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Equity and Access to High Skills through Higher Vocational Education

Edited by
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Ann-Marie Bathmaker
Gavin Moodie
Kevin Orr
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Dedication to Emeritus Professor Jim Gallacher, Professor of Lifelong Learning at Glasgow Caledonian University

This book is dedicated to Jim Gallacher, who died while this book was being compiled in October 2020. Jim was a key figure in our field internationally, and in his home country of Scotland he was a driving force in the widening of access to higher education. In particular he was concerned with the links between colleges and universities and the changing roles of colleges and vocational education and training, in order to increase people's opportunities for lifelong learning.

In the 1990s he established the Centre for Research in Lifelong Learning, a joint centre between Glasgow Caledonian University and the University of Stirling. As co-director (1999–2008), Jim ensured this centre had extensive international reach through establishing a biennial conference series at which some of the editors of this book first met. Much of his research was policy focused and aimed to make a difference to people's lives. Alongside this research activity, he was committed to engaging with policymakers and seeking to influence policy decisions. Recognition of his important contribution to the field led to his appointment to the Scottish Funding Council (SFC) where he was chair of the Access and Inclusion Committee and he was Vice-Chair of the Universities Association for Lifelong Learning (UALL). He was also a member of the Scottish Executive's Lifelong Learning Forum and an adviser to the Scottish Parliament's Enterprise and Lifelong Learning Committee for their Inquiry into Lifelong Learning.

*Following his so-called retirement from Glasgow Caledonian University in 2008, Jim continued to be exceptionally active. As well as holding an Emeritus Chair at Glasgow Caledonian University, he held honorary chairs at the University of Stirling and the University of the Highlands and Islands and was a Distinguished Visiting Professor in Capital Normal University, Beijing. In retirement he remained committed to supporting the further education sector through being a member of the Board of Management of the City of Glasgow College. He carried on being a highly productive researcher too, including being co-editor and author with Fiona Reeve of the publication *New Frontiers for College Education: International Perspectives* (Routledge 2019).*

His achievements were substantial and he touched many people, but it is his humanity and decency that will be remembered most. We are pleased that his chapter (co-authored with Fiona Reeve) forms part of this collection. It is a sadness not to be able to share this publication with Jim, a prolific and passionate researcher. Those of us who also knew him as a friend and colleague with whom we have enjoyed a walk in the Scottish hills or sipped a dram while being shown the steps of some fiendishly complicated Scottish country dance, will sorely miss him, as not least of all will Pauline and his sons Tom and Aidan.

Thanks also to Mike Osborne, friend and colleague, for sharing his thoughts of Jim 'the best of men'.
Sue Webb

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PART I

Framing Equity and Access to High Skills



Introduction

*Elizabeth Knight, Ann-Marie Bathmaker, Gavin Moodie,
Kevin Orr, Susan Webb, and Leesa Wheelahan*

The edited book comprises 14 chapters, including this introduction. The book begins with one substantive chapter that explores the concepts of equity and access and contextualises the localised specific experiences of the growth of higher vocational education presented in the country and province analyses that follow. The nine country- and province-specific chapters are based on empirical work and are drawn together by three

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reflective chapters that conceptualise higher vocational education in three distinct but complementary ways.

The book opens with a chapter framing equity and access that draws together the contributions of the country and province chapters. Webb (2022) theorises the space for higher education outside the university sector. By conceptualising the tension between equity and excellence in these forms of education, she draws out the opportunities for expansion of higher vocational education and offers arguments to inform future policy and practice.

The country and province chapters of the book have been written to provide glimpses into the practices in these nine different jurisdictions. It is hoped that they illuminate the practices they describe and enable a greater understanding of the range and diversity of higher vocational education arrangements in different systems. These touchdowns (Rizvi and Lingard 2010) of global practices that are considered in each of the chapters provide a comprehensive overview of the contribution of higher vocational education in five continents across the globe.

The chapter on Chile considers the interplay between human capital and human rights. Lincovil Belmar (2022) outlines the marketisation of the education system in Chile and the issues that are posed for social justice.

Bathmaker and Orr (2022) consider the complex and complicated tertiary landscape in England, with its multiple shifting policies, and determine whether higher vocational education makes a central or marginal contribution to enabling social mobility.

The nature of a differentiated post-school system in South Africa is explored in Papier and Needham's (2022) chapter, which considers the impact of a post-colonial education system.

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Skolnik (2022) outlines the provision of higher vocational education in Canada and the development of the short-cycle tertiary education programmes which support particular occupations.

In the German context, Graf and Powell (2022) explore how the national system of advanced skill formation interacts with higher education science and industry.

Gallacher and Reeve (2022) trace the United Kingdom's approach to meeting skill needs and how this differs between England and the rest of the United Kingdom. They draw on the history and development of higher vocational qualifications to illustrate the approach.

Floyd et al.'s (2022) chapter on the United States of America presents case studies to show how institutions have responded to workforce needs and how American community colleges have become a key part of developing a diverse workforce.

Hodge et al. (2022) look at the opportunities for broadening participation through higher vocational education and the barriers caused by Australian arrangements. This chapter accentuates the differences between higher education in traditional and vocational education providers.

Quebec's unique institutional type, the *collèges d'enseignement général et professionnels (cégep)*, is explored in the chapter from Beaupré-Lavallée and Bégin-Caouette (2022). Their contribution shows the opportunities of thinking creatively about the offer of higher vocational education.

The final part of the book reflects on systems and higher vocational education. This final section leads with a chapter by Moodie (2022), which presents a typology of higher vocational education based on conceptualisations of contrasting tertiary education systems. Two core concepts form the structure of the typology—the object of education and level of education. Moodie further characterises the object of education using three dimensions: knowledge acquisition; preparation for an occupation and, scope, horizon and duration of training. Through this framework that provides an understanding of the arrangement of vocational and higher education sectors which coalesce to form higher vocational education, the country chapters in the book can be reflectively revisited. This contribution enables the conceptual classification of different types of postsecondary education systems. It also, Moodie (2022) suggests, identifies other possible configurations of these systems and potential re-imaginings of higher vocational education.

In the second substantive chapter of the final section, Wheelahan (2022) takes a contrasting approach and maps the emergence of higher vocational education and the disappointments of those engaged with the sector. The chapter presents a theoretical reflection upon the unforeseen barriers to

growth that have been presented to higher vocational systems. This includes the hierarchical nature of higher education structures that keep college-based higher education systems ‘in their place’. She reflects on higher vocational education across the Anglophone world, drawing on her position as a global authority in this form of tertiary education to explore how and why entrenched systemic inequalities have ensured higher vocational education has remained a lower status route for disadvantaged students.

In providing the final chapter as an epilogue to the book, Gale (2022) engages with higher vocational education’s struggle between the form and function of their offerings. In working through the varied country and province chapters’ contradictions, he problematises the imagining of these higher vocational education systems and draws the book to a conclusion by asking readers to reflect on the core aims of education, higher, vocational or otherwise.

Higher vocational education has been presented as a panacea to the needs of high skills and other economies. The book also considered the role of higher vocational education more broadly in contributing to tolerant, inclusive, sustainable and socially just societies. In this series of contributions, authors have traced how this plays out in different contexts and how close, or how far, systems are from realising equity, high skills and productivity through higher vocational education.

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Higher Vocational Education and the Matter of Equity

Susan Webb

INTRODUCTION

Higher vocational education is variously defined, located in different types of institutions and governed by different arrangements in each of the countries considered in this book collection. The phenomenon ranges from the European model of two-year ‘short-cycle’ higher education sub-bachelor-level qualifications provided by universities or colleges (HNC/Ds and Foundation degrees being examples in the UK) to applied bachelor’s degrees in Sweden and Australia, applied baccalaureates at community colleges in the USA and other combinations of higher level vocational and academic programmes including degree apprenticeships (Bathmaker 2017; Webb et al. 2017; Hippach-Schneider et al. 2017; Köpsén 2020). Despite such diversity in offerings, there are commonalities across these settings. Higher vocational education is usually a response to two distinct policy concerns: on the one hand, policies to increase economic

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competitiveness and productivity and, on the other hand, policies to promote social justice and equity. In relation to the first of these policy concerns, higher vocational education develops when the credential levels of vocational programmes typically associated with technical vocational education and training (TVET), also known as further or vocational education and training (VET), are raised to higher education levels. In these circumstances, the development of higher vocational education is presented as a necessary means for countries (and individuals) to achieve greater economic competitiveness and raise productivity through increasing human capital (OECD 2019). In relation to the second concern of social justice and equity, social inequalities are thought to be exacerbated for those deemed underqualified for work in knowledge-driven economies; therefore, new opportunities are needed to widen participation in higher education (OECD 2019). Consequently, in those countries where the expansion of higher vocational education qualifications takes place in institutions that have distinctive traditions of serving their local communities and employers, the expansion of higher vocational qualifications is viewed as an equity strategy to widen access to higher education (Gallacher 2009).

Notwithstanding these premises, this chapter explores how the concept of equity has been understood in research on widening access to higher education through developments that connect vocational or further education with higher education. The aim is to contextualise the country-specific experiences of the growth of higher vocational education presented in this book collection. The chapter builds on the idea that policies and practices contain historical traces and that different assemblages of policies for vocational or further and higher education lead to different spaces for opportunities for different students (Detourbe and Goastellec 2018). Arguably, these traces and assemblages are important to elicit because different understandings of equity will have different outcomes for widening access to higher education. Moreover, the reason that equity is the focus here is that system change through expansion has been one of the main approaches countries have adopted to widen access to higher education for those who traditionally have not participated (Pitman 2017).

The chapter explores literature that considers how vocational education and higher education as systems or as institutions have connected in order to expand opportunities to higher education qualifications for those who have not traditionally participated at this level. The chapter is organised in two parts. The first part considers how system expansion, which is often

accompanied by increased institutional and vocational and higher education sector differentiation, is understood to affect equity in higher education. Three conceptualisations of equity developed by McCowan (2016) are outlined and discussed in order to set up a frame for reviewing the effects of expansion in more detail in the second part of the chapter. The second part of the chapter then uses McCowan's (2016) conceptual frame to present and discuss the findings of a recent systematic literature review on widening access to higher education conducted by the author with others (Burke et al. 2021). The studies that will be considered in this chapter are those that highlight policies and practices to enable progression to higher education from vocational education.

HIGHER EDUCATION EXPANSION, DIFFERENTIATION AND CONCEPTS OF EQUITY

Increasing the number of higher education providers or the range of higher education-level offerings and thereby changing the institutional boundaries and remits of post-school educational providers has been the major way mass and universal systems of higher education have been created in many countries (Pitman 2017). Indeed, as Teichler (1998) explained more than 20 years ago, since the 1970s there has been a widely held belief that industrial societies have needed to expand their higher education provision. In doing so, increased diversification and differentiation across the system are to be expected since new types of students with different motivations and academic preparation need different forms of teaching and learning.

Trow's (1974) model of system expansion highlighted the likelihood of increased differentiation and diversification accompanying the shift from elite to mass and universal higher education. Currently, as the proportion of young adults (under 25 years of age) with a tertiary education qualification has reached 44% across the OECD and the qualifications they have achieved have widened to include higher vocational education qualifications, as well as bachelors or masters (OECD 2019), Trow's (1974) model seems prescient. The model is just that though. Country-specific higher education systems are more nuanced with elements of the elite model being present in both mass and universal systems or even operating together within the same institution, as Trow (2006) has acknowledged. Segmentation within a system occurs when there are differences in the

structural support and rewards between, for example, research and teaching with the result that institutional diversity becomes hierarchically organised. Although the expansion of higher education over the past three decades has resulted in institutional differentiation, including new forms of higher education teaching, learning, qualifications and institutions (Gellert 1993), expansion alone is unlikely to ensure greater equity in higher education. Who goes where is a key issue as suggested below:

Halsey (1992) perspicaciously predicted that, despite the widening of participation, the relative gains of the under-represented might be limited, as elite institutions preserve their traditional boundaries. There may be merits, but also dangers that in many HE systems, whether they be dual, binary, stratified or unified, one part of the system only takes on the bulk of the widening participation remit. (Osborne 2003: 17)

In Australia, Marginson (2018) argues that while there are system imperatives and cultural norms that militate against formal differentiation in the unified university system, the historical traces of the earlier binary system are still discernible. Marginson (2018) contends that the unified system in Australia comprises a steep hierarchy between the more research-focused and the more teaching-focused institutions that reflects their different performance in research, teaching and in who they teach. Furthermore, as the state-owned colleges (TAFEs) and other private providers have been offering bachelor and other higher vocational education programmes in Australia since 2002, but under a recognition and quality system that privileges the universities in developing and awarding qualifications, the non-university providers are offering the same qualifications as universities but under circumstances over which they have very little influence (see Wheelahan this volume; Hodge et al. this volume). Moreover, the tendency of higher vocational education offerings to be located in the segments of post-school education that have developed distinctive vocational pathways with employers and market forces shaping the curricula offerings has tended to reinforce the role of these programmes in reproducing existing labour market segmentations and inequalities rather than promoting equity and social mobility (Avis 2012; Bathmaker et al. 2018; Köpsén 2020). As Avis has noted:

If VET is to address the 'needs' of employers in its immediate environment it will reflect the classed structure of regionally and locally based employment.
(Avis 2012: 5–6)

It is in this context that the chapter explores conceptualisations of equity which Marginson (2016) regards as the problem of high participation systems when he asks who has access to what?

To understand how these expanded and differentiated higher education systems have sought to widen access, the chapter draws on McCowan's (2016) three principles for understanding equity of access in expanding systems of higher education. Using the examples of England, Brazil and Kenya, McCowan (2016) argued that expansion has been associated with increased levels of institutional differentiation and stratification in the three systems so that equity of access is understood variously as (1) expanding the *availability* of places so that more people from all backgrounds can access higher education, with the effect that inequalities between social groups tend to continue; (2) increasing the *accessibility* of places, to redistribute the proportions of people accessing higher education in line with society as a whole, though often this approach has the effect that those from the underrepresented and marginalised backgrounds find access to lower status forms of higher education is made easier than access to the more selective and elite forms; and (3) increasing the *horizontality* of the system with the effect that entry to all institutions is more diverse and the benefits and outcomes are less dependent on individuals' socio-economic backgrounds and the status of the institutions at which they have studied.

