhn (University of Pretoria, South Africa)**
Liesel Ebersöhn is Director of the Centre for the Study of Resilience and Full Professor in the Department of Educational Psychology, Faculty of Education, University of Pretoria. Liesel is known for educational psychology studies on resilience in schools in challenged settings – specifically for an indigenous psychology theory, relationship-resourced resilience, that describes flocking as a collectivist pathway to counter chronic risk. She is Secretary General of the World Education Research Association, is invited often to read keynote papers (i.e., Plenary at the

2016 Global Development Network Conference, Lima, Peru), has been visiting professor (Yale University, Edith Cowan University), and has received research awards (including the Women in Science Awardee, 2012, Department of Science and Technology).

**Vera Faust (RWTH Aachen University, Germany)**
Vera Faust currently is a Research Fellow at the Center for Teacher Education at RWTH Aachen University, Germany, after having worked at the RWTH Institute for Education. Her research interests include social movements, resilience, and gender. Vera was on the coordination team for the European Union Lifelong Learning Programme project ENTREE (ENhancing Teacher REsilience in Europe). She is also editorial staff of the socioscientific journal *Forschungsjournal Soziale Bewegungen* on participation, protest, and democracy.

**Maria Assunção Flores (University of Minho, Portugal)**
Maria Assunção Flores is an Associate Professor with qualification at the University of Minho, Portugal. She received her PhD at the University of Nottingham, UK. She was visiting scholar at the University of Cambridge, UK, in 2008/2009 and at the University of Glasgow in 2016/2017. Her research interests include teacher professionalism and identity, teacher education and professional development, teacher appraisal, and higher education. She has published extensively on these topics both nationally and internationally. She was the Chair of the Board of Directors of the International Council on Education for Teaching (ICET) between 2011 and 2015, and she is currently the Chair of the International Study Association on Teachers and Teaching (ISATT). She is also executive director of the journal *Teachers and Teaching: Theory and Practice* and co-editor of the *European Journal of Teacher Education*.

**Katya Galea (University of Malta, Malta)**
Katya Galea is a registered Educational Psychologist with a Master's degree in Educational Psychology obtained in 2014 from the University of Malta. She currently works as a practitioner within the Secretariat for Catholic Education carrying out psycho-educational assessments, interventions, and consultations. She also runs her own private practice in Malta. Ms Galea collaborated with the Centre for Resilience and Socio-Emotional Health at the University of Malta on the Lifelong Learning Programme Comenius Project RESCUR- Developing a Resilience Curriculum for Primary Schools in Europe. Through the project, she was a team member in training schools to deliver the RESCUR Surfing the Waves Curriculum. Ms Galea has experience in assisting schools who need support with developing their resilience as a school community and has given training and continuous professional development sessions to school staff on school and teacher resilience, particularly in relation to challenging behaviour.

**Andrew Gibson (Sydney University of Technology, Australia)**
Andrew Gibson (Dr) is a Research Fellow in Writing Analytics at the Connected Intelligence Centre, University of Technology Sydney (UTS). His primary research focus is on Reflective Writing Analytics (RWA) for psychosocial meaning.

Originally a secondary school music teacher, he now works across both educational and computational domains, combining an understanding of pedagogy with software development experience to design and develop software that supports teaching and learning with text.

**Qing Gu (University of Nottingham, United Kingdom)**
Qing Gu (Dr) is a Professor of Education in the School of Education of the University of Nottingham. She is Chair of the British Association for International and Comparative Education. Her research interests include teacher development, school leadership, and school improvement. She has led a range of international and national government and research council funded projects. She is currently leading three UK Education Endowment Foundation funded projects on promoting and embedding evidence-based practices in schools in England. She has published internationally and nationally. Some of these books have been translated in Chinese, Japanese, and Spanish. She is editor of *The Work and Lives of Teachers in China* (Routledge, 2014), and co-editor of *The Routledge International Handbook of Education and Development* (2015) and *Handbook of Education in China* (Edward Elgar Books, 2017).

**Gavin Hazel (Everymind and University of Newcastle, Australia)**
Gavin Hazel's work focuses on the development, implementation, and evaluation of evidence-informed resources, practices, and professional education. Gavin is an experienced education and capability development professional, specialising in the area of child and youth mental health, well-being, and resilience. Gavin has worked as a lecturer in teacher education, a research academic, a senior research scientist, and a mental health projects manager. He holds a conjoint appointment with the School of Medicine and Public Health at the University of Newcastle. Gavin leads a multidisciplinary team who work on building the capacity of professionals through practical programmes, resources, and polices to support children and families.

**Kerstin Helker (RWTH Aachen University, Germany)**
Kerstin Helker (Dr) currently is a Postdoctoral Research Fellow and Lecturer at the Institute of Education at RWTH Aachen University, Germany. After completing her dissertation on the interplay of students', parents', and teachers' judgments of responsibility in the school context and how these are related to student motivation and school outcomes, Kerstin worked as interim professor for didactics and school theory at the University of Bonn, Germany. Her research interests lie in the field of motivation and emotion, focusing on university teachers and peer mentors as well as schools. One project across different German universities and schools focuses on how deschooling programmes affect students' motivation, responsibility, and resilience.

**Mylène Leroux (Université du Québec en Outaouais, Canada)**
Mylène Leroux is a Professor in the Département des sciences de l'éducation at Université du Québec en Outaouais in Canada. She is also an Associate Researcher at the Centre de recherche interuniversitaire sur la formation et la profession enseignante (CRIFPE). Her current research interests include teacher resilience,

well-being and reflection, teacher induction, professional development, practical training, as well as differentiated instruction and classroom observation.

**Lucas Lohbeck (RWTH Aachen University, Germany)**
Lucas Lohbeck (Dr) is a Senior Lecturer and Researcher at the Institute of Education at RWTH Aachen University, Germany. Furthermore, he works as a teacher at a vocational school where he is responsible for organising the practical training of the trainee teachers. His current research interest includes the development of the teacher education system as well as stress and strain of teachers and teacher resilience.

**Tilda Loots (University of Pretoria, South Africa)**
Tilda Loots is a part-time lecturer in the Department of Educational Psychology, University of Pretoria, and recently completed her postdoctoral research fellowship. Her current research focuses on asset-based psychosocial support, school-community partnerships, and resilience in dealing with stressors. Tilda is also a registered educational psychologist in private practice, utilising an eclectic approach to therapeutic intervention.

**Caroline F. Mansfield (Murdoch University, Australia)**
Dr Caroline Mansfield is an Associate Professor in Education and Associate Dean of Research in the School of Education, Murdoch University, Western Australia. Her research focuses on teachers and students, with an emphasis on motivation, well-being, and resilience. Caroline has led two large projects about teacher resilience – Keeping Cool: Embedding resilience in initial teacher education curriculum, and BRiTE: Building Resilience in Teacher Education. In 2016, she was awarded a National Teaching Fellowship (Staying BRiTE: Promoting resilience in higher education) to lead a team of colleagues across Australia to embed resilience in teacher education programmes and build a national and international network of interested researchers and practitioners.

**Helen McGrath (RMIT University & Deakin University, Australia)**
Helen McGrath, PhD, is a leading psychologist and university educator with expertise in mental health, social skills, relationships, student resilience, positive psychology/education, and effective teaching and learning. She is an Adjunct Professor in both the School of Education at RMIT University and the School of Education at Deakin University. She has been a Psychologist in part-time private practice for many years. She has received the Vice Chancellor's Award for Excellence in Community Service for her contributions to Deakin's partnership with governments, the media, the teaching profession, and the wider community. She has been a member of the National Centre Against Bullying (NCAB) since its inception.

**Mark Morgan (Dublin City University, Ireland)**
Mark Morgan has just finished a three-year term as co-director of Growing up in Ireland (the National Longitudinal Study of Children) at the Children's Research Centre, Trinity College. Previously he was Cregan Professor of Education and Psychology at St. Patrick's College and Head of the Education Department. Having

qualified as a teacher in St. Patrick's college, he was a teaching Principal following which he was a lecturer in the college. He is the author of over 80 scholarly publications amongst which are a number that focus on teachers' motivation, stress, and resilience. In 2010, he was awarded the President's Prize for research by Dublin City University.

