

Professional and Practice-based Learning

Stephen Richard Billett
Anthony Leow
Anh Hai Le

Continuing Education and Training

Purposes, Practices and Futures



Springer

Professional and Practice-based Learning

Volume 36

Series Editors

Stephen Billett , Griffith University, Brisbane, Australia

Christian Harteis, University of Paderborn, Paderborn, Germany

Hans Gruber, University of Regensburg, Regensburg, Germany

Professional and practice-based learning brings together international research on the individual development of professionals and the organisation of professional life and educational experiences. It complements the Springer journal *Vocations and Learning: Studies in vocational and professional education*.

Professional learning, and the practice-based processes that often support it, are the subject of increased interest and attention in the fields of educational, psychological, sociological, and business management research, and also by governments, employer organisations and unions. This professional learning goes beyond, what is often termed professional education, as it includes learning processes and experiences outside of educational institutions in both the initial and ongoing learning for the professional practice. Changes in these workplaces requirements usually manifest themselves in the everyday work tasks, professional development provisions in educational institution decrease in their salience, and learning and development during professional activities increase in their salience.

There are a range of scientific challenges and important focuses within the field of professional learning. These include:

- understanding and making explicit the complex and massive knowledge that is required for professional practice and identifying ways in which this knowledge can best be initially learnt and developed further throughout professional life.
- analytical explications of those processes that support learning at an individual and an organisational level.
- understanding how learning experiences and educational processes might best be aligned or integrated to support professional learning.

The series integrates research from different disciplines: education, sociology, psychology, amongst others. The series is comprehensive in scope as it not only focuses on professional learning of teachers and those in schools, colleges and universities, but all professional development within organisations.

Please contact Grace Ma at grace.ma@springer.com if you wish to discuss a book proposal.

Stephen Richard Billett • Anthony Leow
Anh Hai Le

Continuing Education and Training

Purposes, Practices and Futures

 Springer

Stephen Richard Billett
School of Education and
Professional Studies
Griffith University
Mount Gravatt, QLD, Australia

Anthony Leow
Centre for Educational Development
Republic Polytechnic
Singapore, Singapore

Anh Hai Le
Griffith University
Mount Gravatt, QLD, Australia

ISSN 2210-5549 ISSN 2210-5557 (electronic)
Professional and Practice-based Learning
ISBN 978-981-97-2929-6 ISBN 978-981-97-2930-2 (eBook)
<https://doi.org/10.1007/978-981-97-2930-2>

© The Editor(s) (if applicable) and The Author(s), under exclusive license to Springer Nature Singapore Pte Ltd. 2024

This work is subject to copyright. All rights are solely and exclusively licensed 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, expressed or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Springer imprint is published by the registered company Springer Nature Singapore Pte Ltd.
The registered company address is: 152 Beach Road, #21-01/04 Gateway East, Singapore 189721, Singapore

If disposing of this product, please recycle the paper.

Series Editor's Foreword

A central purpose for the Professional and Practice-based Learning book series is on understanding further and supporting the learning and development of working age adults, and as directed towards their working lives. Consequently, a volume on Continuing Education and Training (CET) is a most welcome addition to this series. As the authors emphasise, CET is now a necessary educational provision for working age adults albeit given different titles and taking different forms in different industry sectors, occupations and countries. The kinds of changes that are occurring in occupational requirements and work performance make maintaining occupational currency an ongoing project. The completion of occupational preparation that often occurs in the transition from school to working life is merely the starting point on a journey of learning across working life. This is because that ongoing learning is required for being employed, staying employed and making positive contributions to sustaining the viability of the workplaces in which they are employed. All of this suggests that CET needs to be recognised as an important educational sector as it is preparing people for their occupations. Indeed, the point made by the authors is that rather than being an appendage of or an appendix to an existing educational provision, CET requires to be understood and practised in its own terms and with a particular focus on how it can address the needs of working age adults who have overlapping responsibilities and commitments beyond work and study.

The authors refer to the need for an educational system whose elements comprise tertiary education institutions, workplaces, working age adults and the contribution of friends, family and other familiars in providing support for adults to participate and enjoy success in their programs. Some of the important considerations arising from this volume are that, unlike young people's education that is compulsory or mandated, most participation in CET arises from individuals' initiatives and interests. Yet, there are some occupations that have regular professional development requirements, but in the main, ultimately, it is up to adults whether they participate or not in these provisions. That means those provisions need to be aware of what motivates, engages and addresses the needs of working age adults. The contributions of this book are structured across its chapters, but with a summary chapter early in the volume (Chap. 2) providing a synthesis of what is advanced across the

book and individual chapters. In all, what is proposed in this volume is a data-driven and theoretically framed accounts of what a national CET provision or system which addresses the stated premise of having an approach to CET that is made distinct through its purposes and requirements.