EQUITY UNDERSTOOD THROUGH THE CONCEPT OF *AVAILABILITY*

Australian higher education is a clear example of a high participation universal system (Marginson 2016; Trow 2006) with more than 50% of adults aged 25–34 achieving a tertiary qualification in 2018 (OECD 2019), well above the OECD average of 39%. Arguably, this high level of participation has been achieved through system expansion. Initially this involved increasing the number of bachelor's degree awarding institutions following the Dawkins Review in 1988 (Croucher et al. 2013) rather than specific access initiatives led by institutions (Pitman 2017). Since 2012 participation has increased through the introduction of demand-led funding. Both of these strategies can be understood as examples of creating

greater equity through increasing *availability*. One consequence however, in a system such as Australia that is formally status averse, at least with respect to differences between universities, is that ‘since 1973 the policy approach to equity has been ... extending higher education to under-represented social groups at the margins of participation rather than redistributing social access to elite universities’ (Marginson 2018: 29). Similarly, the bifurcated tertiary system that separates vocational education, including the higher vocational education provided in TAFEs from universities in relation to governance, funding and federal/state policy variations, confers lower status to the vocational sector. The perception that higher education in the vocational sector is of lower status to that in universities is reinforced by the poor transfer rates between vocational education and university-based higher education (OECD 2019; Wheelahan 2009). Viewing strategies to increase equity through this lens of expanding *availability* within the system, these accounts of Australia highlight the continuance of inequalities in spite of increased participation in higher vocational and university-based higher education.

EQUITY UNDERSTOOD THROUGH THE CONCEPT OF *ACCESSIBILITY*

Moreover, following on from the above, once a system becomes universal, exclusion from the benefits and opportunities that higher education affords when there are rapid social, technological and economic changes confers greater disadvantages than it does under an elite or mass system. In Australia, the Productivity Commission’s report (2019) on expansion of access through the demand-led system gives the initiative a ‘mixed report card’ because although access has increased, the distribution of students in higher education has still not achieved the equity targets set. The participation of equity groups varies between institutions and participation gaps and outcomes have widened for some equity groups. As Marginson (2016) has argued:

As systems grow, the question about equity begins to shift from access? to access to what? In “elite” systems in Trow’s (1974) sense, every place carries a reward, and equity turns on inclusion/exclusion. In HPS [high participation systems], with a continuing elite subsector, the binary structure becomes ternary: (1) high value inclusion, (2) low value inclusion, (3) exclusion. There are continuing issues at the boundary of inclusion and also in relation to social mobility,

especially for low socioeconomic status and migrant families, rural students, students from underrepresented ethnic and culturally-defined social groups, students with disabilities, and others. (Marginson 2016: 264–265)

Teichler (2008) commenting on the way that many researchers have used the framework developed by Trow explains that rather than representing historical phases of development of higher education systems where one system supersedes the other, Trow's framework best describes different sectors of higher education systems that emerge at different times and can co-exist. For example, Australia exemplifies a stratified system of higher education comprising universities and other non-university higher education providers including publicly owned TAFEs traditionally associated with the vocational education and training sector. The extent to which institutional expansion within a stratified system has increased the availability of higher education to new groups of students in Australia is a mixed picture and somewhat different to the experiences of some other countries (Brett et al. 2019; Koshy et al. 2020; Webb et al. 2019; Shreeve 2020). In Europe and North America, and increasingly in other parts of the world as our systematic review has revealed (Burke et al. 2021), where binary systems exist, the responsibility for increasing the participation of non-traditional groups of students normally falls on non-university providers (Teichler 2008). Indeed, although these developments have followed different trajectories in English- and German-speaking systems (Kuhlee and Laczik 2015), there is growing recognition of the part played by the post-school college sector, either with the university sector or alone, to increase access to higher education and qualifications for high skill formation (Gallacher and Reeve 2019; Powell et al. 2012).

The evidence from England is that over the past 30 years, between 10% and 15% of all higher education students in England have attended further education colleges (Parry 2015). Across the UK as a whole, the vocational education and training sector has been promoted as the preferred pathway to higher education qualifications for certain types of people, that is, those traditionally not participating in higher education, who are deemed to need a fast accessible route to high-level qualifications and employment (Bathmaker 2016). Yet, steep status hierarchies have cut across policy attempts to expand higher vocational education in England because the 'system architecture [is] designed to reserve one sector for higher education and a further education sector for lower-level programmes and qualifications' (Parry 2015, 493). Whether this approach to increasing

accessibility for previously excluded groups is promoted as a separate technical route with a reputation for quality equivalent to the university sector, as some argue is the case with the universities of applied sciences in Germany, or whether this form of higher vocational education benefits individuals' life chances, but does little for social mobility (Avis and Orr 2016) is one of the conundrums of approaching equity through *accessibility*. Nevertheless, expansion through higher vocational education often ensures that the post-compulsory education sector becomes more interconnected. In Australia, King and James (2014) have observed that one of the consequences of the introduction of a demand-led system has been increased diversity as universities reach down to vocational education and training colleges to develop pathways to boost their recruitment of students and these colleges reach up and become new providers of undergraduate degrees. Equity viewed through this lens of increasing accessibility to higher education reveals that system expansion through closer interconnection between vocational and higher education leads to increased differentiation in opportunities for students, rather than greater equality if the hierarchy of differences between vocational and higher education is not also addressed.

EQUITY UNDERSTOOD THROUGH THE CONCEPT OF *HORIZONTALITY*

As argued in the previous section, the continued positioning of vocational institutions offering higher vocational education as the 'bottom of the hierarchy' (Wheelahan 2016: 45) weakens the potential for this form of access and employment to provide social justice and social mobility (Avis and Orr 2016), at least in many Anglophone countries (Moodie and Wheelahan 2009). For example, although expansion of higher vocational education through the degree offerings of TAFEs in Australia highlights the job readiness of graduates since the majority of these bachelor offerings also carry industry accredited licenses to practice, their distinctiveness may not alter existing inequalities. This is because for the most part these qualifications provide entry to highly gendered and low- to middle-income-level labour markets in health, early years and education, business and finance (Webb et al. 2019). In contrast, there is emerging evidence that in some German-speaking countries, higher vocational education and universities are increasingly forming a hybrid higher education system, at

least on the margins, rather than extending the hierarchically stratified system typical of liberal market systems (Graf 2013, 2018). Arguably, these hybrid system expansions provide an alternative conceptualisation of equity as *horizontal*ity. In these DACH countries (Germany, Austria and Switzerland) the status differences between academic and vocational education have been less stark, at least until recently (Wolter and Kerst 2015). This may be because the dual system of vocational education involving employers and social partnership agreements, as well as education providers, has ensured greater qualifications hybridity within vocational qualifications. These vocational qualifications comprise broader educational outcomes alongside the vocational, and their development has shown resistance to the spread of English-speaking countries competency models (Clarke and Winch 2015). Correspondingly, students and employers may attach greater value to the outcomes of the vocational higher education sector, resulting in recognition that routes to widen access to new forms of hybrid higher vocational learning are reconfiguring the relationships between academic universities and applied universities (Deissinger 2015; Wolter and Kerst 2015). Indeed, Backes-Gellner and Geel's (2014) study in Switzerland shows that whilst vocational higher education institutions admit more students from lower socio-economic backgrounds, compared to academic higher education, the students' initial lower status position is compensated for by less risky labour market outcomes, although over the longer term their returns may be lower than those from universities. This new higher vocational route may go some way to overcoming the problem that inequalities are still more prevalent in Switzerland compared to other European countries (Goastellec and Girinshuti 2014). More recent research by Krone and colleagues in 2019 published in German and cited by Graf and Powell (2022, this volume) states that non-university higher education offerings in dual learning settings with employers are increasingly attractive to more advantaged school leavers and the graduates are highly valued by recruiting employers, not only by the employers with whom they were trained.

Similarly, there is new evidence to show that in the USA community colleges that traditionally offered two-year qualifications only and provided an important access route to four-year institutions (universities) for students from groups underrepresented in universities are now offering bachelor's degrees in work-related curriculum areas (Floyd et al. 2022, this volume). In Sweden too, the expansion of applied bachelor qualifications through the National Agency for Higher Vocational Education

operating outside the university system, but aligned with universities through the qualifications framework, has the potential to promote equity as horizontality (Köpsén 2020). Köpsén (2020) concludes though that the privileged role given to employers in the development of the higher vocational education offerings limits students' future employment opportunities and social mobility through focusing on context-bound knowledge and a narrow differentiated and distinctly vocational pathway to specific labour markets. In contrast, some Canadian provinces such as Ontario college-based higher vocational education offerings are providing new opportunities for students who would not normally access higher education and may have the potential to undermine the vocational education—higher education divide (Skolnik et al. 2018). In sum, examples of systems that adopt an approach to equity as horizontality are most often found in education systems where vocational education and training providers and universities have more equal status. It seems difficult to provide equity as *horizontality* in systems that are steeply hierarchical (Avis 2012; Bathmaker and Orr 2020; Köpsén 2020).

Having considered how equity can be understood in different forms of expansion of higher education, the second part of this chapter applies this thinking to a rigorous reading of 209 articles identified in a systematic review conducted by the author and others (Burke et al. 2021).

THE PLACE OF VOCATIONAL EDUCATION IN A SYSTEMATIC REVIEW OF EQUITY IN HIGHER EDUCATION

Recent major studies of higher education, such as those undertaken by the Centre for Global Higher Education under the leadership of Simon Marginson with 16 universities from the UK, Australia, China, Hong Kong, Ireland, Japan, the Netherlands, South Africa and the USA, have focused attention almost exclusively on university forms of higher education (CGHE 2021). Only one project led by this centre has explored alternative forms of higher education. Yet even that project has been relatively narrowly focused on the expansion of higher education through the growth of private providers internationally, although the study notes the role of further education colleges in the system expansion in the UK (Hunt and Boliver 2020). This dominance of research on universities rather than on alternative providers offering higher vocational education in expanded systems was also found in a recent systematic review (Burke

et al. 2021). This systematic review conducted by a team, that included the author, examined international literature on equity in higher education to explore ‘What key insights from the international literature are of significance to the Australian equity in higher education context?’ (Burke et al. 2021: 14). Of further interest to note is that one of the few major national studies to consider the returns of vocational education on graduates is a study in Germany (a country discussed by Graf and Powell in this volume), which has been funded recently by the German Centre for Higher Education Research and Social Sciences (DZHW 2021).

Significantly, the findings of our systematic review were that the gaze of much of the research on equity in higher education has been from the perspective of higher education undertaken in universities (Burke et al. 2021). A deficit framing predominated the accounts of studies of non-participation in higher education of people from underrepresented and marginalised backgrounds which individualised structural issues that could explain continuing inequalities. For the most part, studies highlighted remedial activities to widen access by focusing the research lens on individuals (students, parents, teachers and so on) and the practices of universities. As a consequence of this focus on individuals and institutions, internal country-specific path dependencies and the effects of different political formations or forms of capitalism were rarely discussed, even though some researchers have argued that different political formations and policy assemblages affect educational pathways (Charles 2015; Detourbe and Goastellec 2018).

Few of the studies analysed the structure and organisation of post-school education and the divisions between vocational education and higher education that corresponded with different educational pathways for students from disadvantaged and advantaged backgrounds. This is surprising given that the OECD (2019) has identified inequities arising from non-participation in higher education and highlighted the importance of higher vocational education in providing access to higher education for underrepresented groups. The lack of attention given to external influences on systems by supra-national agencies, such as the OECD and the World Bank, was notable in the 209 papers reviewed. The absences observed in our systematic review may in part be an effect of the language of publication since the review was confined to publications in English. The overwhelming majority of the 209 articles originated in the USA. Interestingly most of the papers that focused on system-related matters originated from researchers in European countries.

In conducting the Systematic Review, the team was guided by the nine stages developed by Gough (2007). The searches were limited to journal articles published between 1998 and 2019 identified through online academic databases within EBSCOHost, ProQuest and Web of Science. The initial search produced a list of 4484 papers which were reduced to 209 by a process of manual sorting using criteria to include only empirical research into an equity policy or programme or papers that evaluate or report on a programme seeking to improve university access for the student groups within the Australian equity focus. Following the initial analysis of the 209 papers, a second phase involved a Rigorous Review that sought to go beyond the descriptive analysis provided by the Systematic Review by drawing on the expertise of an international advisory group and project team to contextualise, problematise and synthesise the findings from the systematic stage of analysis. The purpose of this second phase was to examine both the delineations of the literature collected and to highlight any absences and silences.

Analysis of the abstracts of the 209 papers in order to select those papers showing an interest in how system expansion could increase equity in higher education identified ten papers. These ten papers provided insights on an interconnected tertiary system and the relationship between vocational and higher education including, for example, highlighting articulation agreements between institutions in different sectors or discussing policy-level initiatives to widen the field of higher education through encouraging higher vocational education to increase student equity. The ten papers all defined the country/countries of study, some adopted a comparative approach, some considered facets of system structures such as fee policies, and all considered the relationships between higher education providers and the transition from vocational to higher education.

These system-level studies of access to higher education covered a wide range of countries (including the USA, the four countries of the UK, Canada, Norway, Spain, Portugal, Russia and Australia). The systems analyses provided in these papers recognised the effects of political diversity. This diversity included the following: comparing the effects of neo-liberal market systems with more socially democratic state-managed systems particularly on fee policies (see Croxford and Raffe 2014 on comparing the four countries of the UK; Sosu et al. 2018 on Scotland; Jerrim and Vignoles 2015 on England, Canada, Australia and the USA) and changes in participation related to the number of places and institutions in the systems (see, e.g. Dias 2015 on Portugal; Otero and Whitworth 2006

on Spain and the UK). In relation to the higher education system, the studies encompassed the following range: unitary to bifurcated/binary tertiary systems and systems that are highly stratified to systems with much institutional diversity (see, e.g. David 2011 on the UK); systems that are blurring boundaries between vocational and higher education by developing new hybrid boundary crossing institutions (see, e.g. Pinheiro et al. 2015 on Norway and Canada, which are contrasted with Australia); and systems that are facilitating progression from vocational to higher education and valuing vocational qualifications over academic meritocratic forms of selection for entry (see, e.g. Baker 2016 on the USA; Cree et al. 2009 on Scotland; Yastrebov et al. 2018 on Russia).

The majority of these ten papers analysed large national data sets and provided in-country analyses or cross-country comparisons using a variety of methodologies, including policy analysis. Only one paper reported on qualitative research based on one case study (Cree et al. 2009). In part this methodological skew could have been an effect of the inclusion criteria in the systematic review which used key words such as evidence, impact and effectiveness (Burke et al. 2021: 26). The majority of papers focused on understanding and explaining the inequalities in access and participation in higher education; some of the papers focused on retention, the experience of studying and the results or outcomes of higher education for different social groups. The limited number of studies of retention and results were attributed to the limitations in national data sets. Social class (sometimes identified as socio-economic background) and to a lesser extent ethnicity were the main inequalities focused on, and in one case participation in ‘big, small’ countries like Australia (big geographically, small in population) was considered.

Strong messages emerged from these ten papers identifying factors affecting access and participation across different systems which align to some extent with the equity framework of McCowan (2016). In presenting an account of these ten studies in the next section through McCowan’s (2016) conceptual framework of equity, this chapter provides examples to help the reader reflect on the extent that expansion of higher education through higher vocational education contributes to social justice and equity.

STUDIES OF EQUITY AS *AVAILABILITY* IN THE SYSTEMATIC REVIEW

Two studies were identified that discussed policy and practices to widen access to higher education through developing closer collaborations between the vocational or further and higher education sectors and increasing the range of higher vocational qualifications.