**Chad Morrison (Tabor University, Australia)**
Chad Morrison (Dr) is the Academic Director of Professional Experience in the Faculty of Education. His research interests include the preparation of pre-service teachers (with a specific interest in Professional Experience programmes) and early career teachers and teaching. These research fields incorporate a range of interrelated topics including the development, well-being, and identity work of teachers; their teaching contexts; and the structural, cultural, and political factors that shape this work and the outcomes associated with it.

**Toni Noble PhD (Australian Catholic University, Australia)**
Toni Noble is an Adjunct Professor in the Institute for Positive Psychology at Australian Catholic University. Her areas of expertise and research include student resilience and well-being, social and emotional learning, student engagement in learning, positive school communities, and positive psychology/education. She has been awarded an Australian Government (Carrick) citation for her outstanding contributions to university teaching in education and psychology. She is co-author (with Helen McGrath) of the award-winning Bounce Back Wellbeing and Resilience programme as well as many other teacher resource books plus numerous chapters and journal articles on student well-being and resilience.

**Margaret O'Donnell (Dublin City University, Ireland)**
Dr Margaret O'Donnell is a Lecturer in the Institute of Education, Dublin City University. She has wide experience in the field of special education, teacher education, curriculum studies, assessment, and educational policy and practice. The area of teacher education has long been a topic of interest and study. Her doctorate studies examined teacher efficacy – the extent to which teachers believe they were adequately prepared with the knowledge, skills, and competencies to work in inclusive classroom in mainstream schools. In addition, she has wide research experience, both at a personal and national level, gleaned through her own studies and through her involvement in major national commissioned research projects. She was a leading researcher who contributed to the ENTREE research project, which examined teacher resilience across five European jurisdictions.

**Francisco Peixoto (ISPA-Instituto Universitário/CIE – ISPA, Portugal)**
Francisco Peixoto is Vice-Rector and Professor at ISPA – Instituto Universitário, the oldest Psychology school in Portugal. His current research interests include identity construction in general, and particularly in teachers, as well as teachers' resilience. He was member and leader of project teams funded by the Portuguese National Science and Technology Foundation and is a project team member of the funded project by the European Union Lifelong Learning Programme project called ENTREE (ENhancing Teacher REsilience in Europe). He published several papers

in national and international journals, authored book chapters, and presented his research at national and international conferences.

**Joana Pipa (ISPA-Instituto Universitário/CIE – ISPA, Portugal)**
Joana Pipa holds a Master Degree in Educational Psychology from ISPA – Instituto Universitário. Her current research interests include the affective components in teaching and learning, namely: self-concept, self-esteem, motivation, emotions in education, school engagement, and peer relationships. She worked as a research assistant in the funded project by the European Commission's Lifelong Learning Programme "ENTREE – Enhancing Teacher Resilience in Europe." Currently, she is a PhD candidate at CIE – ISPA, ISPA – Instituto Universitário, Lisbon. Her project relates to the effects of grade retention on the affective components in learning.

**Mary Ryan (Macquarie University, Australia)**
Mary Ryan (Dr) is a Professor and Head, Department of Educational Studies at Macquarie University in Sydney. Prior to this position, she was the Assistant Dean (Research) in the Faculty of Education at Queensland University of Technology, Brisbane. Her research is interested in discourses of literacy, learning, youth culture, and teachers' work. She applies theories of reflexivity, socio-spatiality, and criticality to the "texts" produced in classrooms, schools, higher education institutions, and social media.

**Jennifer Schwarze (RWTH Aachen University, Germany)**
Jennifer Schwarze is a Research Fellow and Lecturer at the Institute of Educational Science at RWTH Aachen University. Her current research interests include resilience, especially apprentice and teacher resilience, and teacher motivation. She has been a member of the coordinating team of the Lifelong Learning Programme project ENTREE – ENhancing Teacher REsilience in Europe.

**Mara Lupicia Spagnolo (University of Pavia, Italy)**
Mara Lupica Spagnolo is a licensed psychologist and psychotherapist. She collaborated with the Department of Brain and Behavioural Science at the University of Pavia (Italy) working in the fields of educational and clinical psychology in national and international projects. She is a licensed expert of learning disabilities and school difficulties. Her main areas of interest focus on the design and implementation of educational programmes to promote social and emotional skills, school readiness, and resilience. She also provides training courses for medical staff and teachers.

**Hendrieke Stiller (RWTH Aachen University, Germany)**
Hendrieke Stiller holds a master's degree in Linguistics and Communication Studies and in Education and Knowledge Management from the RWTH Aachen University, Germany. In her master's thesis, she focuses on the topic University Teachers' Resilience at German and Australian Universities. Since 2016, she has worked as an educator for blind and visually impaired adults at Berufsförderungswerk Düren (BFW). Additionally, she works as an honorary examiner for the Chamber of Industry and Commerce (IHK), Aachen.

**Linda C. Theron (Universtiy of Pretoria, South Africa)**
Linda Theron, D.Ed., is a full professor in the Department of Educational Psychology, Faculty of Education, University of Pretoria; an associate of the Centre for the Study of Resilience, University of Pretoria; and an extraordinary professor in Optentia Research Focus Area, North-West University, South Africa. Her research and publications focus on the resilience processes of South African young people challenged by chronic adversity and account for how sociocultural contexts shape resilience (see www.Lindatheron.org.). She is lead editor of *Youth Resilience and Culture: Complexities and Commonalities* (Springer, 2015). She is also an associate journal editor of *Child Abuse & Neglect* (Elsevier).

**Noelene Weatherby-Fell (University of Wollongong, Australia)**
Noelene Weatherby-Fell is a Senior Lecturer in Education at the University of Wollongong, NSW. As Head of Students (Education) and Faculty Director of Academic Programmes, Noelene provides leadership in supporting students in their academic progress and well-being, and in curriculum and pedagogy. Noelene is committed to preparing classroom and school-ready teachers, and her research interests include preservice teacher preparation, leadership and professional learning in schools, and pastoral care of students and teachers. Noelene has presented and written about her work nationally and internationally with the Response Ability Project (HIMH), is a project team member on the OLT project BRiTE (Building Resilience in Teacher Education), and continues to work with colleagues across the higher education sector with the Staying BRiTE Project.

**Jill Willis (Queensland University of Technology, Australia)**
Jill Willis (Dr) is a Senior Lecturer in Education at QUT. She has always been interested in the transformative power of learning, and how social collaboration and innovative structures can support learner agency. Her research interests include classroom assessment practices, digital feedback loops, learner agency, leadership of change, and collaborative qualitative research methodologies. She is currently investigating how changes to Queensland Senior Assessment and the Australian Curriculum can enhance student experiences of learning in schools.

**Marold Wosnitza (RWTH Aachen University, Germany & Murdoch University, Australia)**
Dr. Marold Wosnitza is a Professor of Education at RWTH Aachen University and Adjunct Professor at Murdoch University in Perth (Australia). His research interests include teacher motivation and emotions and resilience. He is head of several national and international research projects including a Lifelong Learning Programme funded project: ENTREE (Enhancing Teacher Resilience in Europe). Marold Wosnitza has published numerous journal articles, books, and book chapters and presented his research at national and international conferences. He is currently faculty dean research and is heading three different research groups.

**Maria Assunta Zanetti (University of Pavia, Italy)**
Maria Assunta Zanetti (PhD) is an Associate Professor at the Department of Brain and Behavioural Sciences at University of Pavia (Italy) and Director of the Italian

Laboratory of Research and Intervention for the Development of Talent, Potential and Giftedness. She teaches Psychology of Language Development and Educational Psychology and she collaborates with the Italian Ministry of Education (MIUR) and other local Institutions promoting mental health. She is currently leading several national and international projects to promote well-being in schools. Her main research interests include socio-emotional development, youth risk behaviours, language development, bullying and cyberbullying, vocational guidance, decision-making processes, and early achievement and gifted children development.