Beyond the specific focus, there are aspects of this volume that make it particularly relevant to the book series. Firstly, it presents a country-specific case study through a range of data gathered from diverse informants that together offer a comprehensive approach to understanding what constitutes an effective CET system from the perspectives of working age adults, employers, teachers and administrators in a way that commences with considerations of those who are the primary focus of these educational provisions—working age adults—and then continues from there. Secondly, this study is from a country which clearly has a more mature approach to CET than many others and for good reasons. That is, with economic and social goals been dependent upon the skills of the workforce, which is ageing, Singapore is embracing the need for this educational provision in terms of policies, practices and engagements with workplaces and the community. Thirdly, some will question the relevance of a study based in this country, which offers a perspective from Asia which is as legitimate and important as those from Europe, Scandinavia or North America. Yet, this is a key strength that adds to the diversity of perspectives and orientations to the contributions made in this series. Too often, what is advanced from European, Scandinavian British or North American contacts is expected to be applicable elsewhere. Yet, when perspectives come from outside of those countries, their relevance is inevitably questioned. The authors make clear that while setting out the country context, the findings are drawn out and synthesised in ways that suggest the broad applicability that may be as adaptable to other countries as studies conducted elsewhere. Fourthly, a thematic approach is taken across the sections of this volume providing a review of what the literature is saying about the continuing education of adults, and then overviews of the project and findings, then a set of perspectives drawn from the data that inform about the views of working age adults, graduates from programs, employers, as well as those who teach in and administer CET programs. A chapter on working women and their perspectives is to follow and to finish, a chapter on older workers. This is a particularly germane contribution given the age profile of the Singapore population. However, again, this has relevance to other countries that have ageing populations.

In all, this volume makes a particular, helpful and very timely contribution to this book series, and in doing so offers insights, propositions and findings that are likely to be helpful across the broad field of adult learning and development, regardless of whether it is undertaken wholly within tertiary education institutions or within practice or community settings.

University of Regensburg
Regensburg, Germany

Hans Gruber

Paderborn University
Paderborn, Germany
March 2024

Christian Harteis

Preface

In the current era, the importance of continuing education and training (CET) has evolved from being peripheral and discretionary to increasingly being seen as an essential element of learning across lengthening working lives. Workers are increasingly aware that they need to maintain their skills' currency and occupational competence to remain employed as the requirements for practising those occupations and workplace demands necessitate ongoing and continuous learning. In the past, the concept of professional development was largely constrained to its namesake: the professions. Yet, the ability to remain currently competent, to demonstrate that competence and remain employable, there alone the quest for advancement or changing occupations are all now premised on ongoing learning, participation in structured programs and securing certification that verifies currency and competence. Moreover, although much of CET provisions are those organised through tertiary education institutions, specific requirements of remaining currently competent and adaptable as work and occupational requirements change demand other ways of securing upskilling and reskilling. In particular, considerations for how workplace settings can be used as sites for this ongoing learning are increasingly becoming a focus, not the least because there is a need for scalable approaches that are able to accommodate entire workforces.

More than merely constant change caused by accelerated technological innovations, new ways of working and widening participation within workforces which require processes of further developing skills, there are new and emerging imperatives. Perhaps first and foremost is an increasingly globalised economy means that workforces at the national or enterprise level increasingly require that working age adults need to be adaptive and open to ongoing learning to produce and provide the goods and services that are required within their communities, and beyond. So, this globalised competition necessitates focused considerations that national workforces need to be both export oriented and import competing in their practices, the least they be displaced by goods manufactured and services provided elsewhere. Yet, a new dimension of this imperative has arisen with emerging geopolitical tensions

and disruptions that are leading nation states to find ways of becoming more self-sufficient and self-reliant. Hence, there is a need for constant upgrading and innovations, both of which are directly aligned with continual learning.

Much societal attention, investment and effort are directed towards the education of children in schools and then young adults in tertiary education institutions in preparation for engagement in the world of work. Yet, given the need for ongoing learning across lengthening working lives in most nation states with modern economies, the importance of having a dedicated focus on the purposes, processes and outcomes of CET are now becoming more mainstream and orthodox. Importantly, these processes and outcomes are often quite distinct from those that tertiary education institutions provide for younger adults, most of whom are able to study full-time and focus their efforts on their education, and also socialise with peers. In many ways, these learners are naïve having, usually, limited or no experience in the world of work. Yet, for students attending CET programs, there is often distinct purposes and processes by which they come to engage. For many, and perhaps most working age adults, their participation in CET programs comes at a cost to other activities and commitments as perhaps most of them are balancing the demands of work, family, community as well as participating in continuing education programs.