Otero and Whitworth (2006) undertook a cross-country comparison of policy and practice in expanding higher education in Spain and England from 1997 to 2004 using policy texts and secondary literature that identified closer integration between sectors and the entry of new providers from the vocational sector. They found that whilst system expansion opened up access to more students from diverse social backgrounds, there were country-specific system differences. English policies were focused on equality of access, with a range of measures identified to expand and widen participation including the cross-sector initiatives of Aim Higher (a national funding scheme to support the development of access projects), the introduction of Foundation degrees in further education, and the university developed Access Agreements, alongside supposedly 'socially just' variable top up fees. In spite of the effectiveness of these initiatives in increasing the numbers of underrepresented students in higher vocational education and in some universities, the authors argued that more research is needed to understand and tackle the impact of educational inequalities created earlier in schools and school to tertiary education transitions that affect which part of higher education they could access through increased *availability*. In Spain, the focus was on changes in the quality of offerings and choices for students which included changes to the selection processes and increased students' mobility to take up their preferred course. Policies and practices in neither system were designed to radically transform equality in higher education by considering equality of achievement. Consequently, this study reiterates McCowan's (2016) argument that expanding the system through closer articulations across sectors, introducing new providers and offerings and modifying selection processes will increase access, but if the whole education system remains stratified, these measures are unlikely to transform inequalities in outcomes.

Dias' (2015) study of the expansion of Portuguese higher education and its transformation from an elite system in the 1970s to a mass system in the 2000s highlights the importance of the growth of different types of higher education institutions. Initially the expansion of higher education

in Portugal in the 1990s was attributable to the rise of private higher education, but the main shift to the mass system is associated with increased public investment in both the public universities and the public polytechnics and a policy decision to provide universal support, rather than direct social support to students from families with low incomes. However, Dias' (2015) detailed analysis of the student composition of higher education over these three decades indicates that the growth in participation was linked to the feminisation of higher education, as more 'female students from families of middle and upper class ... [participate]. It was not, as many had thought due to greater access for students coming from disadvantaged families' (Dias 2015: 114). Dias concurs with McCowan (2016) that expanding opportunities increases student numbers, but with only limited scholarship programmes, the Portuguese system expansion favoured the more economically advantaged. Student loans and other forms of support are needed to increase the access of the most disadvantaged, marginalised students; more structural and functional changes are needed to ensure expansion based on quality and equity.

STUDIES OF EQUITY AS *ACCESSIBILITY* IN THE SYSTEMATIC REVIEW

The majority of the ten papers selected for the Rigorous Review analysis adopted an approach to equity which focused on what McCowan (2016) termed equity as *accessibility*. Jerrim and Vignoles' (2015) four-country comparison using national longitudinal data sets of educational participation highlighted that socio-economic differences are more pronounced in England and Canada, than Australia and the USA, even accounting for differences in academic achievement. Interestingly though, given that these four systems have very different funding arrangements to support institutions and students, with the costs of university education being the greatest in the USA (at the time of the study), the level of parental education of a student was the main factor associated with different levels of participation in university baccalaureate study, particularly in highly selective institutions. This led the authors to conclude that access intervention efforts should focus on young people whose parental education level is in the middle or low educational backgrounds. Arguably, this focus should also consider how to affect and disrupt the educational pathways students

from different educational backgrounds are taking so that more from underrepresented groups can access higher education.

The study by Croxford and Raffe (2014) identified some similar findings. This study found that where systems share cultural and historical practices as do the four countries of the UK, political administration differences and localised policies in relation to fees that students pay up-front and loans they can access had minimal effects on differences in participation across the four countries. The study was undertaken during the period from 1996 to 2010 when the four administrations were expanding higher education opportunities, but in different ways and with different funding structures. This study timeframe was prior to the raising of tuition fees in England from 2012 to £9000 following the Browne review recommendations in 2010. Specifically, Scotland's approaches to access to higher education was associated with a centrally managed focus on social justice, whilst England adopted a more arm's length approach with government agencies promoting access initiatives to the highly marketised fields of further and higher education. Scotland exhibited some tendencies that research on other more managed economies have identified as effective (which will be discussed below). In other words, Scotland supported access to higher vocational qualifications (the HNC/Ds) and encouraged young people to access higher education through the vocational college to university route. As a consequence, Scotland's participation rate in the early 2000s was higher than that of England, and colleges did much to recruit students from working-class backgrounds, in part because these students were regularly found to study locally, and Scotland had retained a strong presence of local short-cycle vocational higher education opportunities in colleges with articulation agreements to complete bachelor's degrees in post 1992 universities. It was not until later in the 2000s that England was able to expand in this way through the introduction of the Foundation degrees which are primarily located in colleges not universities. However, Croxford and Raffe (2014) also identified that policies to modify higher education institution practices throughout the 2000s resulted in some universities being more accessible and welcoming to students from ethnic minority backgrounds, especially in England. Whilst students from working-class backgrounds tended to study locally and not move across country borders, students from ethnic minority backgrounds in Scotland were the most likely to leave their home country to study in English universities. The important message from this research is that institutions can make a difference irrespective of the broader political

environment in which they operate. Clearly this study shows that the expansion of higher vocational education (in the form of HNC/HNDs and Foundation degrees) was associated with an increase in students from underrepresented groups, but the extent to which the growth of these qualifications opened up access to bachelor's study and access to elite forms of university education varied between Scotland and England because of the different governance arrangements for these qualifications and the different recruiting or selecting policies of the universities in the two highly stratified systems. The authors conclude that there is no evidence that a more social democratic administrative context that regards higher education as a public good (the example being Scotland) was more effective in generating greater equality and wider access than a liberal market approach typical of England. However, Croxford and Raffe (2014: 93) also suggest that an outstanding question remains regarding 'what lessons can be learnt from the varying (but complex) role of college-based applications in the admissions process, notably the successful outcomes of Scottish college-based applicants to pre 1992 universities?'

The paper by Cree et al. (2009) further highlights this point that institutional behaviour may outweigh the desired effects of particular administrative arrangements. In this qualitative case study of the experiences of students transferring from higher vocational education in a Scottish further education college to completing their degree in Social Work through university study at an ancient, research-led university, the authors argue that the partnership arrangement facilitated access for first-generation higher education students (predominantly women), but the students experienced difficulties in fitting into the university because of the cultural shift needed to cope with study there. As a consequence, attrition from the university system was high. The authors conclude that the shift from a supportive learning environment in the college to the university needs addressing to enhance equity. They suggest questions could be asked about the preparation for further study provided by the college, the requirements and needs of employers for higher vocational qualifications or bachelor's degrees and the appropriateness of the level of support provided in the university, which if changed could benefit all students. Each of these questions indicates that greater access and better outcomes require a dialogue between the colleges, the universities and employers.

Another paper that explored the tensions in Scottish policy (Sosu et al. 2018) draws on the work of several social justice theorists (including Rawls, Young and Sen) to examine policy documents from 2011 to 2016.

The authors highlight how activities to widen access are undermined by meritocratic admissions processes and higher debt burdens for the most disadvantaged students. Moreover, since the policy environment permitted flexibility in the university Outcome Agreements required by the regulator, institutions could show they were making some progress on closing access gaps without adopting radical approaches. In other words, the policy environment encouraged differentiation between institutions in the extent to which they addressed the matter of equity for students from underrepresented groups.

The fifth paper that considered the *accessibility* of institutions was an analytical commentary on a range of empirical work. A paper by David (2011) applies ideas from work conducted in Ghana and Tanzania that identified the value of equity score cards for assessing equity practices. David (2011) revisited the evidence generated by the studies (which were part of the UK's Teaching and Learning Research Programme) to understand and encourage widening participation. The paper asked what these studies have added to our knowledge with respect to the three Rs—recruitment, retention and results. The new analysis highlighted the problems of trying to increase equity and widen participation in contexts where a highly stratified higher education system affects participation differently across the system. David (2011) identified examples where gender, race and the use of either an academic or a vocational qualification route to higher education affected which parts of the system are more *accessible* to students from equity group backgrounds. Similarly to others discussed in the next section, she identified that without radical change to the approach to equity and the inclusion of feminist pedagogies (which encompass inclusive and critical pedagogies), the equity as *accessibility* approach will only provide a partial solution to the equity problem.

In sum, the five papers discussed in this equity as *accessibility* section indicate that whilst this approach does increase opportunities for students from underrepresented backgrounds, the opportunities made accessible to students are limited and circumscribed by the interests of the institutions, the behaviour of others with whom students may be competing for places and the expectations of the educational pathways students have traditionally followed. Viewed through this lens of equity as *accessibility*, when students do not start from the same position and have access to the same resources, equal opportunities do not lead to equal outcomes.

STUDIES OF EQUITY AS *HORIZONTALITY*
IN THE SYSTEMATIC REVIEW

The remaining three papers that considered how education systems could increase higher education equity recognised that equality of opportunity and outcomes requires more than processes to create equal or fair access if they are to rectify the unequal conditions underrepresented groups experience. The system approaches that these studies explored varied. Pinheiro et al. (2016) identified the ways that in Norway and Canada, unlike Australia, increasingly hybrid institutions are offering vocational and academic routes to bachelor's degree qualifications which provide solutions to regional development where HE participation is low and there are many people who have experienced educational disadvantages. In recognition of the value of hybrid tertiary institutions in shifting the equity focus to horizontality in the system rather than accessibility or availability, the authors conclude as follows:

There is a need for comparative research on the evolution of the non-(traditional) university sector in order to understand the very different ways in which this sector is evolving in different national contexts (e.g. maintaining the tight TAFE boundaries in Australia versus the evolution of Canadian colleges, versus the rise of universities of applied sciences) and the complex relationships between these sectors and the traditional university sector. (Pinheiro et al. 2016: 320)

In the USA, Baker's (2016) study recognised that whilst community colleges have played an important role in increasing access to higher education for students from disadvantaged educational backgrounds, there has been a continuing problem of poor rates of persistence and completion. Baker (2016) argues that this problem is particularly concerning given that the majority of students enter community colleges with ambitions to obtain a bachelor's degree or above. Following legislative changes introduced under the Obama administration, in California, where the Student Transfer Reform Act was introduced to simplify and ease the transfer from two-year community colleges to four-year state bachelor granting universities, Baker (2016) constructed a difference-in-differences-in-differences framework to assess the effect of the legislation on student achievement and transfers. The study found that structured transfer programmes do work. They smooth out the informational barriers and

provide clear pathways to students who otherwise might take a range of units that may not enhance their goals. However, pathways that are seen to be useful for progression and transfer are likely to become over popular as students become more strategic in their unit choice-making. New forms of competition and inequalities may emerge; the study found that Asian students were the highest performing subgroups, and as enrolment in the pathway units is a zero-sum game, other racial and ethnic groups were enrolling at lower rates in these pathway units. Also, whilst the introduction of the Associate Degrees for Transfer enabled some students to gain this award who might not previously have done so, it also created an atmosphere that transfer is a complicated and difficult process. Transfer rates have not risen to the same extent as the award of Associate Degrees for Transfer (ADTs) which Baker (2016) attributes to the continuation of what Burton Clark in the 1960s called the ‘cooling out’ effect on marginal students. It may be interesting for future research to compare this approach in California with the approach Floyd et al. (2022, this volume) describe in Georgia and Florida where community colleges now award their own employment-focused bachelor’s degrees, thus challenging the hierarchy of higher education institutions.

The final paper considered takes up the idea of alternative vocational pathways to higher education. Yastrebov et al. (2018) focused on the Russian higher education system which can be entered from both academic and vocational study tracks. Access through the academic route is highly selective and meritocratic involving a high stakes university entry test. In contrast, those who have pursued a vocational study track do not have to take this entry test. The vocational education to higher education route therefore provides low risk and less restrictive access to higher education. Not surprisingly, the children of more advantaged families who are at high risk of failure in the entry test and selective academic route opt to pursue the vocational route to minimise the risk of downward social mobility. It seems that:

hybrid pathways have a complex effect on equality of educational opportunities. On the one hand these foster *social mobility* by offering an affordable and low-risk gateway to higher education for the children from less advantaged families. ... On the other hand, hybrid pathways are partly responsible for tightening *social reproduction*, because more-advantaged families whose children have poor academic records effectively exploit them to maneuver for advantage in access to higher education. (Yastrebov et al. 2018: 235–6)

Similar occurrences have been found in Australia in the way that those from more advantaged backgrounds make post-school preferences for bachelor's degrees in TAFEs (see Webb et al. 2017). It would seem that even adopting an access as *horizontal* approach is no guarantee that the primary objective of the policy (the underrepresented and least-advantaged) will benefit when social divisions (such as class, gender and race) and different access to resources (knowledge, networks and finances) mean that some are more advantaged to plan strategically to take up opportunities to access higher education.

DISCUSSION AND CONCLUSION

This chapter sets out to consider how the concept of equity has been understood in research on widening access to higher education with specific reference to the strategy of expanding higher education through engaging the vocational education sector in the equity project. Despite some commonalities, country-specific historical arrangements and different cultural understandings of the relationships between institutions or sectors have affected the forms the expansion that vocational and higher education has followed. Using McCowan's (2016) frame for understanding equity as *availability*, *accessibility* or *horizontal* has provided a useful device for assessing the equity effects of different strategies for expanding higher education.

When the developments of higher vocational education and transitions between further and higher education are developed ad hoc in systems with steep hierarchical distinctions between vocational and higher education, the offerings are less effective at reducing inequalities than those in systems that encourage an interconnected horizontally differentiated tertiary system. This was shown through studies comparing Scotland with England, Wales and Northern Ireland (Croxford and Raffe 2014), Canada and Norway compared with Australia (Pinheiro et al. 2016), parts of the USA (Baker 2016) and Russia (Yastrebov et al. 2018). Drawing distinctions between the extent to which system expansion increases the *availability*, the *accessibility* or the *horizontal* of opportunities provides a frame to understand why equality of opportunities do not lead to equality of outcomes. In many of the systems discussed, including those where greater numbers of underrepresented groups are participating, expansion of higher education provision and expansion of higher vocational education in non-university providers have exacerbated sector status hierarchies

and revealed cultural distinctions between institutions (see, e.g. Cree et al. 2009 on Scotland; David 2011 on the UK). When funding differences (for institutions and students) accompany these status differences, they contribute further in affecting who participates in what type of institution and what programmes of study (see Dias 2015 on Portugal).

Participation also continues to be affected by school leaving attainment. Meritocratic selection processes prevail despite the evidence that parental education and socio-economic background affect school attainment (Jerrim and Vignoles 2015 on England, Canada, Australia and the USA; Otero and Whitworth 2006 on Spain; Sosu et al. 2018 on Scotland), thereby reinforcing a post-school divide between those that follow the academic pathway and those that follow the vocational pathway (Gale and Parker 2013; Polesel et al. 2018). Unless system expansion includes measures to ameliorate the effects of how meritocratic admissions policies operate to maintain unequal opportunities for those from educationally underrepresented backgrounds, apparently neutral selection criteria based on academic school leaving grades will not lead to equal outcomes. As Marginson (2018, 30) has argued when ‘equity is defined as inclusion, not equality of condition; the goal is equal treatment and fair process not equal outcomes for all social groups’.