# Chapter 14
# Using Online Modules to Build Capacity for Teacher Resilience


**Susan Beltman, Caroline F. Mansfield, Marold Wosnitza, Noelene Weatherby-Fell, and Tania Broadley**

**Abstract** Teacher resilience is regarded as a complex, multidimensional, dynamic construct. Enhancing teacher resilience can potentially increase teacher commitment, yet interventions to build resilience in pre-service programmes are scarce. This chapter examines the effectiveness of the BRiTE (*Building Resilience in Teacher Education*) online modules to develop pre-service teachers' capacity for resilience in Australia. The modules are briefly described. Perceptions of 146 final year pre-service teachers were gathered regarding resilience, self-efficacy, commitment and coping before completing the BRiTE modules and their final professional experience school placement. Both pre- and post-school placement measures were completed by 49 participants. To determine the impact of using the modules, matched data sets were divided with "users" ($n$ = 32) scoring significantly higher scores than "non-users" ($n$ = 17) on five post-placement survey scales. Despite some limitations, there was an indication that using the online modules assisted pre-service teachers develop their capacity for resilience. Adapting the modules for use with in-service teachers and other professionals is an avenue for future research.

S. Beltman (✉)
School of Education, Curtin University, Perth, WA, Australia
e-mail: s.beltman@curtin.edu.au

C. F. Mansfield
School of Education, Murdoch University, Perth, WA, Australia
e-mail: Caroline.Mansfield@murdoch.edu.au

M. Wosnitza
Institute of Education, RWTH Aachen University, Aachen, Germany

School of Education, Murdoch University, Perth, WA, Australia
e-mail: marold.wosnitza@rwth-aachen.de

N. Weatherby-Fell
University of Wollongong, Wollongong, Australia
e-mail: noelene@uow.edu.au

T. Broadley
Queensland University of Technology, Brisbane, Australia
e-mail: tania.broadley@qut.edu.au



M. Wosnitza et al. (eds.), *Resilience in Education*,
https://doi.org/10.1007/978-3-319-76690-4_14

This study has significance, given the importance of teacher professional resilience, and suggests that interventions developed for pre-service contexts can make a difference.

Teacher education programmes have a role in assisting beginning teachers to develop capacity for resilience (Beltman et al. 2011), but the question of how this may occur is largely unanswered. Teacher resilience has been associated with positive outcomes such as commitment, wellbeing and job satisfaction (Gu and Li 2013), and teacher educators and researchers have argued the need for resilience-related skills to be developed during teacher education experiences (Buchanan et al. 2013). Recommendations include using scenarios, videos and observations (Tait 2008), as well as case studies, action research and teaching advanced problem-solving (Castro et al. 2010). Nevertheless, few interventions provide evidence on how best to incorporate activities into teacher education programmes.

Drawing on literature regarding suggested topics and activities, online modules (BRiTE, *Building Resilience in Teacher Education*; https://www.brite.edu.au/) were created that could be implemented in multiple ways in pre-service teacher education settings and beyond. Such an approach is consistent with a focus on using new technologies and blended learning to support teaching and learning in higher education (Johnson and Broadley 2012). A design-based research framework provided an evolving method of effective evaluation and redesign of educational tools (Reeves 2006). Expertise of researchers, teacher educators, psychologists, teachers and instructional designers was drawn upon within the process.

Once the design of the modules was completed, feedback about their effectiveness was obtained through the evaluation of an intervention where the modules were implemented in a teacher education programme in Australia. The aim of this chapter is to present the findings of the evaluation and to determine the impact of engaging with the modules.

## Conceptualisation of Teacher Resilience

As indicated in the Introduction, conceptualisations of resilience may differ (Beltman and Mansfield 2018, Chap. 1, this volume). Resilience is conceptualised in this chapter as a *capacity*, a *process* as well as an *outcome* (Beltman 2015). There is agreement in the literature that resilience is a multidimensional and complex concept (Mansfield et al. 2012) or a "composite construct" (Gu and Li 2013, p. 292). Figure 14.1 illustrates the multidimensional and dynamic nature of resilience where personal and contextual resources are harnessed through the use of various strategies which then enable resilience outcomes. Based on Biggs and Moore's (1993) model showing the complexity of the learning process, the figure uses bidirectional arrows between all components indicating that process is complex, interrelated and dynamic. This conceptualisation endeavours to draw together potentially disparate

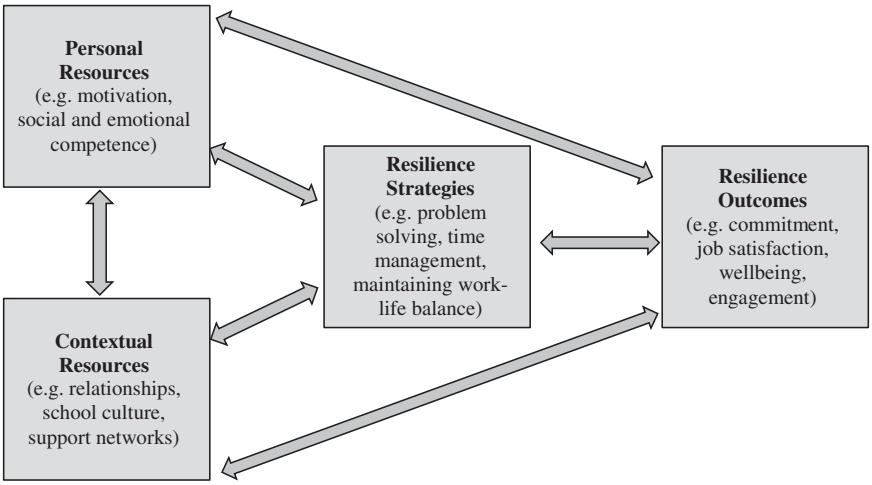


**Fig. 14.1** The teacher resilience process. (Adapted from Mansfield et al. 2016b)

views of resilience focusing on individual capacity, on contextual risk and resources, on dynamic adaptation processes or on resilience as a desirable outcome.

As shown in Fig. 14.1, resilience is shaped by a mixture of personal and contextual resources. Personal resources can include those which are profession-, motivation-, social-, and emotion-related (Mansfield et al. 2012). Contextual resources could include relationships with school leaders (Peters and Pearce 2012). As illustrated in the centre, capacity for resilience is not simply a set of characteristics, but involves the ability to *use* one's own personal resources as well as those in one's contexts (Gu and Li 2013). Harnessing resources involves the use of various strategies, and so resilience is also seen as a process (Castro et al. 2010). For example, networking and collaboration can help create important networks for beginning teachers (Schlichte et al. 2005).

Resilience is also an outcome which "enables teachers to maintain their commitment to teaching … despite challenging conditions and recurring setbacks" (Brunetti 2006, p. 813). Teacher resilience has been described as being "closely allied to a strong sense of vocation, self-efficacy and motivation to teach which are fundamental to a concern for promoting achievement in all aspects of pupils' lives" (Sammons et al. 2007, p. 694). The outcome then, shaped by these resources and strategies, is teachers who are committed to and developing in the profession.

## *Resilience in Teacher Education*

The literature regarding teacher resilience often points to the role teacher education programmes may play in assisting aspiring teachers to develop particular skills that will make a positive contribution to their resilience in the profession. Buchanan

et al. (2013) argued that teacher educators should be more realistic in their "preparation of preservice teachers for the rigours of teaching" (p. 115). Such "rigours" could include working in challenging rural and remote contexts (Sullivan and Johnson 2012) or in resource constrained areas of poverty (Ebersöhn 2014). Skills are needed for dealing with particular groups of students and managing unwanted behaviour (Buchanan et al. 2013). Teaching specific skills has also been suggested - such as problem-solving (Castro et al. 2010; Huisman et al. 2010), coping strategies (Chong and Low 2009), emotional competence (Ee and Chang 2010), emotional intelligence (Chan 2008), building support networks (Papatraianou and LeCornu 2014) and strategies for managing stress (Curry and O'Brien 2012). Pre-service teachers need time to explore their motivations for teaching (Prosser 2008). Curry and O'Brien (2012) argued for incorporating a "wellness paradigm," including personal goals for physical health and nutrition, leisure, relationships and work pursuits within pre-service programmes.