Hence, there needs to be provisions of CET that are comprehensive, systemic and scalable, which this volume seeks to inform about and suggest means by which they can be enhanced. One feature of this monograph is that the practical enquiry conducted, data gathered and workshops facilitated were all in Singapore. In many ways, this is a worthwhile and pertinent choice. This country with its relatively small size and population relies very much upon the skills and capacities of the working age population. Lacking access to primary industries that harvest natural resources or are even self-sufficient agriculturally, the policy agenda for CET is very high because of their dependence upon the quality, skilfulness and adaptability of its national workforce. Also, as the Singaporean population ages, this necessitates considerations for how that working population can remain currently competent and participating in working life far longer than earlier generations. Thus, all of this come requirements for skills development, and often from students who may not have excelled or enjoyed compulsory education.

However, there is no reason to be dismissive of or downplay the findings and conclusions reported here because they were based upon data gathered in Singapore. Instead, the readership is reminded constantly that each country has its own specific approaches to, orientations of and means of enacting CET. Yet, lessons learned from this study have the potential to inform both the purposes and processes of continuing education in other countries. Certainly, the findings here are necessarily no less informative than those arising from countries in North America, Europe or Scandinavia. Indeed, the structuring of the volume is deliberately intended to address key themes that are likely to be germane to any nation state's considerations and enactment of CET.

Structure of the Monograph

The monograph is structured into three parts. The first part—*CET Imperatives, Practices and Policies*—provides an overview of the contemporary national, workplace and personal imperatives for CET and why these make it an important focus for informed inquiry. This includes considerations of factors that need to guide and support policy and practice in this field. Hence, this first part sets out the premises for how such an educational provision might be considered by national governments, albeit situated within tertiary education systems and supported by local enterprises and communities. These premises then also advise about how CET provisions can be designed, enacted and evaluated. These contributions both comprise and are informed by a focused review of the extant literature and the multi-parted and large-scale practical inquiry that comprises a national case study from Singapore that informs much of this monograph.

The first part comprises three chapters: Chapter 1—Supporting Learning Across Working Life: Premises for Effective CET Provisions—sets out the rationale for a focus on CET and outlines the review and practical inquiry that comprises the multi-parted case study from Singapore. Chapter 2—Practice and Policy Implications for CET: A Systematic Approach—draws on the findings of the review and the phases of the practical enquiry to offer suggestions for policy and practice. In many ways, this chapter presents a synthesis of the contributions of other chapters to offer suggestions on the ways in which CET systems might be organised, enacted and evaluated.

Chapter 3—Continuing Education and Training: The Quest for Effective Provisions—comprises a focused review of the extant literature and its contributions to the effective provision of CET. It focuses on the imperatives for adults to learn across working life, both for personal (i.e., employability) and institutional (e.g., government, workplaces) purposes. It highlights the importance of partnerships amongst tertiary education sector, workplaces and working age adults to develop effective CET provisions. In particular, the contribution of workplace learning is generative of important learning outcomes. It considers approaches for organising, ordering, supporting and guiding this intentional learning through CET provisions. It also discusses the Singapore CET landscape to contextualise the phenomenon under investigation in this research project.

The second part—Singaporean Case Study—comprises three chapters that describe and justify the method procedures used in the national case study from Singapore, and present and discuss general findings from the interviews of recent CET graduates and employers about the motivations of working age Singaporeans to participate in CET programs and their perspectives on how they were guarded and supported in making decisions about participating. These chapters also report and discuss these informants' perspectives of the quality of the experiences of the CET provisions, and those provided by the educators in the tertiary education institutes in which they undertook the programs. In addition, data from a national survey undertaken to secure insights beyond the cohort of graduates and employers who were

interviewed for the project. That survey provided a large database of working age Singaporeans that the interview findings can be considered and validated.

Chapter 4—Investigating Effective CET Provisions to Promote Employability: Method and Procedures—provides a detailed overview of the practical inquiry, which, as the title suggests, describes and justifies the kinds of research procedures selected for gathering and analysing the data through interviews, surveys and focus group activities. It sets out the context, framing, procedures and broad outcomes of a three-phase research project that sought to identify what constitutes effective CET provisions for working age adults. The practical inquiry was enacted through interviews with CET graduates and their employers in Phase 1, followed by a survey in Phase 2 administered to Singaporean working age adults in a range of employment and industry sectors to validate and advance the interview findings. In Phase 3, the consolidated findings from the first two phases were presented to CET educators and administrators who engaged in co-construction of the implications and generation of guidelines for curriculum and pedagogic practices.

Chapter 5—Motivations and Affordances for Engaging CET—presents and discusses the project's findings about what motivates working age adults' participation in CET and the kinds of affordances for supporting their engagement in CET. The findings indicated that the recent CET graduates were motivated personally and professionally to take CET courses/programs. Yet, there was a mix of personal and institutional factors that support as well as inhibit their participation and engagement in CET. These findings inform how a provision of CET needs to be positioned to make it attractive and accessible for working age adults.