Nevertheless, as Graf (2018) and Hippach-Schneider et al. (2017) highlight there is strong growth internationally of higher vocational education and new hybrid institutions in more horizontally diverse systems indicating the potential for greater equity in outcomes for underrepresented students. However, in many countries this growth is still a grey area. Data collection methods do not necessarily recognise the role of different providers and the relevance and value of vocational education to equity in tertiary education (Hippach-Schneider et al. 2017). Graf (2018) argues that vocational academies are not taken seriously by many vocational education and university providers and data is not collected in ways to make visible this growing area of provision and its role in equity in higher education. Webb et al. (2019) make similar arguments with respect to the role and policy attention given to higher education in TAFEs in Australia. When data is collected, monitoring becomes possible and the invisible can be made visible. It is this making visible that is central to this chapter and the chapters brought together in this book. The aim is to make the expansion of higher vocational education and its effects more visible and more open to scrutiny, as a basis for more considered evaluation of the value and purposes of higher vocational education in the twenty-first century.

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PART II

Higher Vocational Education:
Country and Province Perspectives



Of Human Capital and Human Rights: Educational Reform and Institutional Hierarchies in Chilean Higher Education

Cristian M. Lincovil Belmar

INTRODUCTION

Chile has ‘one of the most marketised education systems in the world’ (Bellei and Vani 2015 cited in Zancajo and Valiente 2018: 5) where policy debates have traditionally paid little attention to vocational education and training (VET). VET policies in Chile have relied on human capital theory as their conceptual foundation. This was clear in educational reforms in the 1960s, designed to support industrialization of the national economy (Sanhueza et al. 2014), and even more in privatization and marketization policies of the 1980s and the New Public Management approach of the 1990s and 2000s (Salazar and Leihy 2013). At the beginning of the 2010s, the appearance of an alternative approach that challenged the

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human capital orthodoxy seemed unlikely, but in the second half of the decade, VET stakeholders seized an opportunity to debate policies in the field (Zancajo and Valiente 2018). As a result, recent reforms suggest a turn to a rights-based approach to VET, although new policies coexist with previous regulations that stress institutional hierarchies and human capital theory. Even when VET was finally recognized as a distinct subsystem within higher education (Ley N° 21091 2018), this did not mean parity of esteem between sectors.

Acknowledging political aspects of policymaking and their impact on the relationship between policy and research (Webb et al. 2017b: 139), this chapter explores the development of hierarchical relations in Chilean higher education. It argues that although vocational education has been historically positioned at the bottom of the higher education hierarchy, recent policies could enable a more horizontal relationship and a deeper commitment to social justice.

The chapter starts by analysing the growth of Chilean higher education in the last decades and its relationship with the reproduction of social inequalities. This is followed by a description of the current structure of higher education credentials¹ and institutions. A third section establishes the theoretical framework for the chapter, reviewing the main approaches to VET policy and ideal typologies of vertical and parallel higher education systems suggested by Skolnik (2016). The fourth section reviews the recent history of higher education policy (and politics) in Chile, from state-led industrialization in the 1960s to neoliberal policies in the early 2000s. The fifth section describes recent educational reforms and analyses possibilities for a deeper commitment to social justice in Chilean higher education.

In concluding, the chapter argues that the capacity of recent reforms to produce change effectively depends on their degree of retention (i.e. ‘the institutionalisation of a given policy solution through changes in the national legal framework and their incorporation into actors’ practices’ (Zancajo and Valiente 2018: 8)). At the same time, deeper and broader academic and political debates are needed to address inconsistencies within different (and contradictory) policy frameworks in Chilean higher education.

ENROLMENT GROWTH AND SOCIAL STRATIFICATION IN CHILEAN HIGHER EDUCATION

According to the World Bank (2019), the gross tertiary enrolment rate (GTER) in Chile grew from 21.16 per cent in 1991 to 88.46 per cent in 2017, with a huge part of this due to the expansion of higher vocational education (Mineduc 2016). This rapid expansion, reflecting what Marginson (2016b: 415–416) calls ‘high participation higher education systems’, has been celebrated by governments from both the centre-left and right, which claim a close link between education and social mobility.² However, higher education expansion is far from unproblematic as high participation systems of higher education result in ‘a stratified structure of opportunity’ (Marginson 2016b: 421).

In Chile, this stratified structure is strongly linked to the reproduction of socio-economic inequalities. Students from high-income families concentrate in high-quality universities³ (PNUD 2017: 305), while most students from low-income families enrol in vocational education (Mineduc 2016). As Cabrera and Andreu (2016: 128) propose, ‘there seems to be a stronger sustained relation between socio-economic and cultural status of students and quality and prestige of the [organizations] where they enrol’. Hence, the hierarchical structure of Chile’s higher education system needs to be problematized in order to understand its relationship with the maintenance of social differences.

INSTITUTIONAL HIERARCHIES IN CHILEAN HIGHER EDUCATION

Chilean higher education is organized through a clearly established hierarchy of credentials, with vocational at the bottom and academic right above them. This difference is based on the duration and intended outcomes of programmes. While vocational credentials are closely related to the labour market, academic credentials are considered a continuous specialization within a specific field of knowledge (most often the academic disciplines).

There are two types of vocational credentials in the Chilean higher education system: short-cycle (International Standard Classification of Education [ISCED] level 5) higher level technician title (*título técnico de nivel superior*) and long-cycle (ISCED level 6) professional title (*título profesional*).⁴ Academic credentials are arranged over three levels within a

discipline or field of knowledge: baccalaureate or *licenciatura* (ISCED level 6), master's degree (ISCED level 7) and doctorate (ISCED level 8).⁵ Table 1 provides a summary of the organization of higher education credentials in Chile, including a brief description of each credential as defined by Chilean law (Ley N° 18962 1990, art. 31).

Institutional hierarchy follows that of credentials, as 'the weight of qualifications is organized following the level of the awarding institution' (Salazar and Leihy 2013: 28). This is reflected by a common saying among practitioners and policymakers, 'those who do the most could do the lesser' (i.e. as long as an institution is allowed to award a specific credential it is also allowed to award the credentials 'below' it). While technical training centres (*centros de formación técnica*) can only award higher level technician titles, professional institutes (*institutos profesionales*) can also award professional titles, as long as they do not require a previous baccalaureate. Universities, on the other hand, can award every credential (Ley N° 18962 1990, art. 31). Table 2 presents Chilean higher education credentials related to their awarding institutions.

Table 1 Higher education credentials in Chile

<i>Type</i>	<i>Credential</i>	<i>ISCED 2011^a</i>	<i>Legal definition (Ley N° 18962 1990, art. 31)</i>
Vocational	Higher level technician title	5	'Confers the capacity and knowledge needed to perform in an occupation that supports the professional level'
	Professional title	6	'Confers a general and scientific education needed for an adequate professional performance'
Academic	Baccalaureate	6	'Comprises all essential aspects of a field of knowledge or a specific discipline'
	Master's degree	7	'Specialization studies in one or more of the addressed disciplines'
	Doctoral degree	8	'[Accredits the awardee's] capacity and knowledge needed to carry original research'

^aISCED refers to UNESCO's International Standard Classification of Education and is used to classify different types of qualifications, outcomes and institutions in education systems (UNESCO 2011)

Table 2 Higher education credentials and awarding institutions in Chile

<i>Credential</i>	<i>Programme type (ISCED 2011)^a</i>	<i>Can higher education institutions award them?</i>		
		<i>Technical training centres</i>	<i>Professional institutes</i>	<i>Universities</i>
Doctoral degree	Postgraduate academic (Level 8)	No	No	Yes
Master's degree	Postgraduate academic (Level 7)	No	No	Yes
Bachelor	Long-cycle academic (Level 6)	No	No	Yes
Professional title	Long-cycle vocational (Level 6)	No	Yes, if bachelor's degree is not required	Yes
Higher level technician title	Short-cycle vocational (Level 5)	Yes	Yes	Yes, if related professional titles are offered

Based on Ley N°18962 1990

^aISCED refers to UNESCO's International Standard Classification of Education and is used to classify different types of qualifications, outcomes and institutions in education systems (UNESCO 2011)

APPROACHING HIGHER VOCATIONAL EDUCATION: POLICY FOUNDATIONS AND SYSTEM TYPOLOGIES

Acknowledging that ‘current policies and practices contain the traces of the historical differences in the structures of each system’ (Bathmaker et al. 2018: 57), it is important to situate the discussion about specific contexts within wider theoretical debates. This section establishes the theoretical foundations for a subsequent analysis of the Chilean higher education system through an exploration of underlying policy frameworks in VET, as well as different configurations of higher education systems.

Vocational Education for Development: Human Capital, Right-Based Education and the Capabilities Approach

Although human capital theory is currently associated with right-wing politics, it has been used by policymakers across the political spectrum as a

driver for educational development, even before the appearance of neoliberalism in the 1980s. VET policies, in particular, have relied heavily on human capital theory, and although the form and emphasis has changed over time, the rationale of labour-related skills acquisition to foster economic growth has been constant (Tikly 2013: 5).

Foundations of human capital theory can be found in the work of Adam Smith, who in the eighteenth century proposed that economic activity was guided by ‘the acquired and useful abilities of all the inhabitants or members of society’ (Keeley 2007: 28). As individuals accumulate them, abilities become ‘a capital fixed and realized, as it were, in its person’ (Keeley 2007: 28). However, it was not until the 1960s that economists ‘rediscovered’ human capital and systematically started to introduce it in their work (Keeley 2007: 28). This was reflected in VET’s relationship with productivist frameworks for development and the ‘monolithic account of industrialization, modernization and paid work’ (McGrath 2012: 628). This positioned VET for economic growth, and its reliance on human capital, as the orthodoxy in the field.

Human capital orthodoxy has been reinforced by concurrent neoliberal trends such as privatization, marketization and the imposition of ‘demand-driven’ systems (Wheelahlan and Moodie 2016). In contemporary discourses such as the ‘knowledge economy’, education as human capital accumulation has been stressed and framed as an individual investment (Livingstone 2012). Accordingly, development is said to depend on the capacity of individuals and organizations to develop new and more complex skills to cope with rapid social and economic changes (Schwab 2016).

This prevalence of human capital theory, however, implies a narrow understanding of work and workers where ‘human needs, interests, aspirations and irrationalities are eclipsed and rationalised by the technical resource imperative of the organisation’ (Casey 2006: 233). The purpose of VET is reduced to ‘promote employability and productivity’, with human capital theory ‘serv[ing] to entrench social inequalities and dilut[ing] VET to a bundle of skills rather than to what it should be: a combination of meaningful knowledges (vocational)’ (Powell and McGrath 2019: 6).

Addressing critiques to human capital theory, alternative approaches to VET policy have appeared in the last decades. Right-based approaches to development, for example, conceive lifelong learning as a human right and emphasize humanistic goals of education and guaranteed access irrespective of circumstances such as class, ethnicity, gender and age (Zancajo and

Valiente 2018: 4). Instead of conceiving education as a private good, right-based approaches to VET focused on four main issues: availability of provision; practical access; quality and acceptability; and adaptability to individual needs (McGrath 2012: 626). However, although helpful in supporting equity, rights-based education seems to be insufficient to address structural concerns about inequality and decent work (McGrath 2012: 630).

Another alternative take on VET policies is the capabilities approach, the primary concern of which is the development of individuals' 'agency freedom' or the idea that 'individuals need to be empowered to exercise their agency through being granted access to information and opportunities to participate in [VET]' (Tikly 2013: 23). Accordingly, Wheelahan and Moodie (2016: 61) explain that, in the context of VET, capabilities represent 'the resources and arrangements of work and the broad knowledge, skills and attributes that individuals need to be productive at work, to progress in their careers, and to participate in decision-making about work'. To support social justice, the capabilities approach to VET policies addresses structural issues about educational and labour market inequalities; thus, its focus is not on productivity but on 'the relationship between vocational curriculum, qualifications and society' (Wheelahan and Moodie 2016: 57).

Addressing Hierarchical Relations in Higher Education: Vertical and Parallel System Typologies

As higher education enrolment rates grown around the world, the question about equity 'begins to shift from *access?* to *access to what?*' (Marginson 2016a: 265, emphasis in the original). Then, in order to understand how access to higher vocational education relates to social stratification, we need to focus 'not just on who is participating [...], but also consider the position of the vocational institutions in the wider system' (Webb et al. 2017a: 153).

One way of addressing the relative position of VET within higher education is through the distinction between unitary and binary systems of higher education. While unitary systems are those composed by a single path connected through transfer functions,⁶ binary systems are those which present a clear differentiation between vocational and academic paths and institutions (OECD 2019). However, since its biggest concern is the development of educational paths, the unitary/binary distinction

does not focus directly on the relationship between higher education institutions. This issue could be addressed through Skolnik's (2016) ideal typologies of vertical and parallel higher education systems, focusing on the relationship between university and non-university sectors in different contexts.

Vertical higher education systems show a clear hierarchy among institutions, with universities at the top and non-university institutions at the bottom (Skolnik 2016). In this configuration, non-university education usually considers a connection to universities through a transfer function, which becomes one of the distinctive features of the system. Effectively, 'since students take lower level undergraduate courses in one sector and upper level courses in the other sector the relationship between sectors could be described as vertical' (Skolnik 2016: 40), such as in the liberal market economies of the United States of America and some Canadian provinces.

Parallel systems, on the other hand, result from the appearance of an independent non-university (vocational) sector (Skolnik 2016). Here, vocational institutions offer baccalaureates and, often, postgraduate education, resulting in a non-university, degree-granting sector. These systems, which usually show greater parity of esteem between higher education sectors, are labelled parallel systems as 'degree granting is a major function of each sector' (Skolnik 2016: 40) and are common in coordinated market economies such as those of Northern Europe.

The dichotomy between vertical and parallel systems should be understood as a theoretical construction of ideal types, as most higher education systems present characteristics of both models. This is especially relevant when addressing higher education systems outside liberal and coordinated markets, as researched by Skolnik and as is the case with Chile's hierarchical market economy (Schneider 2009). In such contexts, it is possible that there are relationships between vocational and academic higher education that are not fully covered by Skolnik's ideal types or that mix them in a way that challenges their apparent dichotomy.

However, as the current higher education structure of Chile is, to some extent, inspired by the American public education system (Salazar and Leihy 2013: 9), and as there is a tendency to global isomorphism in higher education, and especially in universities (Meyer et al. 2007), Skolnik's ideal typologies represent a useful framework to analyse the Chilean higher education system.