## *Resilience Interventions*

Even though the literature makes recommendations for teacher education, there are limited examples of how such recommendations may be implemented, particularly with pre-service teachers. In one study located, Le Cornu (2009) used a learning community model of professional experience to positively contribute to pre-service teacher resilience. It included opportunities for peer and collegial support, explicit teaching of interpersonal skills for developing relationships and a focus on nurturing wellbeing.

Despite the paucity of interventions with pre-service teachers, there are some examples of interventions with practicing teachers. Stress management training (Siu et al. 2014) and classroom management strategies (Dicke et al. 2015) have had a positive impact on beginning teacher wellbeing. Relaxation therapy has been used to reduce teacher stress (Kaspereen 2012). Mindfulness development programmes such as Cultivating Awareness and Resilience in Education (CARE) (Jennings et al. 2013) have resulted in improved teacher wellbeing, as well as reducing risk of burnout. Likewise, a gratitude-focused intervention (Chan 2011) positively influenced teachers' life satisfaction and sense of personal accomplishment as well as reducing emotional exhaustion and depersonalisation.

Online interventions to promote wellbeing could be a useful way to assist university students who may be reluctant to seek formal help (Ryan et al. 2010). One programme of a 90-min seminar with follow-up individual activities reported a positive influence on university students' wellbeing (Stallman 2011). It focused on six building blocks of resilience: realistic expectations, balance, connectedness, positive self-talk, stress management and taking action.

### *The Intervention: The BRiTE Modules*

One of the challenges in developing interventions is the complex, dynamic and idiosyncratic nature of resilience. Gu and Li (2013, p. 300), for example, referred to "the uncertain and unpredictable circumstances and scenarios which form the main feature of teachers' everyday professional lives". Personal and contextual resources available to a particular individual in a particular setting will also vary as highlighted by Yonezawa et al. (2011) who wrote about "the conflation of resilient characteristics of teachers and the environmental supports" (p. 915). Addressing this complexity was an important issue to address in designing and evaluating the modules for this intervention. The BRiTE modules, described below, focused on highlighting and developing strategies that pre-service teachers could use to harness their unique personal resources and resources in their varied contexts.

To develop the modules, an evidence-based resilience framework was developed (Mansfield et al. 2016a, b) to inform module content around five main themes: *understanding and building resilience* (e.g. why teacher resilience is important; the resilience process), *relationships* (e.g. developing support networks; communicating effectively), *wellbeing* (e.g. responding to stress; achieving work-life balance), *motivation* (e.g. self-efficacy; help-seeking) and *emotions* (e.g. optimistic thinking; managing emotions). These themes formed the basis of the five BRiTE modules. Figure 14.2 shows the main findings from the literature and BRiTE module topics.

## Rationale for Online Modules

Having developed the content for the modules, a set of self-paced online learning experiences was developed. The process of learning through a digital experience has been given various terms such as distance learning, distributed learning, e-learning and online learning. Increasingly researchers and developers are grappling with understanding the specific characteristics of these learning environments (Garrison 2011; Moore et al. 2011). Nevertheless, online learning generally means accessing learning experiences through using some type of technology connected to the Internet (Moore et al. 2011). In the present intervention, online modules are explicitly defined as the organising principle for guiding learners through self-paced, asynchronous learning experiences, hosted on the Internet.

In online learning, the technology is simply a delivery mechanism for the provision of authentic learning experiences, materials or instruction (Broadley et al. 2013). The use of online learning materials can be highly effective in increasing student achievement and engagement when there is a focus on quality content, on the instructional strategies built into the learning materials and on the learner at the core (Naveh et al. 2010). Social interaction and discourse are key components of online learning (Anderson 2008).

| module | literature informed concepts | examples of module topics |
|---|---|---|
| **B**<br>**B**uilding resilience | resilience is a dynamic, multifaceted process where individuals mobilise personal and contextual resources and use coping strategies to enable resilience outcomes | what is resilience?<br>why is resilience important for teachers?<br>resilience in schools<br>what makes a resilient teacher?<br>the resilience process – bouncing back and bouncing forward |
| **R**<br>**R**elationships | social competence (for building relationships, support networks and working collaboratively), setting boundaries, communication | understanding relationships and resilience<br>building relationships in schools<br>working in a professional team<br>building personal and professional support networks<br>using social media support networks<br>communicating effectively |
| **I**<br>Wellbe**i**ng | seeking renewal, work-life balance, time management | understanding personal wellbeing and mental health<br>responding to and managing (dis)stress<br>healthy living<br>managing work-life balance<br>time management |
| **T**<br>**T**aking initiative | efficacy, value, sense of purpose, sense of vocation, initiative, high expectations, problem solving, professional learning, goal setting, help seeking, reflection, persistence | maintaining motivation<br>persistence and efficacy<br>problem solving processes<br>goal setting and management<br>help seeking<br>ongoing professional learning |
| **E**<br>**E**motions | emotional competence, optimism empathy, hope, courage, humour, emotion regulation, mindfulness | emotional awareness<br>optimistic thinking<br>enhancing positive emotions<br>managing emotions |

**Fig. 14.2** Building Resilience in Teacher Education: the BRiTE concepts and topics. (Adapted from Mansfield et al. 2016a)

In relation to teacher resilience, there are suggestions in the literature that online resources can support resilience, but this previous work has been through online synchronous and asynchronous networking rather than online learning, such as casual teachers accessing support through a social networking site (Papatraianou and Le Cornu 2014). Whilst the use of social networking sites can "foster resiliency amongst the younger teachers entering the workforce" (Muller et al. 2011, p. 553), many learning management systems already cater for collaboration through discussion boards and web conferencing technologies. For this reason, the BRiTE modules were not developed with a collaboration feature for social interaction.

The modules were specifically designed to focus on learning outcomes associated with identified topics of resilience, with the intention that teacher educators would follow up with discussion in class time or embed these modules within their

learning management system. Suggested implementation strategies for teacher educators are included in the BRiTE website, where a range of strategies explain their use either through independent access or to complement face-to-face courses where aspects of resilience may not be covered.

Four design principles informed the creation of the modules. The modules are *personalised* with each user provided with "content or an experience which has been tailored to suit their specific needs based on implicit or explicit information about that user" (O'Donnell et al. 2015, p. 23). Through the use of an initial quiz, the learning topics are prioritised and orchestrated for the individual user based on the responses gathered in the quiz and to suit the unique needs of each user. Further personalisation is available to users as they pin and save learning objects into a personalised toolkit for future reference as required. Modules are *interactive*, as users respond to scenarios, have opportunities for reflection and contribute ideas regarding useful additional strategies. Dynamic principles mean the modules include non-linear navigation, multimedia links and further resources. Modules are *practice-based* with teacher voices frequently "heard" through videos as well as direct quotes from research featuring pre-service and early career teachers. Finally, modules are *evidence-informed*, with reference to supporting research and literature a key feature of each topic.

Teacher education courses include field-based practical or professional experience components where pre-service teacher education students are placed in schools under the supervision of mentor teachers. These are an important learning experience for pre-service teachers (Zeichner 2010) and can be stressful for a number of reasons (Caires et al. 2009; Gardner 2011). For example, the realities of teaching might contrast with previously idealised images of teaching (Goldstein 2005). In the BRiTE modules, reference is made to these experiences and to possible knowledge, skills and strategies that could be used to overcome or ameliorate stressful situations. The study aimed to determine whether pre-service teachers who completed the BRiTE modules, and used the related knowledge and skills during their final professional experience placement in schools, reported higher levels of teacher resilience, commitment to the profession and coping strategies than students who said they did not use the modules.