Chapter 6—Effective CET Provisions: A National Survey—reports and discusses the findings of a national survey that engaged working age adult respondents including those who had participated in CET programs and those that had not comprising Phase 2 of the research project. It illuminates and elaborates responses from 860 working age Singaporeans who may or may not have participated in a CET program. It was found that many of them claiming on-the-job training was the most effective way to acquire skills, thereby questioning an assumption that this could best be achieved through CET provisions offered through tertiary education institutions. Nevertheless, there was seen to be a great value in these kinds of provisions to promote further the development of Singaporeans' capacities for both personal and professional purposes, and usually a combination of both.

As the title of the third part suggests—Stakeholder Perspectives—it comprises four chapters each of which introduces, describes and discusses the perspectives of specific categories of informants and respondents. They offer specific perspectives to understand what constitutes effective provisions of CET and how these are present in existing arrangements and, from that perspective, how they might be enhanced and advanced for the future in responding to their particular purposes, needs and requirements.

Chapter 7—Effective CET Provisions: Perspectives from Graduates and Employers—analyses responses from graduates of CET programs and employers. It discusses the perspectives of a selection of diverse kinds of working age adults who have recently completed CET programs, and also small sample of employers about how their employees' employability can be sustained through participation and

engagement in CET programs and the ways in which these might need to change to more adequately realise important personal and societal goals. Findings indicated that there are similarities and differences in their views about how to effectively acquire and develop further occupational capacities and specific competencies required for workplace performance, what constitutes effective CET provisions, and qualities of effective educators and learners. In some ways, these can be seen as complementary views about the efficacy of CET provisions.

Drawing upon a series of workshops conducted online with practitioners, Chap. 8—*Advancing CET Provisions: Perspectives of Educators and Practitioners*—reports and discusses the third phase of the project. In this phase, the consolidated findings from the first two phases were presented to CET educators and administrators who engaged in co-construction of the implications and generation of guidelines for curriculum and pedagogic practices in tertiary education institutions. Overall, it was indicated that there is a need for collaboration and engagement with different partners and between different levels of CET. This collaborative approach not only enhances the practical relevance of the education provided but also opens avenues for networking, skill application and real-world problem-solving, and subsequent opportunities for employment. Importantly, a systemic approach to such collaboration and engagement is essential for enacting effective CET provisions.

Given this and the demanding roles in which they engage, Chap. 9—*Working Women and CET: Enablers and Barriers*—provides an analysis on the purposes, experiences and needs of women who are seeking to balance their studies with other aspects of their lives. This chapter illuminates and appraises the experience of working women through interviews with female CET graduates. Overall, it was found that the working women, just like their male counterparts, were driven by both personal and professional reasons to participate in CET courses/programs. These female informants reported that work and family commitments were key barriers to their full engagement. Understanding of these female graduates' perspectives and experiences is pivotal to respond to the quest of what constitutes effective CET provisions for working women.

Finally, Chap. 10—*CET Journey: Experience of 'Older' Working Age Adults*—offers a range of perspectives from mature age or older working age adults through interviews with CET graduates aged 50 and above. It was found that these graduates' participation in CET was driven by both personal and professional reasons, the mix of which were shaped by individual needs and goals. Noteworthy, the majority reported being motivated by occupational or work role changes, which is central to their sense of self as working age adults and is also important in their transitions across working life and the ability to remain employed.

Brisbane, QLD, Australia

Stephen Richard Billett

Singapore, Singapore

Anthony Leow

Brisbane, QLD, Australia

Anh Hai Le

February 2024

Acknowledgements

The authors would like to acknowledge the range of institutional, personal and professional contributions that have supported the review of literature and practical investigations that were highly instrumental in informing and directly contributing to what is advanced through this authored monograph. Firstly, we would like to acknowledge the source of funding that supported the enquiry in Singapore, which was provided through nationally competitive scheme in Singapore hosted by the Ministry of Education's Workforce Development Applied Research Fund. This funding supported the employment of research assistants in Singapore. In addition, the support provided by Griffith University, Australia, and Republic Polytechnic, Singapore, which hosted the project, made the organisation and enactment of the project possible. This included the in-kind contributions provided by these institutions that permitted the authors to undertake the research and then prepare this volume.

We would like to acknowledge the research assistant work that was undertaken by Cheryl Low, Gwyneth-Ann Khoo and later Shuyi Chua. These research assistants were largely responsible for organising and undertaking most of the interviews with CET graduates and employers. Moreover, colleagues at Republic Polytechnic in Singapore, Shufen Po and Mark Chia also provided support in advising and assisting the development of the instruments being used in the project, as were colleagues from Ngee Ann Polytechnic (Sara Zaman and Yew Kong) who engaged in the first phases of the project.

Research projects such as the one described and elaborated across this volume rely upon informants providing data and being generous with their time and contributions. This project was no exception. We were fortunate that 180 working age Singaporeans who had completed continuing education and training (CET) programs agreed to be interviewed and provided rich data, as did the 40 employers who also gave up their time and made helpful contributions to their perspectives on what constitutes effective CET programs.