HOW IT ALL CAME TO BE: A BRIEF HISTORY OF POLITICS AND POLICY IN CHILEAN HIGHER EDUCATION

The recent history of Chilean higher education is commonly depicted as a linear trajectory from state to market control, suggesting that ‘under the influence of liberalism, institutional change processes (and policies, by extension) have followed a non-disruptive path’ (Brunner 2009 cited in Salazar and Leihy 2013: 8). However, this characterization fails to address the complexity of educational policy development, especially when VET is considered. As most research on the history of Chilean higher education focuses on the development of universities, to analyse the history of vocational higher education we need to pay attention to omissions and silences in research and policies.

The complex history of higher education could be addressed through Salazar and Leihy’s (2013) proposition of an ‘invisible handbook’ guiding its policy: a compendium of successive orientations, not fully concordant and not accessible by direct analysis. For them, since 1981, policy instruments have lacked an explicit statement of goals and implementation plans, so the history of policy (and politics) needs to be reconstructed through interpretation (Salazar and Leihy 2013: 8). This section uses the notion of the invisible handbook to explore underlying theoretical assumptions in Chilean higher education policies between the 1960s and 2014. It does so following Brunner and Tillet’s (2006) stages of recent higher education development in Chile (tradition, control and market), adding a fourth stage labelled neo-market.

Since the tradition stage, starting in the 1960s (Brunner and Tillet 2006: 650), close links between human capital theory and VET policies can be found. Here, the emphasis on skills as drivers of industrialization by social democrat and socialist governments (Sanhueza et al. 2014) reflects the international orthodoxy of VET for economic development (McGrath 2012). Governments’ attempts to lead development through state-led industrialization were sustained by supporting the consolidation of a parallel system of higher education. Higher vocational education was carried by a subset of universities known as technical universities (*universidades técnicas*), with the public *Universidad Técnica del Estado* playing a major role in the expansion of higher education through its regional campuses (Sanhueza et al. 2014: 8). The state also supported the creation of new vocational programmes within these universities (Dittborn, 2007: 26), and the appearance of tertiary vocational institutions as the *Instituto*

Nacional de Capacitación (INACAP) implied the idea of a ‘labour university’ to give workers access to higher education.

The scenario changed abruptly after the 1973 *coup d’état*, with a control stage in which universities suffered intervention by the civic-military dictatorship both politically and administratively (Brunner and Tillet 2006: 651). Once political control was ensured, a market stage began with the 1981 educational reform. This was based on the postulates of *gremialismo* (Salazar and Leihy 2013), the conservative ideology that provided the political and doctrinal foundations of the civic-military dictatorship (Muñoz Tamayo 2014). This reform, probably the biggest change in Chile’s higher education history, shaped the current structure of the system and introduced market forces as its main drivers.

Through the 1981 reform, the hierarchical structure of credentials and institutions was established (Sanhueza et al. 2014: 2), cementing a vertical distinction between universities and vocational institutions. The public technical university, *Universidad Técnica del Estado*, was converted into a more traditional, academic institution, *Universidad de Santiago de Chile*, and its regional campuses were transformed into autonomous institutions (Sanhueza et al. 2014). Non-university institutions (vocational training centres and professional institutes) were now recognized within higher education, but their role was to absorb student spillover resulting from the limited number of university places (Salazar and Leihy 2013: 13). The clear hierarchy across higher education institutions resembles Skolnik’s (2016) vertical systems of higher education. Furthermore, the absence of a transfer function between vocational and academic institutions (or even within the same institution) suggests an even more extreme distinction, where higher vocational education represents a terminal stage in education.

VET reliance on human capital theory as its conceptual foundation is also clear in the 1981 reform. While the doctrine of *gremialismo* considered that universities should be protected from massification, politization and commercialization (Salazar and Leihy 2013: 13–15), higher vocational education was left adrift, subject to market forces. This is not to say that universities were not affected by the market-led reform, but its effects over vocational education were deeper. Higher vocational education was considered a way of ‘channeling the increasing demand for post-secondary studies without compromising public-funding’ (Salazar and Leihy 2013: 13), so public funding was not available to vocational higher education institutions.

More so, neoliberal understandings of human capital frame ‘training and education as a self-investment opportunity’ so there is ‘no public provision [...] since only the individual in question profits in terms of future earnings’ (Fleming 2017: 700–701). Thus, after the privatization of INACAP, all higher education institutions in Chile became private and potentially for-profit organizations (Donoso Traverso et al. 2017), while universities (even private ones) were required by law to be non-profit organizations.

The democratic transition in 1990 was carried through a ‘negotiated revolution’ (Lawson 2005), with the institutional foundations of the civic-military dictatorship maintained through legislation and political consensus. This has led authors such as Brunner and Tillet (2006) to consider that democratic governments managed the dictatorship legacy through ‘politics of agreements’, so the market period continues to this day. I argue, on the contrary, that new public management policies from 1990 onwards reflect a global tendency to further institutionalize markets as the sole basis for the organization of public affairs (Harvey 2005). Under the politics of the third wave, which allegedly combined socialism and market economies, market forces moved from the foundation for economic development to the institutional foundation of the state.

I label this post-dictatorial stage as neo-market, characterized by a broad consensus along the political spectrum about the need for ‘greater investment in human capital for Chile to maintain competitiveness’ (Brunner and Tillet 2006: 653). Policies on higher education focused on establishing quality assurance systems and demand-driven funding mechanisms, using financial incentives to drive the ‘educational market’ towards wider access and ensuring a common ground for quality (Salazar and Leihy 2013).

Most higher education policies were not intended to directly address vocational higher education, although they played a significant role in the growth of the sector. State-backed loans for students in private institutions established in 2006, for example, played a major role in the expansion of vocational education through making financial aid available for its students (Donoso Traverso et al. 2017): enrolment in vocational education institutions doubled between 2007 and 2014, going from 31 per cent to 41 per cent of total enrolment in higher education (SIES 2019). Although this growth had nothing to do with challenging institutional hierarches or the primacy of human capital theory, it paved the way for the appearance of VET in recent educational debates.

CHALLENGING THE HIERARCHY: POSSIBILITIES FOR SOCIAL JUSTICE WITHIN A NEW POLICY FRAMEWORK

During the 2014–2018 presidential period, major educational reforms were implemented by the government. These were intended, allegedly, to answer the demands arising from student movements in 2011 for free, public and quality education. Although initially this reform did not consider VET, it ended up incorporating it both in major educational reforms and through the enactment of policies directly aimed at VET (Zancajo and Valiente 2018). However, this does not reflect a particular political interest in VET. The enactment of policies in this sector was the outcome of pressure by different public and private stakeholders, who seized an opportunity within the political environment in which the educational reform was carried (Donoso Traverso et al. 2017).

VET policies were situated within a wider reform that framed education as a social right, focusing on equal access to education and de-emphasizing its conception as individual investment. In this context, a series of VET policies that seemed to disassociate from human capital theory were enacted, embracing the right-based approach of the reform. Instead of focusing primarily on the links between VET and economic development, their main goal was to ensure educational opportunities for students and workers (Zancajo and Valiente 2018). In doing so, they questioned the relationship between vocational and academic higher education, prefiguring an alternative structure for the system through four major policies:

- The creation by a law of 15 state-owned technical training centres, the first vocational post-secondary institutions since the privatization of INACAP (Ley N° 20910 2016).
- The definition of a Vocational Qualifications Framework (*Marco de Cualificaciones Técnico-Profesional*) that organizes vocational credentials from non-formal training to professional titles (Mineduc and Corfo 2017).
- The publication of a National VET Strategy, which defines the purpose for vocational education as fostering education and labour trajectories and explicitly proposes a parallel system of higher education (Mineduc 2018: 23).
- The enactment of the Law on Higher Education in 2018, which (among many changes) for the first time defines VET as a distinct subsystem within the education system, without directly referencing academic education (Ley N° 21091 2018, art. 15).

None of these policies by themselves change the structure of higher vocational education but, considered as a whole, they open new possibilities for the future of VET in relation to universities. For example, moves towards a parallel system are supported by interrelated mechanisms established in different policies: long-cycle academic and vocational credentials are positioned at the same level of qualifications (Mineduc and Corfo 2017: 74–75); the creation of vocational degrees at the graduate level is explicitly proposed (Mineduc 2018: 43); and vocational education is recognized as a distinct sector within higher education (Ley N° 21091 2018, art. 4), while parallel sectors with connecting transfer functions are proposed (Mineduc 2018: 23).

The shift from human capital to rights-based education is another example of interconnected policy mechanisms. Although its links with the labour market are still stressed, vocational education is mainly defined by its focus on applied knowledge ('Ley N° 21091', 2018, art. 15), which echoes an epistemological (i.e. knowledge-based) conception of VET (see Moodie 2002). Its purpose is defined in relation to students and workers' life projects and their right to live a 'more decent and free life' (Mineduc 2018: 39), acknowledging the limitations of human capital theory. Even more, as public higher vocational education is reinstated, state technical training centres are conceived as anchors for their local communities and industry (Ley N° 20910 2016). This resembles Wheelahan and Moodie's (2016: 59) emphasis on the role of 'strong public vocational education institutions in mediating the development of capabilities and in mediating links between students and other social partners'.

The entanglement between these policies, however, does not mean that the adoption of a different policy framework is secured. There is still doubt among researchers about the capacity of rights-based education approaches to disrupt the orthodoxy of human capital theory as the underpinning basis of vocational education (McGrath 2012: 626). In fact, Leihy and Salazar (2017: 156) argue that, although no one could oppose human rights themselves, 'construing HE [higher education] as a human right actually subverts its historical understanding' so that in Chile 'the human right is not HE itself, but rather access to it in the impossible to police basis of merit'. Effectively, although they depart from human capital theory as its sole foundation, recent VET policies do not abandon it: human

capital theory and right-based education are discursively combined in order to navigate political tensions (Zancajo and Valiente 2018: 15).

Furthermore, many of the intended reforms were enacted by soft law, defined as ‘quasi-legal instruments that have no legal force, such as non-binding resolutions, declarations, and guidelines created by governments and private organizations’ (Druzin 2017: 361). This means reforms are dependent on voluntary adoption and compliance. Among policy documents, only the *Law on Higher Education* has binding power, and although it institutionalized other policy documents, it does not ensure that the final version will consider the already published soft laws. Finally, and even more relevant, many of its articles are written in an abstract, open language, so their interpretation relies heavily on the framework established by the broader pre-established framework for VET and higher education policies supported by previous regulations still in force.

The permanence of a legal structure inherited from the market-driven policies of the 1980s and the neoliberal agenda of the 1990s and 2000s are, by far, the major obstacles to enacting a policy framework strongly committed to social justice. Attempts to establish a parallel system of higher education coexist with the hierarchy of credentials and institutions installed by the 1981 educational reform. Public technical training centres are mandated to develop close relationships with their surrounding communities, but they do not receive specific public funding to do so and rely on student tuition and indirect funding by the state (Ley N° 20910 2016). Free tuition is awarded to financially disadvantaged students in public and private non-profit organizations, but this is funded through a demand-based voucher through which the state pays the institution after a student’s enrolment (Ley N° 21091 2018). As different regulations with different underlying theoretical frameworks coexist, there is an unresolved tension at the heart of Chilean higher education.

If we are to support social justice and students’ freedom of agency through participation in higher education, the structure of the system should be considered (Bathmaker et al. 2018; Marginson 2016b). To challenge the invisible handbook (Salazar and Leihy 2013), debates over structural and discursive issues that reify social inequalities within higher education should be addressed. Orthodox assumptions about the links between education and economic growth should be problematized, and critiques of the neoliberal organization of work and labour relations should complement the discussion ‘to incorporate conceptions of human development and decent work’ (McGrath 2012: 630). If we are to develop

comprehensive approaches to VET policy that address structural barriers to social justice, the location of VET as a policy field at the border of education and work needs to be recognized and researched.

CONCLUSION

Deeply rooted in human capital theory as the underlying policy framework, Chilean vocational higher education has been traditionally positioned at the bottom of a profoundly hierarchical higher education system that privileges university education. However, recent policy changes in Chilean education, and specifically in VET, seem to challenge the dominance of human capital theory, proposing instead a right-based approach to education that puts the human individual at the centre of government policies. In this scenario, the associated body of public policies proposes a transition to a parallel structure of the higher education system in which VET is defined more by its focus on applied knowledge than by its relative position in comparison to universities.

The actual capacity of such policies to transform the VET and higher education landscape in Chile depends on an uncertain degree of policy retention, as their discursive strategies navigate between human capital and right-based education. In addition, these policies coexist with regulations inherited from the market-driven policies of the 1980s and neoliberal agendas of the 1990s and 2000s. In this regulatory landscape, it seems unlikely for right-based approaches to vocational higher education to successfully disrupt the human capital hegemony.

In order to make an effective transition to a higher education system that supports social justice, as intended by the right-based approach, it is necessary to open a debate about underlying neoliberal assumptions that remain unquestioned in the Chilean case. Even within the more recent rights-based approach, productivist understandings of VET seem to be reinforced by stressing the links between skills and the knowledge economy (see Mineduc 2018). Furthermore, there is a necessary debate about what is the broader purpose for VET in Chile and how it can contribute to students' wellbeing beyond mere economic considerations. Addressing these issues requires adopting a comprehensive approach to VET and higher education that considers VET's problematic position as a field located at the frontier between education and work.

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NOTES

1. Although in most scholarship in higher education, credentials and qualifications are used as equivalent terms, the Chilean Vocational Qualification Frameworks distinguishes between qualifications as a set of competencies and credentials as the actual accreditation of learning awarded by educational institutions (Mineduc and Corfo 2017).
2. See, for example, the annual presidential messages of Ricardo Lagos Escobar in 2003, Michelle Bachelet Jeria in 2008 and Sebastián Piñera Echeñique in 2010, 2011 and 2013. Available at https://www.bcn.cl/historiapolitica/corporaciones/cuentas_publicas/detalle?tipo=presidentes.
3. Here, quality is referred to as years of accreditation by the National Accreditation Commission (*Comisión Nacional de Acreditación*).
4. UNESCO's ISCED is used to classify different types of qualifications, outcomes and institutions in education systems (UNESCO 2011).
5. There are 18 professional titles that require a previous baccalaureate, including highly valued professions such as engineering, medicine and law, which could only be awarded by universities (Ley N° 18962 1990, art. 52). Throughout this chapter they will be treated as regular baccalaureate programs and credentials.
6. This refers to mechanisms that allow students to use their non-university credentials to pursue baccalaureate or equivalent degrees at universities.

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Higher Vocational Education in England in the 2010s: Positioning, Purpose, and Possibilities in a Highly Stratified, High Participation System of Higher Education

Ann-Marie Bathmaker and Kevin Orr

INTRODUCTION

This chapter explores the provision of higher vocational education (HVE) in England. It does so with a particular focus on its positioning, form, and function in the context of the wider system of higher education (HE) in England, which is characterized by a high level of vertical stratification (Cantwell and Marginson 2018). The chapter focuses on provision in the

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college sector and on sub-bachelor-level qualifications, as these are key areas of contestation in the English policy context. HE at the sub-bachelor level and in institutions that are outside the university sector has a long history in England. Vocationally oriented Higher National Diplomas (HNDs) and Higher National Certificates (HNCs) were introduced nearly 100 years ago. Further education (FE) colleges, established in some form for well over a century throughout England's towns and cities, have played a central role in this provision. In the public imagination, colleges tend to be associated with further education (up to International Standard Classification of Education [ISCED] level 3) rather than higher level study, yet colleges have offered a range of higher level courses since their inception, mainly in vocational subjects such as accountancy, childcare, or engineering. Over the past 30 years, between 10 and 15 per cent of all HE students in England have attended FE colleges (Parry 2016). In 2015–2016 that 10 per cent constituted a total of 151,360 students (ETF 2017: 4).