## Method

### *Procedure and Participants*

The evaluation of the implementation of the BRiTE modules occurred in a series of phases (Fig. 14.3). Final year pre-service teachers from two universities in two Australian states were invited to complete the BRiTE modules and asked to complete an online survey, including a set of scales, before gaining access to the modules. Informed ethical consent at university and individual level was obtained. Invitations were made by staff known to the participants but not currently teaching them.

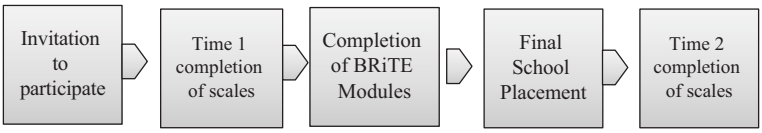


**Fig. 14.3** Design of implementation evaluation

Interested participants were provided via email with information on registering for module access and accessing the pre-module survey. The pre-module survey (Time 1) was completed by 146 pre-service teachers (average age 32.1 years; 79.5% female) prior to beginning the modules. The modules were available for 8 weeks and participants were able to engage with as few or as many as they wished.

The majority ($n$ = 100) of those completing the Time 1 survey were from one of the two universities and were in a Graduate Diploma of Education (primary or secondary) delivered across four campuses. These 100 students were contacted again after their final professional experience (PEX) placement. This was a supervised placement in a different school location and different context from their previous placements including city schools, major regional centres and remote regional areas. Schools were government and non-government. Although it was suggested that completion of the modules should be undertaken during the week prior to their final 5-week block placement in schools, a number of participants completed the modules during or at the completion of their PEX. At the end of the placement, students who had agreed to participate were contacted by email and invited to complete another survey (Time 2) and 49 participants did this. This did represent a drop out of around 50%. As Time 2 was at the completion of the professional experience placement and the teacher education programme, a number of students commenced casual teaching or accepted additional opportunities to work in non-teaching capacities. This impacted on their availability and focus. In addition, some students were reticent to undertake the T2 survey as they had not completed all the modules and were unwilling to provide feedback based on their perceived limited knowledge and engagement with the modules. Some had explained that they were busy completing required assessments before their placement so had not prioritised the modules which were not compulsory.

## *Instruments*

### Scales (Time 1 and Time 2)

The survey administered at Time 1 included demographic questions and a set of scales. The same scales were administered at Time 2 (after completing PEX). Table 14.1 provides the number of items and a sample item for each scale administered at T1 and T2.

The first set of four scales, TRP (teacher resilience profession; 6 items), TRM (teacher resilience motivation; 10 items), TRE (teacher resilience emotion; 6 items)

**Table 14.1** Scale details, means, standard deviations and reliabilities at Times 1 and 2

| | Scale | # Items | Sample item | T1 | | | T2 | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | M | SD | $\alpha$ | M | SD | $\alpha$ |
| TRP | Teacher resilience – profession | 6 | I reflect on my teaching and learning to make future plans | 25.5 | 2.7 | 0.77 | 27.1 | 2.4 | 0.81 |
| TRM | Teacher resilience – motivation | 10 | I like challenges in my work | 41.4 | 4.4 | 0.83 | 43.6 | 5.2 | 0.91 |
| TRE | Teacher resilience – emotion | 6 | When something goes wrong at school I don't take it too personally | 24.1 | 3.1 | 0.75 | 26.0 | 3.3 | 0.86 |
| TRS | Teacher resilience – social | 4 | When I am at work I can generally resolve conflicts with others | 16.8 | 1.9 | 0.70 | 17.6 | 2.0 | 0.77 |
| TCG | Teacher commitment – general | 5 | I feel pleased that I decided to be a teacher | 21.9 | 3.2 | 0.91 | 22.5 | 3.8 | 0.95 |
| RUM | Rumination | 7 | When something upsets me at school, I find it hard to forget about it | 24.3 | 3.4 | 0.68 | 23.1 | 3.1 | 0.56 |
| TRG | Teacher resilience – general | 9 | (Confidence re) getting over setbacks in school | 34.0 | 6.0 | 0.93 | 36.8 | 5.8 | 0.94 |
| TEF | Teacher efficacy | 12 | (Confidence re) teaching in a way that my students will remember important information | 44.4 | 8.3 | 0.94 | 48.7 | 8.0 | 0.94 |
| CAP | Coping appraisal | 7 | Analyse my reaction to the problem | 28.4 | 3.5 | 0.82 | 29.6 | 3.2 | 0.78 |
| CSO | Coping social | 4 | Seek advice from others | 15.3 | 2.3 | 0.81 | 15.8 | 2.4 | 0.79 |
| CCH | Coping challenge | 4 | Take a positive approach and see it as a challenge | 15.1 | 2.3 | 0.66 | 15.4 | 2.3 | 0.57 |
| CAV | Coping avoidance | 4 | Pray for it to go away | 9.3 | 3.1 | 0.74 | 8.7 | 2.1 | 0.79 |

and TRS (teacher resilience social; 4 items), were newly developed scales (Mansfield and Wosnitza 2014) based on earlier work on teacher resilience (Mansfield et al. 2012). Ratings were on a 5-point scale (1, strongly disagree; 2, disagree; 3, neutral; 4, agree; 5, strongly agree).

The second set of four scales, TCG (teacher commitment general; 5 items), RUM (rumination; 7 items), TRG (teacher resilience general; 9 items) and TEF (teacher efficacy; 12 items), were taken from Morgan (2011) where the factors most likely to facilitate beginning teacher resilience were identified, based on an asset model of

resilience. Items were rated on a 5-point scale (1, strongly disagree/never; 5, strongly agree/always). In the RUM scale the positive and negative aspects were reversed as rumination was considered to be a "factor that could aggravate the adverse events" (Morgan 2011, p. 96). The final two scales in this set (TRG and TEF) used the same stem: "*How confident do you feel about succeeding in each of the following on a regular basis*?" Ratings were again on a 5-point scale (1, not confident; 2, somewhat confident; 3, moderately confident; 4, mostly confident; 5, absolutely confident) (see also Wosnitza et al. 2018, Chap. 16, this volume).

The third set of scales was the Deakin Coping Scales (CAP, coping appraisal; CSO, coping social; CCH, coping challenge; and CAV, coping avoidance) (Moore 2003). Developed in a nursing context, these scales include four factors involving *appraisal* of a situation or problem and its demands (CAP), seeking out and using available *social* resources (CSO), seeing a situation as a *challenge* (CCH) and *avoiding* action such as hoping for a solution to emerge (CAV). The stem for each scale was "Please indicate which response shows how you address demands or problems that arise in general" and a 5-point scale was used (1, never; 2, rarely; 3, sometimes; 4, often; 5, always).

### Post-Placement Scales (Time 2)

The survey completed at T2 after the final PEX comprised the same three sets of scales as administered at T1, with an additional 14 items rated on a 5-point scale (1, never/not at all; 5, definitely/always) regarding use of the modules in the previous placement as well as in their future career. Items included, for example, "During your PEX, to what extent did you use items from your BRiTE toolkit?" and "To what extent do you think you will refer to the BRiTE modules in the early stages of your career?"