Then, there were over 800 working age Singaporeans who completed the survey, and then in the third phase over 270 educators and administrators working in polytechnics engaged in 6 workshops and 3 webinars that were used to translate the

findings from the interview and survey phases into workable options for improving the provision of CET in Singapore.

It is also important to acknowledge that much of the latter phases of the project was undertaken in extremely difficult circumstances given the ‘circuit breakers’ or lock downs in Singapore. This meant that the workshops in the final phases of the project had to be conducted online and at a distance. Yet, in many ways these workshops highlighted a heightened use of electronic technology and platforms by working age Singaporeans. This necessitated the supplementary survey that was administered after the lockdowns to capture whether working age adults’ attitudes towards online educational provisions had changed because of the enhanced use of electronic means of communication during the periods of lockdown.

Contents

Part I CET Imperatives, Practices and Policies

1	Supporting Learning Across Working Life: Premises for Effective CET Provisions	3
	Continuing Education and Training: A Growing Interest	4
	CET Premises, Purposes and Processes	6
	Privileging CET as Well as Schooling and Initial Tertiary Education	8
	Consequences of Societal Educational Imperatives	11
	Repositioning Continuing Education and Training	12
	Preview of Contributions	17
	References	19
2	Practice and Policy Implications for CET:	
	A Systemic Approach	23
	Towards a Continuing Education and Training Promoting	
	Employability and Workplace Viability	24
	Key Considerations for a CET System	26
	The Role and Leadership of CET Institutions	27
	Factors Shaping Effective CET Provisions	29
	A CET Provision for Sustaining Employability	
	and Workplace Viability	30
	Positioning Adults as Learners	31
	Towards a Model of a (National) CET System	32
	Key Indicators of an Effective CET System	35
	Privileging CET as an Educational Sector	41
	References	42
3	Continuing Education and Training: The Quest for Effective Provisions	45
	Promoting Employability Across Working Life	46
	Singapore Case Study	48

Continuing Education and Training: The Quest for Effectiveness 52

Constituting Effective CET: The Tripartite Contributions of the Tertiary Education Sector, Workplaces and CET Students. 54

 Enterprise Outcomes from Engagement in CET 56

 The Role of Adult Education and CET Educators 57

 CET and Working Age Adults. 59

 CET and Workplace Experiences 61

The Quest for Effective CET Provisions. 62

References. 64

Part II Singaporean Case Study

4 Investigating Effective CET Provisions to Promote Employability: Method and Procedures 73

Continuing Education and Training to Sustain Employability 74

Case Study Context. 75

Exploring Effective CET Provisions: A Singaporean Investigation 78

Phase 1: Graduates’ and Employers’ Perspectives on Effective CET Provisions. 80

Phase 2: Verifying and Elaborating Findings Through a National Survey 82

Phase 3: Advancing CET Provisions 86

Ethics. 87

Applicability, Contribution and Impact of the Research. 87

Limitations 89

Investigating Effective CET Provisions 90

Appendices 93

 Appendix 4.1—Phase 1 Pre-Interview Survey 93

 Appendix 4.2—Phase 1 Interview Schedule. 97

 Appendix 4.3—Vignettes for workshops and webinars 98

References. 101

5 Motivations and Affordances for Engaging in CET 103

Participating in Continuing Education and Training 104

Motivations and Affordances for CET Participation and Engagement 106

 Perspectives on Motivation to Participate and Engage in CET. 107

 Potential Barriers 108

Procedures. 110

Findings. 110

 Motivations for CET Participation 111

 Achievement of Purposes for CET Participation 113

 Affordances for CET Engagement 114

Motivations and Affordances for CET Participation. 120

References. 122

6 Towards an Effective, Accessible and Scalable CET Provision: A National Survey 125

Provisions of Continuing Education and Training and Working Age Adults 126

Adults’ Perspectives of CET: The National Survey 129

 Procedures 129

 Findings 131

An Effective, Accessible and Scalable CET Provision 151

References 154

Part III Stakeholder Perspectives

7 Effective CET Provisions: Perspectives from Graduates and Employers 159

Continuing Education and Training to Sustain Employability 160

CET Initiative: The Case from Singapore 162

Investigating Effective CET Provisions: Workers’ and Employers’ Perspectives 163

 Skill Acquisition 164

 Effective CET Provisions 166

 Qualities of CET Educators 169

 Qualities of CET Students 172

Conclusions and Implications 174

References 177

8 Advancing CET Provisions: Perspectives of Educators and Practitioners 181

Continuing Education and Training: A Quest for Effective Provisions 182

Educators’ and Practitioners’ Perspectives of CET: A Case from Singapore 186

 Support for Students Before and After the Course 187

 Support from Employers 188

 Support from Administrators 189

 Coping with New Online Education Provisions 190

 Skills Required of Contemporary Adult Educators 191

Recommendations for Effective CET Provisions 193

Towards an Effective Provision of CET 196

References 197

9 Working Women and CET: Enablers and Barriers 199

Working Women, CET and Employability 200

Women and Participation in Continuing Education and Training 202

Women Graduates’ Perspectives of CET:
A Singaporean Investigation 205
 Motivations for CET Participation 206
 Barriers to and Enablers for Participating in CET Programs 208
 Experience of CET Courses/Programs 210
Working Women’s CET Experience and Outcomes 214
References. 216