However, despite the enduring nature of HVE in the form of non-university provision at the sub-bachelor level, there is fluctuating policy commitment in England, with HVE facing frequent reform and being charged with achieving diverse and perhaps incommensurate goals. Over the last decade (2010–2020), different government policies have promoted HVE as a separate *technical* system of HE—a form of higher *vocational* education, while simultaneously positioning HVE as a form of vocational *higher* education (Bishop and Hordern 2017; Keep 2015a), in a competitive HE market which is dominated by universities and bachelor-level provision. As a result, HVE has faced ever more challenges.

This chapter examines developments in HVE in England¹ during the 2010s, under a Conservative-dominated coalition government (2010–2015) and subsequent Conservative government (2015 to date). The chapter considers the conundrum faced by HVE to achieve a valued and distinctive purpose. This is in the context of a wider HE system that is characterized by a significant level of vertical stratification in which 'Competition for status and resources allows strong institutions to accumulate advantage and improve their relative position in a highly differentiated system' (Marginson 2016b: 425).

A Note on Terminology

A variety of terms have been used to name and describe this area of HE provision (see Teichler 2000: 16). Some terms refer to the sector, such as ‘non-university’ higher education, the ‘second sector’, and the ‘alternative sector’ of higher education, pointing to the subordinate status of this sector in relation to university HE. The term ‘short-cycle’ higher education is sometimes used, referring to the duration of study, and demonstrating the association of HVE with two-year programmes, rather than three-year bachelor’s degrees. In different country contexts, the terms ‘vocational higher education’, ‘higher technical education’, and ‘professional higher education’ are also used. These terms carry with them different levels of prestige, as suggested by the OECD (2014) *Skills Beyond School* report, which encourages the use of the term ‘professional higher education’, to give status to HVE provision. In England, the term ‘higher vocational education’ first appeared in a strategy document published by the Department for Business, Innovation and Skills (DBIS) in 2011 (DBIS 2011a: 3) in the context of a vision for ‘a ladder of opportunity of comprehensive Vocational Education and Training’ but without further elaboration or definition (Saraswat 2015). At the end of the 2010s, policy in England refers to higher ‘technical’ education (Augar 2019; Department for Education [DfE] 2018a, 2019a) rather than higher ‘vocational’ education, in an attempt to distance HVE from negative associations with the notion of ‘vocational’. We therefore sound a strong note of caution in our use of the term ‘higher vocational education’ (HVE) in this chapter. We focus on higher education that takes place in further education colleges (also referred to as ‘HE in FE’, college-based higher education [CBHE], and college HE), whilst recognizing that universities also offer programmes that are ‘vocational’. We consider, in the main, level 4 and 5 qualifications, that is, sub-bachelor programmes (QAA 2017), bracketing out vocationally oriented qualifications at bachelor level and above. While there is no one agreed way of naming this area of HE, it forms an enduring but regularly contested part of the overall landscape of HE in England.

HVE IN ENGLISH COLLEGES DURING THE 2010S

Participation in HVE in England remains small. The proportion of sub-bachelor students in 2016–2017 was half that of Germany or the OECD average (Foster 2019: 3; Augar 2019: 35). And in 2018–2019, only 2.25

per cent of all the certificates awarded in vocational subjects in the FE sector were at level 4 or 5; that is, only 130,985 awards out of a total of 5,815,045 across all levels (Ofqual 2020). This section presents an overview of what provision looks like, focusing on the colleges that provide HVE, the courses they offer, and the students who participate in the courses. This represents only a brief outline of a complex picture. A number of reports on HVE in English FE colleges during the 2010s provide much more extensive detail on this complexity. They also provide an indication of key areas of concern over the course of the decade. This includes a focus on part-time provision (Saraswat et al. 2015); the development of level 4 and 5 technical qualifications and pathways (Boniface et al. 2018; DfE 2018a, 2019a; Field 2018, 2020; Foster 2019); and the growth of degree apprenticeships (Bishop and Hordern 2017; Hubble and Bolton 2019), as well as reports on overall HE provision in FE colleges (DBIS 2012; ETF 2016). In what follows, we draw on these and other documents in considering the picture of current provision.

As noted in a recent report (ETF 2017: 3), there ‘is no single source of data for college based higher education and different data sources need to be combined in order to gain a complete picture of this type of activity’. There is no coherent reporting of HE data for the FE sector in the public domain and data sources are variable in what they include (e.g. some only report on bachelor’s degree students, others on all undergraduate students including levels 4 and 5). There are also no good quality time series data on the nature of higher level enrolments in FE colleges or on the characteristics of the student population.

In 2020, following many enforced mergers of institutions over the previous two years, there were 168 general FE colleges in England. Of these, 165 offer higher level courses as part of their provision² and 43 are part of the Mixed Economy Group, whose members have ‘a significant established, strategic and developmental role in the provision of HE’.³ For most other colleges, HVE is a peripheral activity. In 2019–2020, there were 137,000 part-time and full-time students at FE colleges studying HE courses, including bachelor’s degrees, all sub-bachelor level 4 and 5 courses as well as higher level apprenticeships (Association of Colleges [AoC] 2019: 9).

The financial situation in which colleges operate has had a particular impact on the provision of HVE and may help to explain why provision remains small. There have been year-on-year reductions in spending on all FE and skills provision in England since 2010, which have disproportionately affected adult courses, including HVE. This has left the whole sector with smaller real terms income than in 2002–2003 (ACL Consulting for

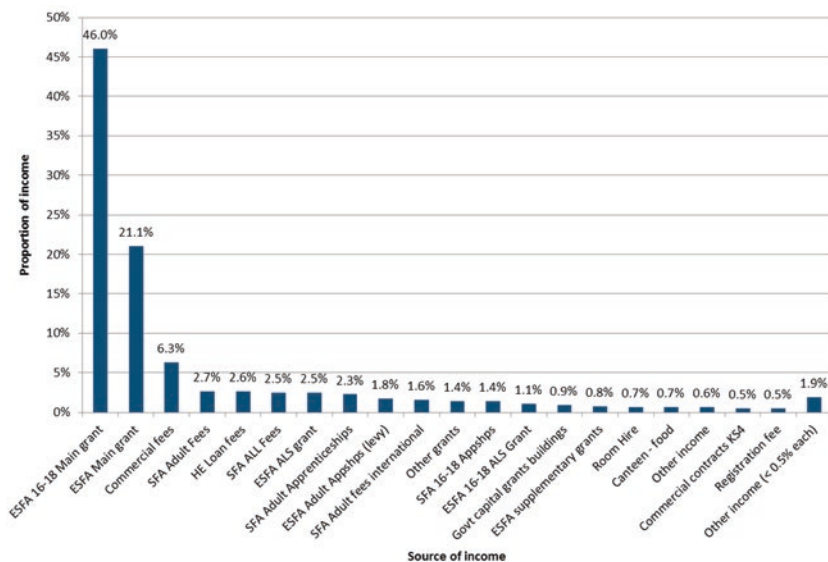


Fig. 1 Sources of income, percentages, a multi-site Further Education College. (Source: ACL Consulting for DfE 2020: 55)

DfE 2020: 22). Given the cuts in overall funding, from a high of just over £12 billion in 2010–2011 to under £9 billion in 2017–2018, college leaders have needed to focus on maintaining their principal sources of income, of which HVE comprises only a minor element. Consequently:

[colleges] offer 53 per cent of Level 4/5 provision but have experienced severe funding cuts, leaving them with no surpluses available for high cost higher technical provision and forcing them to focus on lower level awards. (Augar 2019: 46)

Moreover, college funding is complex. Figure 1 shows an example of one (anonymized) FE college, which has 20 different income streams of diminishing significance, and this complexity of funding restricts the potential to develop new courses:

It is possible for one classroom to contain students studying the same qualification, who are funded in four different ways, with four different funding rates and four different criteria for funding. This materially affects the quality

of the offer the college can make to students and employers, and the flexibility it has to put on new provision responding to demand. (Augar 2019: 126)

Nevertheless, colleges are the most important providers of sub-bachelor HVE. 59 per cent of foundation degrees and 82 per cent of HNCs and HNDs were delivered in FE colleges in 2018–2019 (AoC 2019: 10).⁴

These three qualifications are the main courses offered at sub-bachelor level (below level 6) in England, with 35 per cent of enrolments in two-year foundation degrees at level 5, 13 per cent in full-time HNDs at level 5, and 12 per cent in part-time HNCs at level 4 in 2016–2017. But alongside these courses, there are around 3400 other level 4 and 5 qualifications, of different types and in different subject areas (Foster 2019: 3). The most popular subjects are health and science, business and administration, social care, and engineering and manufacturing. Just under two-thirds of all students were studying within these areas in 2015–2016 (Boniface et al. 2018: 6).

Unlike universities, which have degree-awarding powers, FE colleges do not usually act as awarding bodies for these qualifications. HNCs and HNDs are awarded by the private examination board, Edexcel, which is owned by Pearson PLC. Most foundation degrees are awarded by partner universities. In 2019, only seven colleges had the power to award foundation degrees and only two had the power to award bachelor's degrees (AoC 2019: 17).

The number of students taking sub-bachelor-level courses has been in steep decline through the 2010s (Higher Education Funding Council for England [HEFCE] 2014). Enrolments dropped by 63 per cent between 2009–2010 and 2016–2017, from around 510,000 to around 190,000 (Foster 2019: 3). By contrast, enrolments on bachelor's degrees rose from 372,140 in 2014–2015 to 394,640 in 2018–2019 (Higher Education Statistics Agency [HESA] 2020). The only exception to this picture is in higher level apprenticeships, which were introduced in 2006/2007 and have expanded to over 50,000 enrolments (Foley 2020: 15).

THE (IM)POSSIBILITY OF HORIZONTAL DIVERSITY

So why does HVE in England look like this? Why is it small, and why are the numbers of students taking sub-bachelor courses in decline, when overall participation in HE since 2006 continues to rise (from 41.8 per cent in 2006/2007 to 50.2 per cent in 2017/2018 (DfE 2019b))? Central

to our understanding and sense-making is the contestation that occurs in the process of HE expansion. Following Bourdieu (1985, 1998), we view HE as a particular social space, a ‘field’ where different institutions and forms of provision and individuals are positioned relationally to one another. Fields are ‘historical constellations that arise, grow, change shape, and sometimes wane or perish, over time’ (Wacquant 2007: 268). They involve struggle and tension over who and what may be included, what is considered to have value, and where power lies in deciding the shape of, and practices within, the field (Martin 2003). HVE in England is a good example of these struggles and tension; college HVE is located in both the FE and HE fields, but very differently positioned relationally in these two fields (Bathmaker and Thomas 2009). In order to make sense of the picture of HVE in England in the 2010s, we first consider key issues raised in literature on the evolution of HE systems since the second half of the twentieth century and the position of HVE within the wider expansion of the HE field. We then examine major policy developments that have had an impact on the provision of HVE in colleges in England over the last decade, highlighting the challenges of working across two different sectors, or fields, of education in England—the HE sector and the FE and skills sector.

The Evolution of HVE in the Expansion from Mass to High Participation Systems of HE

Across European countries, HVE has formed an important element in the process of HE expansion since the 1960s. From the development of ‘mass’ systems of HE, where more than 15 per cent of a given cohort participate, to what Cantwell et al. (2018) refer to as high participation systems in the twenty-first century, a key question has concerned diversity and diversification. This focuses on the shape and structure of expanded systems, the extent of vertical and horizontal diversity, and the implications for inequalities in who goes where and who gets what as a result.

Teichler (1998, 2008) considers the changing roles of ‘non-university’ HE during three generations of expansion in Europe from the 1960s to the early 2000s. Initially, European countries developed binary structures, where HVE was offered in separate institutions, such as polytechnics in England, *Instituts universitaires de technologie* in France and *Fachhochschulen* in Germany. Horizontal diversity, in the form of horizontal differences in institutional mission, form, and type, located in different sectors, was at

the core of diversification (Teichler 2008). By the 1980s, there was increasing evidence of vertical, hierarchical stratification based on reputational hierarchies. In binary systems, the vocationally oriented sector was viewed as ‘the less noble one’ (Teichler 1998: 475), with tendencies to academic drift (Pratt and Tyrell 1974) in efforts to become more like universities. A key effect was to create ‘endemic instability’ (Teichler 2008: 362), particularly in the vocationally oriented sector. It was during this period that England moved to a unitary system, with polytechnics becoming universities and part of the HE sector following the 1992 *Further and Higher Education Act*. However, this move did not reduce the vertical stratification of institutions. Moreover, in England, the provision of HE in FE colleges continued throughout this period but remained outside of the HE sector. Teichler’s (2008: 366) third generation of approaches is linked to the dynamics of globalization and increasing competition amongst countries for ‘world-class universities’. This has led to greatly increased vertical stratification, with an emphasis on success at the apex and those at the top playing in a ‘champions league’, rather than a national league. For Teichler, this overall trend to vertical stratification undermines horizontal diversity and limits what is possible for HVE, potentially serving to reproduce rather than challenge wider social and economic differences. Later in the chapter we return to how this issue has played out in the context of England.

In the early twenty-first century, a New Labour government (1997–2010) in England identified HE in FE colleges as playing an important role in widening participation. Within this context, scholars interested in non-university HE began to debate the possibility of a ‘tertiary moment’ and opportunities for a ‘seamless’ system of lifelong learning that might achieve more inclusive HE (Duke 2005; Gallacher and Osborne 2005; Osborne et al. 2004). There were (limited) experiments with dual sector institutions in England (Garrod 2009; Garrod and MacFarlane 2007), similar to the combined FE and HE institutions found in Scotland and Australia. However, even at this time, researchers such as Wheelahan (2009) offered a robust critique of the opportunities for a ‘seamless’ system of tertiary education, and scholars looking to find ways to achieve a more socially just system spoke of ‘the English genius for converting diversity into hierarchy’ (Duke 2005: 7).

While there has been very little evidence of the development of ‘seamlessness’ in England, these debates form part of considerations across Europe and beyond concerning diversity in the twenty-first century and

the positioning of higher level vocational education in relation to university HE. Europe-wide practice and research has explored ways of creating greater ‘permeability’ between academic and vocational pathways, including the creation of progression routes and opportunities between the different sectors (Deissinger et al. 2013). There is interest in ‘hybrid’ forms of HE provision, which have established themselves as high status alternatives in the German-speaking DACH countries (Germany, Austria, and Switzerland) in particular (Graf 2013).