After placement, 24 students were interviewed and asked whether they had consciously used the modules during their placement and to explain how this had helped them. Although these data are not reported here, two illustrative comments are provided to indicate what participants meant when they said they had "used" the modules. For example, two interviewees said:

> One of the children…had behavioural issues and I found that confronting and challenging and just…to have, just to go back to the module especially in the area of not taking it personally. In talking to a mentor, in finding out how other people deal with it. It made me feel I wasn't needing to cope alone. That there was the support out there and there was things I could do with it out there. I went back into that classroom the next day after having reprised [sic] that and I had a much better day with him and I felt much better within myself that I was capable. [Participant 12]
>
> I remember one day in particular where I had a REALLY bad day…It was the worst class I have ever had…I guess working through the BRiTE stuff for me was more about reminding me about options because when you are in the moment you feel a bit trapped … it can feel really overwhelming… and then you catastrophise it….doing the modules straight before [PEX] was good because it reminded you not to do that. Not to catastrophise…take a minute, speak to someone… which for me is an important thing as I don't naturally speak to people when I have a problem. [Participant 14]

### *Data Analysis*

All scales showed acceptable to good reliabilities at T1 (see Table 14.1). The scales from Morgan (2011) and Moore (2003) showed a similar reliability structure to the originally published instruments. For T1 and T2 the Cronbach alphas for all scales ranged between $\alpha = 0.70$ and $\alpha = 0.95$ (see Table 14.1) with two exceptions – rumination ($\alpha_{t1} = 0.68$; $\alpha_{t2} = 0.56$) and coping challenge ($\alpha_{t1} = 0.66$; $\alpha_{t2} = 0.57$). Therefore these two scales were not considered further in the analysis. For each scale at T1 and T2, a scale mean was calculated. The resulting scale means were used for further analysis. Matched data sets for T1 and T2 were available for 49 participants.

## Results

No significant group differences were found for gender or university for all scales and both measurement points. However, paired sample t-tests showed significant differences with medium effect sizes between the two measurement points for 8 of the 10 scales (see Table 14.2). A significant increase occurred in all resilience measures for those who completed both sets of scales before and after the BRiTE implementation and PEX. Furthermore there was a significant increase for teaching efficacy and two of the coping scales, namely, appraisal (CAP) and social (CSO) at T2.

To determine to what extent the use of the items from the BRiTE toolkit had an impact on these changes, participants who completed the survey at both measurement points were divided into two groups based on the feedback they gave to the question "During your PEX to what extent did you use items from your BRiTE toolkit?". Those who answered "never" or "rarely" were categorised as "non-users" ($n = 17$) the others ($n = 32$) as "users". No significant group differences between users and non-users could be identified at T1. At T2 after the module implementation and PEX, the scales showed significant group mean differences between users

**Table 14.2** Changes in measures over time

| | | Time 1 | | Time 2 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Scale | M | SD | M | SD | t (df 48) | p | | d |
| TRP | Teacher resilience – profession | 4.2 | 0.46 | 4.5 | 0.77 | −3.97 | <.001 | ↗ | 0.48 |
| TRM | Teacher resilience – motivation | 4.1 | 0.44 | 4.4 | 0.52 | −2.83 | <.001 | ↗ | 0.35 |
| TRE | Teacher resilience – emotion | 4.0 | 0.52 | 4.3 | 0.54 | −3.90 | 0.007 | ↗ | 0.40 |
| TRS | Teacher resilience – social | 4.2 | 0.49 | 4.4 | 0.51 | −2.64 | 0.011 | ↗ | 0.37 |
| TCG | Teacher commitment – general | 4.4 | 0.65 | 4.5 | 0.77 | −1.88 | 0.066 | | |
| TRG | Teacher resilience – general | 3.8 | 0.66 | 4.1 | 0.65 | −2.92 | 0.005 | ↗ | 0.38 |
| TEF | Teacher efficacy | 3.7 | 0.69 | 4,1 | 0.67 | −4.59 | <.001 | ↗ | 0.51 |
| CAP | Coping appraisal | 4.0 | 0.50 | 4.2 | 0.45 | −3.17 | 0.003 | ↗ | 0.46 |
| CSO | Coping social | 3.8 | 0.59 | 3.9 | 0.61 | −2.72 | 0.009 | ↗ | 0.38 |
| CAV | Coping avoidance | 2.3 | 0.89 | 2.2 | 0.77 | 0.94 | 0.351 | | |

**Table 14.3** Users and non-users at Time 2

| | Non-users | | Users | | | | | |
|---|---|---|---|---|---|---|---|---|
| Scale | M | SD | M | SD | SD | *t* (df = 47) | *p* | *d* |
| TRP: teacher resilience – profession | 4.4 | 0.42 | 4.6 | 0.36 | 0.36 | −2.15 | 0.037 | 0.52 |
| TRM: teacher resilience – motivation | 4.1 | 0.53 | 4.5 | 0.47 | 0.47 | −2.61 | 0.012 | 0.81 |
| TRE: teacher resilience – emotion | 4.1 | 0.62 | 4.5 | 0.46 | 0.46 | −2.38 | 0.022 | 0.77 |
| TRS: teacher resilience – social | 4.2 | 0.42 | 4.5 | 0.52 | 0.52 | −2.21 | 0.032 | 0.61 |
| TCG: teacher commitment – general | 4.1 | 0.90 | 4.7 | 0.61 | 0.61 | −2.46 | 0.008 | 0.83 |
| TRG: reacher resilience – general | 3.9 | 0.69 | 4.2 | 0.60 | 0.60 | −1.46 | 0.151 | |
| TEF: teacher efficacy | 3.8 | 0.70 | 4.1 | 0.67 | 0.67 | −1.79 | 0.079 | |
| CAP: coping appraisal | 4.1 | 0.46 | 4.3 | 0.44 | 0.44 | −1.12 | 0.269 | |
| CSO: coping social | 3.9 | 0.58 | 3.9 | 0.63 | 0.63 | 0.02 | 0.988 | |
| CAV: coping avoidance | 2.1 | 0.76 | 2.2 | 0.78 | 0.78 | −0.34 | 0.739 | |

and non-users on four scales. As seen in Table 14.3, users scored significantly higher scores than non-users on the post-placement survey scales of differentiated teacher resilience (TRM, TRE, TRS, TRP), although not on the general measure of resilience (TRG). Users also scored significantly higher than non-users on teacher commitment (TCG). No significant differences were found for efficacy (TEF) or the coping measures.

## Discussion

The findings showed that pre-service teachers who completed the BRiTE modules independently and reported using them during their professional experience placement scored significantly higher on some measures of resilience than participants who completed the modules but reported not using them in their placement. The significant increases on all four resilience scales are a positive finding as the scales and BRiTE modules were based on the same literature highlighting the key components of resilience (Beltman et al. 2011; Mansfield et al. 2012, 2016). In this small study it was also promising to see that those who used the modules reported increased commitment to teaching. They scored significantly higher than non-users on the TCG scale which included items such as: "*I am likely to be teaching in ten years' time*" and "*I feel that teaching is really right for me*".

The modules specifically targeted skills such as building relationships in schools, communicating effectively, time management, maintaining motivation, help-seeking and managing emotions (see Fig. 14.2). Such skills are consistent with the noncognitive skills like "communication skills", "motivation" and "resilience" that teacher education programmes in Australia are recommended to assess in order to select suitable candidates to become teachers (AITSL 2015). Whilst this synergy is positive, what our study also shows is that such skills can be developed using suitable interventions during pre-service programmes. This position is consistent with

the literature that shows that resilience, rather than being an innate attribute, can be learnt (Beltman et al. 2011). As illustrated in Fig. 14.1, skills and attributes continue to develop over time, as individuals live and work in different contexts that can support their professional growth (Cameron and Lovett 2015; Meister and Ahrens 2011). Likewise the ongoing support of others in their professional work contexts plays an important role:

> The nature and sustainability of resilience in teachers over the course of their professional lives is not a static or innate state, but influenced, individually and in combination, by the strength of their vocational selves, the commitment of those whom they meet as part of their daily work and the quality of leadership support within the school as well as their capacities to manage anticipated as well as unanticipated personal events. (Gu and Day 2013, p. 40)

The study reported in this chapter has several limitations. The number of participants who used the modules and agreed to participate in the Time 2 round of data collection was small. One key aspect of resilience is a positive sense of personal agency (Day 2008), and it is possible that many of the participants who did not persist with the modules needed more assistance and support from others. In this intervention the responsibility was on an individual to engage with and complete the modules. It is also difficult to disentangle the effect of the modules and the placement which was an important component of the course. Measures of context were not included even though contexts can present challenges and are a key resource for developing resilience. The scales used were largely newly developed, and two had low reliability and were removed from the analysis. A further limitation is that the possible long-term effect of the modules has not been investigated in this study. The period between completing the modules and the post-questionnaire was about 8 weeks, and follow-up would be needed once the participants commenced work as teachers, in a potentially less supported context, to examine longer-lasting impact. The overall findings therefore need to be interpreted cautiously. Measuring resilience presents challenges as it is a multidimensional and dynamic construct and more work is needed in this area.