**10 CET Experience of and Outcomes for ‘Older’
Working Age Adults 219**
Older Workers, CET and Employability. 220
Older Workers, Their Needs and Bases for Engagement in CET. 222
 Factors Shaping Older Workers’ Learning for and in Work 223
 Older Workers’ Agency and Intentionality 225
 Singaporean Case 227
Findings from CET Project. 228
 Demographic and Work Background 228
 Motivations for CET Participation 229
 Factors Inhibiting Participation. 232
 Factors Sustaining Engagement and Completion 233
 Achievement of Purposes 233
 CET Teachers 234
 CET Provisions. 236
Older Working Age Adults’ Experiences and Outcomes
in Sum 238
References. 240

Index. 243

About the Authors

Stephen Richard Billett is Professor of Adult and Vocational Education at Griffith University, Brisbane, Australia, and an Australian Research Council Future Fellow. He has worked in vocational education, educational administration, teacher education, professional development and policy development in the Australian vocational education system and as a teacher and researcher in higher education.

Anthony Leow is currently the Assistant Director at the Centre for Educational Development of Republic Polytechnic. He completed his PhD at the University of Queensland, researching on the interface between public health and education policies. His current research interests include adult learning, workplace learning, continuing education and training of adults and lifelong learning.

Anh Hai Le is a Research Fellow at Griffith University, Brisbane, Australia. Her research interest focuses on workplace learning and curriculum development in tertiary education, with a specific emphasis on the process of building knowledge through scholarly engagement with industry and tertiary institutions. Much of her recent research has focused on lifelong and adult education.

Part I

CET Imperatives, Practices and Policies

This first section provides an overview of the contemporary national, workplace and personal imperatives for continuing education and training (CET) that make it an important focus for informed investigation through which to guide and support both policy and practice in this field. In this way, it sets out the premises for how such an educational provision might be considered by national governments, fitted within tertiary education systems and supported by enterprises and communities. These premises then also advise about how CET provisions can be designed, enacted, and evaluated. All of this is informed by a focused review of the extant literature and the multi-parted and large-scale practical inquiry that comprises a national case study from Singapore that comprises and informs much of this monograph. It comprises three chapters: Chap. 1—*Supporting learning across working life: Premises for effective CET provisions*, which sets out the rationale for a focus on CET and outlines the review and practical inquiry that comprises the case study from Singapore; Chap. 2—*Practice and policy implications for CET: A systematic approach* that draws on the findings of the review and the phases of the practical enquiry to offer suggestions for policy and practice; and Chap. 3—*Continuing education and training: The quest for effective provisions* that advances a review of the extant literature and its contributions to the effective provision of CET.

Chapter 1

Supporting Learning Across Working Life: Premises for Effective CET Provisions



Abstract Nation states increasingly require effective, accessible, inclusive, scalable and broadly engaged provisions of continuing education and training (CET) to develop further the capacities of their working age populations. This is no more the case than when those countries' social and economic needs rely largely or wholly on the capacities of their working age populations. Consequently, understanding what constitutes accessible and effective CET provisions enables informed decision-making about effectively realizing these national initiatives through developing skilled, employable, and adaptive workforces. Yet, to illuminate and elaborate what comprises efficacy, it is necessary to capture, analyze, understand and reconcile perspectives and needs for CET provisions, including national bodies, those who employ working age adults, education institutions, CET educators and, most importantly, working age adults themselves. Capturing and reconciling these perspectives is essential for establishing comprehensive account of what constitutes an effective CET system. This includes the kinds of CET provisions best able to meet the needs of working-age adults and their workplaces, and how they are delivered and engaged with by these adults. This opening chapter discusses the premises for understanding learning across working life and how it can be supported, guided, and enacted through CET provisions. It also overviews a research program on CET undertaken in Singapore and summarizes its key findings, conclusions, and contributions. The Singapore investigation secured contributions from interviews with CET graduate informants and their employers, and survey respondents from a larger population of working-age Singaporeans. It foreshadows the identification and need for a systematic approach to developing and enacting effective CET provisions to promote and sustain individuals' employability across lengthening working lives that are then elaborated in subsequent chapters. Like any other nationally based case study, it has strengths and limitations. Importantly, it provides a comprehensive case and important perspective from a nation state largely reliant on its working-age population's capacities and one that has an aged and aging profile. Hence, CET is central to its social and economic well-being and, indeed it is a sovereignty. Whilst there are limitations with a case study based within one country, these perspectives render it particularly helpful to inform discussions and decisions in others.