These considerations about the positioning and possibilities for HVE are set against the trend towards vertical stratification of HE systems, driven by globalized conditions of intense positional competition during the first decades of the twenty-first century (Naidoo 2018). As indicated above, research by Cantwell et al. (2018) defines this as an era of high participation systems. In competitive high participation systems such as in England, stratification tends to ‘stretch’ vertically over time. Competition for status and resources allows strong institutions to accumulate advantage and improve their relative position in a highly differentiated system (Marginson 2016b: 425). What Marginson and colleagues’ analysis only mentions in passing is the positioning of ‘second sector’ technical and vocational institutions, offering HE that is often at sub-bachelor level, as in the case of English HVE. In the following section, we consider how different policies have sought to reform the form and function of HVE in England under conditions characterized by high participation and market competition.

Policy Reforms in the 2010s: Change and Challenge to the Form and Function of HVE

In the period leading up to the 2010s, the then Labour government saw HVE in English colleges as having a distinctive mission, fulfilling both economic and social goals. HE delivered in FE was to have ‘a strong occupational and employment purpose’ (Department for Education and Skills [DfES] 2006: 30), as well as contributing to widening participation in HE. The flagship qualification was the sub-bachelor foundation degree introduced in 2001, ‘designed and delivered in partnership with employers’ and intended to give ‘a strong foundation for employment in a chosen sector’ (DfES 2006: 30). The financial crisis of 2008, the election of a Conservative-dominated coalition government in 2010, followed by the introduction of austerity policies, combined to bring about a re-orientation

of policy. Lying at the nexus between higher and vocational education (Powell and Solga 2010), HVE has faced reform as a result of an ‘ensemble’ of different policies (Ball 1993), made up of a combination of HE reforms, technical education reforms, changes to student funding, and area reviews of FE colleges (Bathmaker 2018).

Fundamental to HE policy throughout the decade has been an explicit emphasis on competition and choice, exemplified in a major HE White Paper (DBIS 2016) developed under a Conservative majority government. This claimed that competition would increase quality and drive down cost:

Competition between providers in any market incentivises them to raise their game, offering consumers a greater choice of more innovative and better quality products and services at lower cost. Higher education is no exception. (DBIS 2016: 8)

Nevertheless, at the beginning of the 2010s, under a Conservative-dominated coalition government, college HVE continued to be defined as having a ‘distinctive mission’:

Colleges have displayed particular strengths in reaching out to non-traditional higher education learners including mature and part-time students. They also have a distinctive mission particularly in delivering locally relevant, vocational higher-level skills such as HNCs, HNDs, Foundation Degrees and Apprenticeships. (DBIS 2011b: 46)

But this distinctive mission was severely undermined by changes to student funding. From 2012, the cost of tuition fees of up to £9000 per year shifted to students, following the Browne Review (2009–2010) of HE funding. While loans were made available to students for fees and maintenance, the new system encouraged younger students to choose full-time bachelor study, while discouraging completely older and part-time students with work and family commitments, who were debt averse, not necessarily aware of loans, and found their employers reluctant to fund participation in HVE study (Saraswat et al. 2015). By the mid-2010s, there was a dramatic drop in participation in level 4 and 5 HVE qualifications, particularly amongst part-time students.

The HE White Paper (DBIS 2016) referred to above served to further affect the position of colleges and sub-bachelor provision within the HE

field. The central focus of HE was now on bachelor's degrees and above, with sub-bachelor qualifications either a 'bridge' to bachelor level or addressed separately as part of a 'technical' system of higher level study. Colleges were defined as one player in a competitive market (Zaidi et al. 2019). The Office for Students (OfS), a new single regulator for HE created following the *Higher Education and Research Act 2017*, was tasked with judging all HE provision on the same criteria for success (DfE 2018c). This did not allow for the possibility that a 'distinctive mission' in working with 'non-traditional' learners might affect outcomes such as retention rates and graduate destinations. Under these conditions, college HVE rapidly began to look high risk (Higher Education Commission 2019).

Meanwhile, technical education reforms introduced new providers, a new regulator for HVE, and a review of HVE qualifications. A network of Institutes of Technology was announced in 2015, with the first institutes opened in 2019. The institutes were expected to involve collaboration across HE, FE, private providers, and industry, specializing in higher level technical training in STEM skills (science, technology, engineering, and mathematics) needed in their region. Alongside these institutes, National Colleges in five key sectors were launched, as centres of expertise in nuclear, digital skills, high-speed rail, onshore oil and gas, and the creative and cultural industries (DBIS and DfE 2016). A new regulator, the Institute for Apprenticeships, was established in 2017 to oversee the development, approval, and publication of apprenticeship standards, including higher level apprenticeships. In 2019 the Institute was also given responsibility for technical qualifications at all levels and renamed the Institute for Apprenticeships and Technical Education. At the end of the 2010s, a major review of level 4 and 5 education and funding, the Augar Review (2019), was published. The review proposed strengthening technical education and reforming and refunding the FE college network.

Collectively, these reforms appear to create an increasingly separate field of higher technical education but, in practice, there are complex and, at times, confusing overlaps. So, for example, a flagship qualification in the 2010s has been the apprenticeship, stimulated not least by the introduction of an apprenticeship levy in 2017, a tax on larger employers to fund apprenticeship training. But while higher apprenticeships at sub-bachelor level 4/5 appear to be located firmly within HVE, degree apprenticeships at bachelor level 6 are predominantly within university HE, deemed more prestigious, and dominated by those from advantaged backgrounds (Cullinane and Doherty 2020).

HVE: A Central or Marginal Contribution to Enabling Social Mobility?

Claims that HVE has a distinctive mission to widen participation to under-served groups and to promote social mobility have persisted for many years (see e.g. Hartley and Groves 2011; Goodhart 2020). The Augar Review's vision (2019: 138) is that colleges in the 2020s continue with this mission and 'provide high quality technical and professional education, maintain strong relationships with employers and act as engines of social mobility and inclusion'. The central argument of the report is that there has been an over-emphasis on university bachelor-level education in England, which neither matches demand in labour markets nor brings the anticipated returns to individuals, and undervalues the role played by HVE in enabling social mobility. Here we consider these claims in relation to available data on the occupational and employment mobility of students taking HVE courses.⁵

The profile of HVE students in England is distinctive from that of university students studying for bachelor's degrees. They are more likely to be older; in 2018–2019, 65 per cent of students taking level 4 and 5 courses were aged over 25 across all providers compared with 36 per cent taking bachelor's degrees. They are more likely to be part-time; 52 per cent of level 4 and 5 students in colleges in 2018–2019 were part-time compared to 10 per cent on bachelor courses in universities (HESA 2020). HVE students in colleges are also more likely to come from the country's most deprived areas compared to those who attend universities (Boniface et al. 2018: 6). All of this suggests that HVE is successfully widening participation in HE. However, better access to HE has not narrowed income inequalities (Brown et al. 2008; Augar 2019: 23).

The evidence on the specific link between HVE in colleges and well-paid employment is mixed, but differences between the incomes associated with qualifications remain. Sub-bachelor HNDs and HNCs have the best wage returns among higher vocational qualifications, although these returns are still generally less than for bachelor's degrees, especially in the longer term (Mcintosh and Morris 2016). Analysis of graduate outcomes provided in the Longitudinal Educational Outcomes (LEO)⁶ dataset indicates that five years after graduation, college HVE graduates in England are marginally more likely than their university counterparts to be in employment (see Fig. 2).

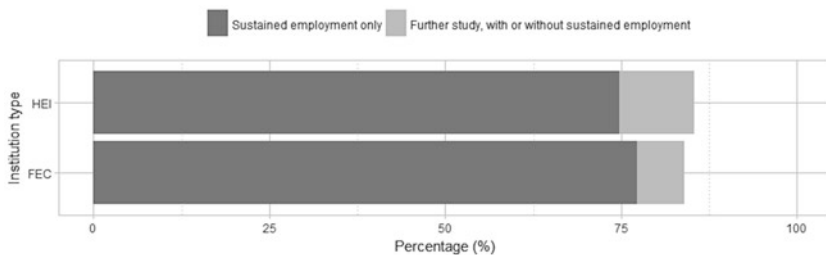


Fig. 2 Employment outcomes of graduates by institution type five years after graduation (Tax year 2015–2016). (Source: DfE 2018b: 26)

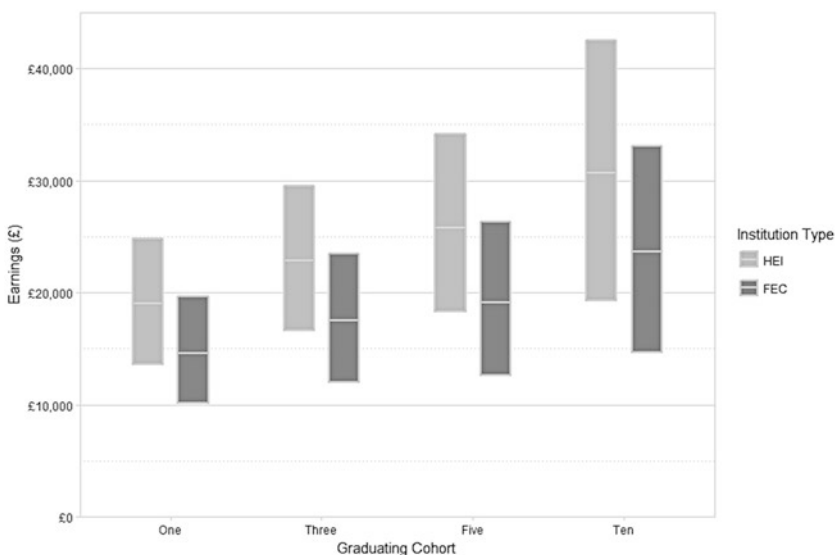


Fig. 3 Earnings of graduates by institution type one, three, five, and ten years after graduation (Tax year 2015–2016). (Source: DfE 2018b: 12)

However, one, three, five, and ten years after graduation, HVE graduates’ average annual salary is consistently around £5000 less than their university counterparts (see Fig. 3).

Econometric analysis by Espinoza and Speckesser (2019) has compared the earnings of those with HVE qualifications at levels 4/5 over time, comparing incomes associated with HVE qualifications and bachelor’s

degrees at the age of 30. They found that the subject area of the qualification as well as gender had strong statistical effects on income. Broadly, earnings for male bachelor's degree holders from non-elite universities were similar to those with HVE qualifications, but bachelor's degrees from elite universities attracted higher earnings. Female bachelor's degree holders had higher earnings than those with HVE qualifications, regardless of type of university. All of this evidence suggests that access to HVE does not systematically lead to social mobility in England as measured by employment and earnings outcomes, whatever other personal benefits it may bring to individual students. This reflects both the position of HVE within a vertically stretched hierarchical HE system and the state of labour market opportunities at a given time (Webb et al. 2017).

CONCLUDING COMMENTS: HVE IN A HIGHLY STRATIFIED SYSTEM

In 2016, Wolf argued that stratification of the HE system in England results in the lack of a sustainable tertiary sector that incorporates the kind of technical education that is represented by HVE. Among the factors she identified that 'account for much in our current system, and for much of what is wrong with it' are the 'uniquely inchoate arrangements' for providing sub-degree tertiary qualifications (Wolf 2016: 10). At the end of the 2010s, policy developments in England could be seen as increasing the amount of policy churn, rather than addressing the endemic instability for HVE provision created by underlying power relations. This is despite attempts to garner prestige for what is now called technical education through the use of terms that are associated with academic education, such as foundation *degrees* and *degree* apprenticeships. Highly aspirational plans 'to build a world-class, German-style FE system in Britain, and level up skills and opportunities', announced by the education secretary in 2020 (Williamson 2020) do not appear to fully take account of the context and conditions in which English HVE is located, at the nexus of the differing fields of HE and vocational education. Moreover, they appear to ignore the lessons that might be learned from the relative success of the long-standing HND and HNC qualifications in England.

Contrasting sets of policy levers promote, on the one hand, vertical stratification based on market competition and, on the other, propose

horizontal diversification with separate academic and technical options, including a stronger technical and vocational education system at sub-bachelor level. Yet to achieve such radical change towards a more equal, diversified system of tertiary education would require more than change to structures in the education and training system. Firstly, as Keep (2015b: 123) has emphasized in the past, the proposed reforms are based on ‘chasing the knowledge-driven economy at the end of the rainbow’ and a failure to recognize that:

in an economy and labour market where the quality and pay of many jobs is low and possibly declining, policies and designs that work well in high pay, high tech sectors and occupations may founder in those that are heading in the opposite direction.

Secondly, as Trow (1974) and Marginson (2016b: 413) argue, decisions to participate in higher level education are ‘primarily powered not by economic growth but by the ambitions of families to advance or maintain social position’. In a highly stratified system, in which some pathways carry more value than others, ‘relative advantage is crucial’ (Marginson 2016b: 415) and students will seek out the most prestigious route they can access in order to pursue their goals.

A major and enduring issue therefore remains concerning the positioning of HVE in the vertically stretched, highly stratified system of HE in England (Bathmaker 2016). Rather than weakening vertical stratification through attempts to create horizontal diversification, a reformed system of HVE may turn into a high-quality route that favours the academically successful (see, e.g. Cullinane and Doherty 2020) or alternatively continue to be deemed the appropriate route for certain types of students, those unsuitable for university HE study, the overlooked and under-served ‘forgotten’ 50 per cent (Birdwell et al. 2011: 13).

NOTES

1. The general evolution of colleges in the other nations of the United Kingdom (Northern Ireland, Scotland, and Wales) has been similar to that in England, but the current situation of college higher education is quite different.
2. The 165 colleges that offer HE include general colleges of further education, specialist colleges in art, design, and performing arts, and land-based

- colleges, as well as institutes of adult learning and sixth form colleges (244 colleges in total) (AoC 2019).
3. See <http://mixedeconomygroup.co.uk/about-mixed-economy-group/> (accessed March 2020).
 4. A total of 541 organizations in England provided sub-bachelor level 4 and 5 courses in 2016–2017: 210 FE colleges, 157 private training providers, 96 higher education institutions, and 45 alternative providers (Foster 2019: 6).
 5. While other personal and social benefits may derive from education, the economic understanding of social mobility we use derives from the definition of social mobility used by the UK's Social Mobility Commission. This focuses on employment outcomes not on educational achievement: 'Social mobility is the link between a person's occupation or income and the occupation or income of their parents. Where there is a strong link, there is a lower level of social mobility. Where there is a weak link, there is a higher level of social mobility' (Social Mobility Commission 2020).
 6. The Longitudinal Educational Outcomes dataset combines information about individuals gathered by the schools, colleges, and universities they attended, with data on the taxation they pay, so long as they are not self-employed.