The implementation evaluated in this study was based on participants accessing the modules independently in their own time. Whilst they were encouraged by the university staff to do so, this was not part of their standard course or assessed components. Guidelines have been developed for teacher educators to implement the modules in different ways within their course. One way could be as in this intervention with a simple recommendation to engage independently with the modules. The other extreme would be to embed the modules into a learning management system and require their completion with related assessment tasks. In between these extremes, educators could select relevant aspects of the modules and use them as prior reading, class discussion topics or assessments. Whilst the flexibility of the ways the modules could be used is a strength and makes them suitable for various settings, it also means that further research is needed to determine whether different types of implementation are more suitable for different individual pre-service teachers, for teacher educators, for different programmes or at different times of the pre-service programme.

It may also be that such modules would be of use in the early years of teaching when teachers are most likely to leave the profession (Gallant and Riley 2014). Another important area to examine is whether interventions maintain their impact over time and if they make any difference to the academic and wellbeing outcomes of those teachers' pupils. According to Day and Gu (2010), teacher resilience, well-being and commitment are key outcomes of the resilience process and lead to increased teacher effectiveness and pupil progress. The implementation of one evidence-based programme focusing on social and emotional learning needed to be supported through ongoing training such as coaching as well as the support of the organisation (CASEL 2015). Do teacher education programmes have the room and resources to provide such support in a global trend of increasing accountability (Day and Gu 2014; Mayer 2014)? Can these modules be adapted for teachers at different levels of experience, for different countries or even across different professions?

In conclusion, this chapter has briefly outlined evidence-informed online modules that represent an innovative resource in the field. Although further work is needed, initial findings regarding the potential impact of such an intervention are promising for developing the capacity of pre-service teachers to meet the demands of the profession and to continue to grow and develop as professionals who are committed and effective.

**Acknowledgements** The Building Resilience in Teacher Education [BRiTE] project was funded by an Australian Government, Office for Learning and Teaching grant.

## References

AITSL [Australian Institute for Teaching and School Leadership]. (2015). *Action now: Selection of entrants into initial teacher education*. Melbourne: AITSL. Retrieved from http://www.aitsl.edu.au/initial-teacher-education/ite-reform/selection.

Anderson, T. (2008). *The theory and practice of online learning* (2nd ed.). Edmonton: Athabasca University Press (AU Press). Retrieved from http://www.ebrary.com.

Beltman, S. (2015). Teacher professional resilience: Thriving not just surviving. In N. Weatherby-Fell (Ed.), *Learning to teach in the secondary school* (pp. 20–38). Melbourne: Cambridge University Press.

Beltman, S., & Mansfield, C. F. (2018). Resilience in education: An introduction. In M. Wosnitza, F. Peixoto, S. Beltman, & C. F. Mansfield (Eds.), *Resilience in education: Concepts, contexts and connections* (pp. 3–9). New York: Springer.

Beltman, S., Mansfield, C. F., & Price, A. (2011). Thriving not just surviving: A review of research on teacher resilience. *Educational Research Review, 6*, 185–207. https://doi.org/10.1016/j.edurev.2011.09.001.

Biggs, J., & Moore, P. J. (1993). *The process of learning* (3rd ed.). Sydney: Prentice Hall.

Broadley, T., Ledger, S., & Sharplin, E. (2013). Portals and platforms: Does the technology matter when developing an online community? In J. Herrington et al. (Eds.), *Proceedings of World Conference on Educational Media and Technology 2013* (pp. 1408–1413). Association for the Advancement of Computing in Education (AACE).

Brunetti, G. J. (2006). Resilience under fire: Perspectives on the work of experienced, inner city high school teachers in the United States. *Teaching and Teacher Education, 22*(7), 812–825. https://doi.org/10.1016/j.tate.2006.04.027.

Buchanan, J., Prescott, A., Schuck, S., Aubusson, P., & Burke, P. (2013). Teacher retention and attrition: Views of early career teachers. *Australian Journal of Teacher Education, 38*(3), 112–129. https://doi.org/10.14221/ajte.2013v38n3.9.

Caires, S., Almeida, L. S., & Martins, C. (2009). The socioemotional experiences of student teachers during practicum: A case of reality shock? *The Journal of Educational Research, 103*(1), 17–27. https://doi.org/10.1080/00220670903228611.

Cameron, M., & Lovett, S. (2015). Sustaining the commitment and realising the potential of highly promising teachers. *Teachers and Teaching: Theory and Practice, 21*(2), 150–163. https://doi.org/10.1080/13540602.2014.928132.

CASEL. (2015). *CASEL guide: Effective social and emotional learning programs*. Chicago: Collaborative for Academic, Social, and Emotional Learning. Retrieved from www.casel.org/guide/

Castro, A. J., Kelly, J., & Shih, M. (2010). Resilience strategies for new teachers in high-needs areas. *Teaching and Teacher Education, 26*, 622–629. https://doi.org/10.1016/j.tate.2009.09.010.

Chan, D. W. (2008). Emotional intelligence, self-efficacy, and coping among Chinese prospective and in-service teachers in Hong Kong. *Educational Psychology, 28*(4), 397–408. https://doi.org/10.1080/01443410701668372.

Chan, D. W. (2011). Burnout and life satisfaction: Does gratitude intervention make a difference among Chinese school teachers in Hong Kong? *Educational Psychology, 31*(7), 809–823. https://doi.org/10.1080/01443410.2011.608525.

Chong, S., & Low, E.-L. (2009). Why I want to teach and how I feel about teaching – Formation of teacher identity from pre-service to the beginning teacher phase. *Educational Research Policy and Practice, 8*, 59–72. https://doi.org/10.1007/s10671-008-9056-z.

Curry, J. R., & O'Brien, E. R. (2012). Shifting to a wellness paradigm in teacher education: A promising practice for fostering teacher stress reduction, burnout resilience, and promoting retention. *Ethical Human Psychology and Psychiatry, 14*(3), 178–191. https://doi.org/10.1891/1559-4343.14.3.178.

Day, C. (2008). Committed for life? Variations in teachers' work, lives and effectiveness. *Journal of Educational Change, 9*(3), 243–260. https://doi.org/10.1007/s10833-007-9054-6.

Day, C., & Gu, Q. (2010). *The new lives of teachers*. London: Routledge Taylor & Francis Group.

Day, C., & Gu, Q. (2014). *Resilient teachers, resilient schools: Building and sustaining quality in testing times*. Oxon: Routledge.

Dicke, T., Elling, J., Schmeck, A., & Leutner, D. (2015). Reducing reality shock: The effects of classroom management skills training on beginning teachers. *Teaching and Teacher Education, 48*(0), 1–12. https://doi.org/10.1016/j.tate.2015.01.013.

Ebersöhn, L. (2014). Teacher resilience: Theorizing resilience and poverty. *Teachers and Teaching, 20*(5), 568–594. https://doi.org/10.1080/13540602.2014.937960.

Ee, J., & Chang, A. (2010). How resilient are our graduate trainee teachers in Singapore? *The Asia-Pacific Education Researcher, 19*(2), 321–331. https://doi.org/10.3860/taper.v19i2.1600.

Gallant, A., & Riley, P. (2014). Early career teacher attrition: New thoughts on an intractable problem. *Teacher Development, 18*(4), 562–580. https://doi.org/10.1080/13664530.2014.945129.

Gardner, S. (2011). Stress among prospective teachers: A review of the literature. *Australian Journal of Teacher Education, 36*(1), 18–28.