Keywords Continuing education and training · Educational purposes · Educational processes · Employability · Scalability · Social goals · Economic goals · Public enterprises · Private enterprises · Working age adults · Older workers · National priorities · Policy imperatives

Continuing Education and Training: A Growing Interest

National states with both developed and developing modern economies require effective, accessible, inclusive, and broadly engaged provisions of continuing education and training (CET) to develop further the capacities of their working age populations. This requirement goes beyond the effectiveness and profitability of the private sector enterprises that deliver much of the economic contributions and employment. The further development of those skills equally applies to public enterprises and particularly those focused on important social goals such as health and aged care, education and development and maintenance of physical infrastructure and caring for the environment. An effective provision of CET is especially important for countries whose viability is dependent upon the skills and adaptiveness of the working-age population, such as Singapore. That skillfulness is essential because of the absence of natural resources to sustain their economic well-being and providing for the nation state's social and economic needs. Moreover, in an era in which work is premised increasingly on adaptive human expertise, and a growing need for greater national self-reliance and self-sufficiency, these capacities are becoming vital for all nation states to meet their social and economic goals, and to maintain their national sovereignty. That is, in an era of geopolitical tensions, to have the resources available to resist unwelcome and unwarranted interference from other countries to national well-being. An effective provision of CET is also necessary because of the wide acceptance that the initial occupational preparation that occurs in most countries for young people in the transition from school to work is insufficient to maintain individuals' employability across lengthening working lives. The changing requirements for occupational practices and dynamic and specific needs of individual workplaces necessitate working age adults to continue to learn across their working lives who are required, on the one hand, to maintain their employability, but also contribute to their workplaces viability through an ability to adapt, on the other (Organisation for Economic Co-operation and Development [OECD], 2021).

Together, these circumstances emphasize the importance of the currency of the working-age population's occupational skills. These adults' adaptability is also becoming central to national governmental considerations about educational effort and for the ability of both public and private sector enterprises that provide the goods and services needed in these nation states (Economic Strategies Committee, 2010a). Consequently, the focuses on working-age adults' employability have been extended to include not only the ability to secure employment, but also to sustain that employability as the competence required for occupational practice constantly

evolves as do workplace performance requirements (Billett & Hodge, 2016). Globally, these imperatives are leading to a growing interest by supranational government agencies (e.g., OECD, 2021; UNESCO, 2022), national governments, professional and employer bodies and representatives of employees in how that employability can be realized in ways that are scalable for and accessible to entire working populations. Indeed, the national economic review in Singapore in 2010 had as its first priority to maintain and develop further the capacities of all members of its working-age population (Economic Strategies Committee, 2010a). This policy aim has been advanced through establishing institutions and programs to support the ongoing development of working age adults in ways that are systematic and strategic, and embracing it is a national strategic priority. This national concern and priority was articulated clearly in a recent statement by the Minister for Education, who stated that:

... If we need to top up the knowledge and skills of our people as they take on new jobs every four to five years, that means upgrading 20 to 25% of our roughly 3 million local workforce each year: or about half a million adult workers every year! ... the definition of success for our education system cannot be just how well we produce a cohort of 30 to 40 thousand students each year for the job market. It should be how well we do *that* plus retraining and upgrading about half a million adult learners each year. (Minister Chan Chun Sing, 10th February 2022) (Ministry of Education Singapore, 2022)

What is proposed in this challenge for the education system and CET provisions is to develop the capacities of the entire national workforce over a four- or five-year cycle. Consequently, not only is there a need for effective provisions of CET, but for those to be scalable to accommodate an entire national workforce. However, this country is far from being alone, as many others have implemented policies and practices to promote and realize effective CET provisions for working-age populations, albeit in different ways depending upon their needs and aspirations (Bostrom, 2017; Guo, 2014; Lauder, 2020; Schuetze & Slowey, 2013; Zimmermann, 2020).

Therefore, understanding what constitutes accessible, effective and scalable CET provisions enables informed decision-making and actions about how best to achieve these important national goals. That importance extends beyond the nation state that comprises the case presented here as achieving a skilled, employable, and adaptive workforce have become an important policy focus globally (OECD, 2021). To understand what comprises that efficacy, it is necessary to capture, analyze, and reconcile the perspectives of key stakeholders including national bodies, education institutions, those who employed in both public and private sector workplaces, CET educators and, perhaps, most importantly, the working-age adults who will elect whether or not to engage in these educational provisions, for what reasons and how they will come to engage. Capturing and reconciling these perspectives is essential for establishing what constitutes an effective, accessible and scalable CET system. This includes what kinds of CET provisions can best meet the needs of these adults and their workplaces and how they are delivered and engaged with by all kinds and occupational classifications of working-age adults with diverse levels of educational backgrounds, across categories of gender and age.