Garrison, D. R. (2011). *E-Learning in the 21st century: A framework for research and practice* (2nd ed.). London: Routledge/Falmer.

Goldstein, L. S. (2005). Becoming a teacher as a hero's journey: Using metaphor in preservice teacher education. *Teacher Education Quarterly, 32*(1), 7–24.

Gu, Q., & Day, C. (2013). Challenges to teacher resilience: Conditions count. *British Educational Research Journal, 39*(1), 22–44. https://doi.org/10.1080/01411926.2011.623152.

Gu, Q., & Li, Q. (2013). Sustaining resilience in times of change: Stories from Chinese teachers. *Asia-Pacific Journal of Teacher Education, 41*(3), 288–303. https://doi.org/10.1080/1359866X.2013.809056.

Huisman, S., Singer, N. R., & Catapano, S. (2010). Resiliency to success: Supporting novice urban teachers. *Teacher Development: An International Journal of Teachers' Professional Development, 14*(4), 483–499. https://doi.org/10.1080/13664530.2010.533490.

Jennings, P. A., Frank, J. L., Snowberg, K. E., Coccia, M. A., & Greenberg, M. T. (2013). Improving classroom learning environments by Cultivating Awareness and Resilience in Education (CARE): Results of a randomized controlled trial. *School Psychology Quarterly, 28*(4), 374–390. https://doi.org/10.1037/spq0000035.

Johnson, G., & Broadley, T. (2012). Web-based active learning and frequent feedback: Engaging first-year university students. In A. Herrington, J. Schrape, & K. Singh (Eds.), *Engaging students with learning technologies* (pp. 77–96). Perth: Curtin University.

Kaspereen, D. (2012). Relaxation intervention for stress reduction among teachers and staff. *International Journal of Stress Management, 19*(3), 238–250. https://doi.org/10.1037/a0029195.

Le Cornu, R. (2009). Building resilience in pre-service teachers. *Teaching and Teacher Education, 25*(5), 717–723. https://doi.org/10.1016/j.tate.2008.11.016.

Mansfield, C. F., & Wosnitza, M. (2014). *Teacher resilience scales*. Perth/Aachen: Murdoch University, RWTH Aachen University.

Mansfield, C. F., Beltman, S., Price, A., & McConney, A. (2012). "Don't sweat the small stuff": Understanding teacher resilience at the chalkface. *Teaching and Teacher Education, 28*, 357–367. https://doi.org/10.1016/j.tate.2011.11.001.

Mansfield, C. F., Beltman, S., Broadley, T., & Weatherby-Fell, N. (2016a). Building resilience in teacher education: An evidenced informed framework. *Teaching and Teacher Education, 54*, 77–87. https://doi.org/10.1016/j.tate.2015.11.016.

Mansfield, C. F., Beltman, S., Weatherby-Fell, N., & Broadley, T. (2016b). Classroom ready?: Building resilience in teacher education. In R. Brandenberg, S. McDonough, J. Burke, & S. White (Eds.), *Teacher education – innovation, interventions and impact* (pp. 211–229). Singapore: Springer.

Mayer, D. (2014). Forty years of teacher education in Australia: 1974–2014. *Journal of Education for Teaching, 40*(5), 461–473. https://doi.org/10.1080/02607476.2014.956536.

Meister, D. G., & Ahrens, P. (2011). Resisting plateauing: Four veteran teachers' stories. *Teaching and Teacher Education, 27*, 770–778. https://doi.org/10.1016/j.tate.2011.01.002.

Moore, K. A. (2003). The Deakin coping scale: Strategies for the management of demands. *Australian Journal of Advanced Nursing, 21*(2), 13–19.

Moore, J., Dickson-Deane, C., & Galyen, K. (2011). E-Learning, online learning, and distance learning environments: Are they the same? *Internet and Higher Education, 14*, 129–135. https://doi.org/10.1016/j.iheduc.2010.10.001.

Morgan, M. (2011). Resilience and recurring adverse events: Testing an assets-based model of beginning teachers' experiences. *The Irish Journal of Psychology, 32*(3–4), 92–104. https://doi.org/10.1080/03033910.2011.613189.

Muller, S. M., Gorrow, T. R., & Fiala, K. A. (2011). Considering protective factors as a tool for teacher resiliency. *Education, 131*(3), 545–555.

Naveh, G., Tubin, T., & Pliskin, N. (2010). Student LMS use and satisfaction in academic institutions: The organizational perspective. *The Internet and Higher Education, 13*, 127–133. https://doi.org/10.1016/j.iheduc.2010.02.004.

O'Donnell, E., Lawless, S., Sharp, M., & Wade, V. (2015). A review of personalised e-learning: Towards supporting learner diversity. *International Journal of Distance Education Technologies, 13*(1), 22–47. https://doi.org/10.4018/ijdet.2015010102.

Papatraianou, L. H., & Le Cornu, R. (2014). Problematising the role of personal and professional relationships in early career teacher resilience. *Australian Journal of Teacher Education, 39*(1), 100–116. 10.14221/ajte.2014v39n1.7.

Peters, J., & Pearce, J. (2012). Relationships and early career teacher resilience: A role for school principals. *Teachers and Teaching: Theory and Practice, 18*(2), 249–262. https://doi.org/10.1080/13540602.2012.632266.

Prosser, B. (2008). The role of the personal domain in middle years teachers' work. *Australian Journal of Middle Schooling, 8*(2), 11–16.

Reeves, T. C. (2006). Design research from the technology perspective. In J. V. Akker, K. Gravemeijer, S. McKenney, & N. Nieveen (Eds.), *Educational design research* (pp. 86–109). London: Routledge.

Ryan, M. L., Shochet, I. M., & Stallman, H. M. (2010). Universal online resilience interventions might engage psychologically distressed university students who are unlikely to seek formal help. *Advances in Mental Health, 9*(1), 73–83.

Sammons, P., Day, C., Kington, A., Gu, Q., Stobart, G., & Smees, R. (2007). Exploring variations in teachers' work, lives and their effects on pupils: Key findings and implications from a longitudinal mixed-method study. *British Educational Research Journal, 33*(5), 681–701. https://doi.org/10.1080/01411920701582264.

Schlichte, J., Yssel, N., & Merbler, J. (2005). Pathways to burnout: Case studies in teacher isolation and alienation. *Preventing School Failure, 50*(1), 35–40.

Siu, O. L., Cooper, C. L., & Phillips, D. R. (2014). Intervention studies on enhancing work well-being, reducing burnout, and improving recovery experiences among Hong Kong health care workers and teachers. *International Journal of Stress Management, 21*(1), 69–84. https://doi.org/10.1037/a0033291.

Stallman, H. M. (2011). Embedding resilience within the tertiary curriculum: A feasibility study. *Higher Education Research & Development, 30*(2), 121–133. https://doi.org/10.1080/07294360.2010.509763.

Sullivan, A., & Johnson, B. (2012). Questionable practices? Relying on individual teacher resilience in remote schools. *Australian and International Journal of Rural Education, 22*(3), 101–116.

Tait, M. (2008). Resilience as a contributor to novice teacher success, commitment, and retention. *Teacher Education Quarterly, 35*(4), 57–75.

Wosnitza, M., Delzepich, R., Schwarze, O'Donnel, M., Faust, V., & Camilleri, V. (2018). Enhancing teacher resilience – From self-reflection to professional development. In M. Wosnitza, F. Peixoto, S. Beltman, & C. F. Mansfield (Eds.), *Resilience in education: Concepts, contexts and connections* (pp. 275–288). New York: Springer.

Yonezawa, S., Jones, M., & Singer, N. R. (2011). Teacher resilience in urban schools: The importance of technical knowledge, professional community, and leadership opportunities. *Urban Education, 46*(5), 913–931. https://doi.org/10.1177/0042085911400341.

Zeichner, K. (2010). Rethinking the connections between campus courses and field experiences in college- and university-based teacher education. *Journal of Teacher Education, 61*(1–2), 89–99. https://doi.org/10.1177/0022487109347671.