As a starting point, this opening chapter discusses the purposes of and premises for understanding learning across working life and how it can be supported, guided, and enacted through CET provisions. That is, it establishes the foundations for exploring alternative purposes and forms of educational provisions, encouraging a departure from conventional or orthodox approaches to CET such as the traditional face-to-face learning experiences in tertiary education institutions. Inevitably, given the quest for scalability, identifying settings where CET can be enacted for working-age adults necessarily brings into focus the role of learning experiences within and through these adults' workplaces. Following this, an overview of the research program undertaken in Singapore, and summary of key findings, conclusions, and contributions are advanced in preview, which are subsequently detailed in subsequent chapters. These comprise a synthesis of recent literature and the phases of a national investigation conducted in Singapore (*see* Chapters 3—*Continuing education and training: The quest for effective provisions* and 4—*Investigating effective CET provisions to promote employability: Method and procedures*). The investigation furnished contributions from interviews with CET graduate informants and employers, and survey respondents from a larger population of working-age adult Singaporeans, including supplementary surveys to capture the potential of online CET provisions that became a priority during the COVID-19 pandemic (Billett et al., 2022). Further, it foreshadows the identification and discussion of a systematic approach to developing and enacting effective CET provisions to promote and sustain individuals' employability across lengthening working life that are elaborated in Chap. 2—*Practice and policy implications for CET: A systematic approach* including, a focus on older workers (*see* Chap. 9—*CET journey: Experience of 'older' working age adults*). This national study provides a salient case study as it refers to a nation state that relies on the capacities of its working age population and one that has an aged and aging profile.

CET Premises, Purposes and Processes

A review of approaches and provisions focused on goals for, modes and approaches to CET globally provides the basis for an exploration and elaboration of the purposes for, conceptions of and provision of CET in the contemporary era. As foreshadowed, CET is becoming an increasing concern of supranational agencies, governments, communities, enterprises and working age adults seeking to sustain their employability. It is reasonable to suggest that the kinds and level of interests that have previously been directed towards schooling and tertiary education for young adults is now being extended to CET. Now, such is the growing need for continuing learning and development in the contemporary era, as necessitated by lengthening working lives (Ebbinghaus, 2012; OECD, 2015), constant changes in occupational and workplace requirements (Billett & Hodge, 2016) and needs for greater national economic self-reliance (Eder, 2023). Consequently, heightened

interest and unprecedented considerations are being given to its purposes and forms. All of this emphasizes the central role of CET in seeking to secure employability. Importantly, securing that employability is more than providing effective initial occupational preparation and aligning it with entry into the workforce. Instead, increasingly, it is about sustaining individuals' employment across lengthening working lives. That is, to assist them in maintaining their ability to achieve occupational and workplace performance. This has at least four implications at the personal, workplace and community and national levels.

Firstly, maintaining working age adults' employability is important for them to remain employed, adapt to changing circumstances, seek and realize career and workplace advancements and more broadly adapt and enact their occupational capacities in different ways as circumstances and work requirements change. Secondly, for the workplaces or work settings in which they are employed, those capacities are important for maintaining their ability to produce goods and services effectively thereby maintaining the viability and potentially advancing the scope and adaptability of those work settings. Thirdly, for the communities who consume the goods and services provided by these workers and enterprises, the maintenance of those capacities is central to their quality and effectiveness. Fourthly, collectively, employability not only assist these working age adults avoid unemployment, thereby preventing them from becoming a financial liability for nation states, but also their capacities are central to being able to be self-sufficient in the provision of goods and services and be both import competing and able to export those capacities in an increasingly globalized economy and now, one fraught with geopolitical tensions.

Yet, it is necessary for this educational provision to be viewed in terms of its own purposes, and practices, rather for those associated with pre-employment education and training. That is, it need to be organized and enacted in distinct ways from that mainly designed for young people transitioning from school to working life. This includes how its goals and provisions can best meet the needs of working age adults who, unlike children engage compulsorily in schooling or, young adults now mandated to participate in tertiary education. Instead, working age adults must identify the need for participation in CET, have means by which that participation can occur alongside other commitments and whose processes are such that these goals are likely to be realized. It follows that such a reconsideration of this education provision needs to be informed by accounts of practice occurring and targeted empirical work. These two concerns are addressed in this volume. It provides such a review and is also informed by the findings and outcomes from a study in the nation state of Singapore, which has long had a more developed and systemic approach to CET than most other countries. As noted, this is because it realized, early on in its formation as a nation state, the importance of sustaining the employability of its workforce as its key economic and social asset. Unlike many other countries who can draw upon provisions of natural resources or even an ability to export food products, this nation state relies on the talents, capacities, and expertise of its working age population. Hence, the development and maintenance of the qualities of its workforce becomes a central and national consideration. Yet, as other nation states move away from a reliance upon natural resources and focused upon what is sometimes