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Higher Level Vocational Education in South Africa: Dilemmas of a Differentiated System

Joy Papier and Seamus Needham

INTRODUCTION

Understanding the Term ‘Higher Vocational’ in South Africa

The concept of higher vocational education and training in South Africa is multi-layered and understood very differently depending on the institutional type with which it is being associated. In fact, higher vocational in the South African context is something of an oxymoron, as a rudimentary electronic search of the term immediately takes one to vocational colleges (technical and vocational education and training [TVET]) and their offerings are generally ‘mid-level’ qualifications that fall below university levels—‘higher education’ being more generally associated with university qualifications. In the university system on the other hand, the term higher

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vocational is rarely used to refer to the many qualifications that are closely related to work or practice, generally referred to as ‘professional qualifications’ (e.g. accounting, engineering, medicine, law, or business).

Even though TVET colleges and universities have been located in the same government department, the Department of Higher Education and Training (DHET), since 2009, colleges are subject to separate quality assurance authorities and processes and their qualifications do not easily articulate. Some public TVET colleges in South Africa (known as further education [FE] colleges in the UK) have historically offered vocational qualifications at National Qualifications Framework (NQF) levels 5 and 6, which are within the university/higher education space. However, these qualifications have never been regarded as higher education due to their status as official college curricula rather than accredited university qualifications. In spite of the establishment of the NQF in 1995, which was intended to bring coherence across the education and training system and enhance portability of credits and articulation, perceptions of institutional hierarchies and the ‘value’ of qualifications have persisted.

Scope of This Chapter

This chapter therefore proposes to problematize the issue of higher vocational education. It will show how skills development is envisaged to occur across a post-schooling spectrum of offerings in South Africa, where equity is a goal but historically divergent education and training systems often militate against it being realized. In the last decade there has been growing recognition of the need for qualifications that span the boundary between TVET colleges and universities and allow greater access to further and higher education for young people who, for various reasons, cannot access university. Albeit to a limited extent, universities and TVET colleges are collaborating in the design of level 5 higher certificates that can be offered by colleges or universities and become pathways into university qualifications. These certificates enjoy higher status than historical TVET level 5/6 offerings. This is because they have the input and approval of universities at the outset and are registered on the Higher Education Qualifications Sub-Framework (HEQSF).

In this chapter, we trace the convoluted pathway that TVET colleges and vocational education in South Africa have traversed and the difficulties of creating a coherent post-school system notwithstanding the existence of the NQF. To date there has been limited articulation of TVET college

and university qualifications, but as demonstrated herein there are encouraging signs of increasing political will to bridge the vocational-higher education divide by finding common ground for articulation in nationally recognized qualifications. The following section sketches the policy background within which colleges and universities coexist.

FRAMING A POST-SCHOOL DISCOURSE IN SOUTH AFRICA

Before the formation of a single ministry for TVET, adult learning, and university education, there was a distinct lack of policy coordination and coherence among sub-sectors of the post-school system. This seriously hampered student efforts at progression and transfer, a legacy that is constantly being challenged. The need for alignment of institutions of adult learning, vocational training, the workplace, and higher education was expressed in several policy forums (see Cloete 2009; Perold et al. 2012; Kraak 2011). In response, a Department of Higher Education and Training Green Paper (2012) envisaged a diverse, comprehensive, and differentiated post-school system responsive to the demands for access, skills development for economic growth, and in service of communities.

South African education policy conceptualizes post-schooling rather differently from other countries on the continent or abroad, creating the potential for confusion. In most international settings, post-schooling would mean education *after* a period of compulsory schooling (also known as post-compulsory or post-basic). However, in South Africa, post-school is defined as ‘no longer in compulsory general schooling’, irrespective of the stage at which one left or whether one ever attended school. Key characteristics of the post-school system in South African policy can be summarized as follows.

Various Institutional Types

The policy emphasis in the Green Paper (DHET 2012) and subsequent White Paper (DHET 2013a) moved significantly from the DHET’s previously narrow focus on vocational education in public vocational colleges, to the recognition that post-schooling would require a range of institutional types within a system. This new emphasis was attributed to the diverse needs of candidates for post-schooling for whom a ‘one-size-fits-all’ post-school institutional approach would not work. Various institutional types, namely, universities, TVET colleges, and community

education and training colleges (CETCs), and associated programmes, were envisaged to cater for the needs and aspirations of the target audiences described below.

Broad and Inclusive Post-School System

The broad definition of post-schooling in the Green Paper (DHET 2012) was applied to those outside of formal general schooling, as defined under the Department of Basic Education, but who were within the ambit of the DHET. This included students at public and private universities, colleges, adult education centres, and workplace training institutions. The post-school system therefore accommodates youth and older adults, the schooled and the unschooled, the employed and the unemployed, those in pre- and post-basic education, those in broadly formative and more specific occupational training programmes, and those learning within institutions or at the workplace—a daunting scope by any yardstick.

Although it merits attention, this paper does not delve into ‘informal’ learning, focusing largely on learning within formal qualifications. We remain cognizant, however, that much valuable learning falls outside the boundaries of the formal and that for many young people and adults such learning may serve a necessary purpose on their learning journeys and in building a vibrant culture of learning. Recognition of prior learning (RPL) for access and placement therefore remains on the national agenda, together with the development of formal credit accumulation and transfer mechanisms. This is evidenced by the national task teams constituted by the Minister of Higher Education and Training for this purpose (see Report of the Ministerial Task Team on RPL, 2014).

Since the first official data analysis revealed that around 3.2 million young people were ‘not in employment, education or training (NEET)’ (Cloete 2009), South Africa has seen this number increase as dropouts from school and university are added to the ranks of those who are neither studying nor working. The most recent statistics from the DHET (2018: 5) estimated that 31.1 per cent of young persons aged 15–24 years were NEET, amounting to 3,213,000 in 2017.

South African policy suggests, therefore, that massification of the post-school system should occur at the pre-university level (i.e. TVET and CETCs), since universities are not set to expand dramatically or to provide for the broad range of potential post-school needs (DHET 2013a). However, in South Africa, university enrolments still exceed those for

TVET and adult education, in spite of government policy directives to make TVET colleges more attractive and accessible options. The following chart shows the relative size of each of the post-school sectors in 2017 (Fig. 1).

Formal vocational education and training at the mid-skills level has historically been the preserve of TVET colleges (the former technical colleges), and higher education professional qualifications, as explained earlier, have been the preserve of universities/universities of technology. As such, TVET colleges and universities have the foundations in place for vocational and higher vocational programmes to be expanded upon. CETCs, on the other hand, are new entities in the post-school landscape, arising out of the former public adult learning centres (mostly ‘night schools’). These offered mainly literacy and second-chance schooling programmes for adults located at lower secondary-school-level qualifications. The CETCs will eventually offer a range of skills programmes and second-chance education programmes for adults in their communities. At present, however, they are structurally weak, poorly funded, and only just in the process of setting up the infrastructure or institutional partnerships to enable them to function. It is not envisaged that CETCs will offer full

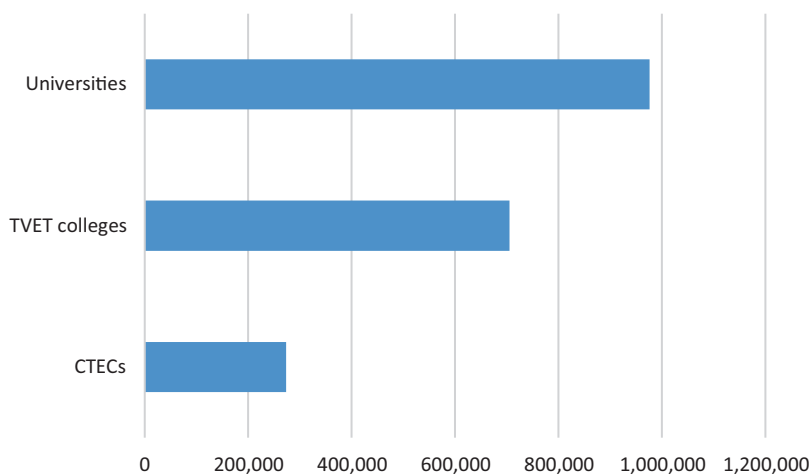


Fig. 1 Enrolment in South Africa's post-school institutions (2017). (Source: Statistics South Africa 2019)

vocational qualifications in the short term or the higher level qualifications for which TVET colleges are being geared up. Having only a limited number of offerings at present, and without state-funded programmes for adults, this sector has far fewer enrolments than both TVET colleges and universities.

Post-School Inefficiencies

TVET colleges have been subjected to ongoing critique for failing to retain students and to improve pass and throughput rates. Such failures highlight the waste of resources resulting from student failure and drop-out (Kraak 2013). Although college pass and throughput rates have been improving slowly since the introduction of the new curriculum in 2007, they still fall short of official targets annually. The statistics suggest that almost half of enrolled students are exceeding the required duration of the qualification, are repeating subjects in the next year, or are dropping out before completion. In an environment where further and higher education and training is highly subsidized by the state through public funds, the cost of such inefficiency is enormous.

Universities face similarly dismal pass and throughput rates. It has been shown that less than half of the students enrolled in a three-year undergraduate programme actually graduate in the prescribed period (Council on Higher Education Report 2013). There has been some research on the reasons for these poor success rates (see van Brockhuizen et al. 2017). With significant bottlenecks due to repeating students, universities are also not able to find places for all of those who desire initial or second-chance access.

TVET colleges and universities cater to widely divergent student needs and learning backgrounds, which makes the task of creating a scaffolded system of provision across institutions a daunting one. A university qualification still remains the aspiration of most students and parents, and TVET colleges have to work hard to overcome the negative stereotyping of vocational education that many years of systemic neglect has engendered. As stated earlier, while university qualifications leading to work may be termed vocational higher qualifications, the term vocational is not generally associated with university qualifications. Creating pathways from college to university would be one way to overcome the stigma of low achievers being relegated to TVET colleges, but the purpose of vocational training and the drive for colleges to become institutions of first choice

(rather than gateways to higher education) are emphasized in policy intentions. In view of the diversity of education and training needs that post-school institutions have to meet, South African policy has embraced the concept of institutional ‘differentiation’. This is problematized more fully below.

DIFFERENTIATION IN A POST-SCHOOL SYSTEM

Mission Differentiation and Mission Creep

South African policy holds that TVET colleges, CETCs, and universities have different missions designed to meet the needs of their citizens (DHET 2013a). Despite these differences, they should avoid operating in siloes and, to ensure progression and articulation, create a network of pathways and bridges to link institutions in logical and easily understood ways. However, the concept of mission differentiation, or intentional differentiation, was applied to South African higher education with not altogether pleasing outcomes, as the sections below illustrate.

Mission differentiation refers to ‘an array of types of institutions, each with a clearly designated mission, and a clear expectation that institutions would seek excellence within their designated mission’ (Longanecker 2008: 1). In the case of the United States of America, as a result of increased demand for higher education, many new higher education institutions were created with defined missions, and the missions of existing institutions were expanded to serve the community’s economic development needs (Longanecker 2008: 2). But, in expanding the mission of existing institutions, unintended consequences such as ‘mission creep’ and, in many cases, ‘upward mission creep’ resulted. This meant that community colleges sought to become baccalaureate colleges, baccalaureate colleges wanted to be universities, modest universities aspired to be significant research universities, and research universities aimed to be ‘world class’ (Longanecker 2008: 3). This upward mission creep was observed too in South Africa, especially when mission differentiation was accompanied by stratified funding that was perceived to be upholding the apartheid status quo advantage of former racially defined universities.

Differentiation of higher education in South Africa has rendered important lessons which should inform future differentiation efforts in other domains (like TVET colleges for instance). Cloete (University World News 2008) wryly observes that:

post-apartheid SA has a more coordinated post-school system than before, but it also has a more homogenous system in terms of mission and vision, with the main form of differentiation being institutional inequalities rather than different functions and choices.

Van Vught (2009) has written widely on differentiation in higher education using organizational theories such as Darwinian population ecology. Such theories are used to explain how ‘institutional isomorphism’ results when organizations adapt to the existence and pressures of other organizations in their environment and react similarly so that they come to resemble each other. This is especially the case in situations of scarce resources, as in nature. Van Vught (2009) argues that in such situations, there will be an increase in homogeneity and elimination of weaker organizations, undermining the very intentions of differentiation.

Garraway and Winberg (2019) trace the differentiation process that led to the creation of universities of technology. In the late 1960s, a group of technical colleges were designated as centres of advanced technical education (CATE), which subsequently became technikons in the 1970s, similar to the approach and aspirations of polytechnics in the UK. In 2003, technikons were rebranded as universities of technology, which maintained their vocational focus but placed them under similar governance and funding formulae as comprehensive and traditional research universities. This inevitably led to a decrease in vocational education provision as universities of technology focused on postgraduate programmes and research that attracted better funding relative to undergraduate programmes. Critically, previous linkages between TVET colleges and universities of technology were lost through this higher education differentiation process.

What are the lessons about differentiation in relation to TVET colleges? These colleges are not intended (in policy) to be universities. The bulk of their offerings (described more fully in the next section) are located below higher education levels at NQF levels 2–4 and they have a specified mission that is associated with employability and employment (DHET 2013a). Furthermore, many college lecturers enter college teaching via industry or from schools and do not have the higher level qualifications that would be expected by universities of those teaching on university programmes. In view of TVET colleges’ racialized history, there are still deep-seated inequalities that pervade particular offerings due to uneven funding during the apartheid years. This enabled some institutions’ infrastructure and staffing to be better developed than others.

In view of the above, differentiation will have to be carefully and sensitively carried out so that colleges are enabled to deliver (where appropriate) higher education programmes in line with their community needs, rather than only on the basis of where capacity currently exists. In some instances, capacities will have to be built to enable the college to meet the demand for higher education where university structures are not accessible to the target group.

We turn now to a more detailed explanation of the nature of South African TVET colleges and what they offer.

THE PUBLIC TVET COLLEGE SYSTEM IN SOUTH AFRICA

The public vocational college system in South Africa has been the focus of education and training reform for the past 20 years. Transformative policies in this sector have addressed, *inter alia*, institutional structures, functions, governance, management, curricula, student support, and staff qualifications. Taken together with successive interventions, which have shaken deeply rooted practices and processes in public colleges, many unintended and unresolved consequences have resulted (Papier 2012; McGrath 2010; Cosser 2011).

Conceptual debates about the nature of practical and disciplinary knowledges have polarized demand- and supply-side perspectives, resulting in curriculum confusion within TVET colleges. The emphasis on a new knowledge economy, disciplinary knowledge debates (Allais 2007; Young 2006) and persistent critique from the private sector that traditional college offerings are outdated and obsolete, was evident in the structure of new qualifications introduced in 2007. Arguments that vocational education ought to 'look both ways' (Barnett 2006; Fuller and Unwin 2004; Billett and Seddon 2004) and that vocational training has a responsibility to provide both the basis for further learning in higher education as well as workplace preparation have gained ground in South Africa. But this kind of integrated approach has proven difficult in the country. Some argue that vocational qualifications have fallen short on the side of practical training, with an over-emphasis on the theoretical components, to the detriment of the qualification's value in the workplace (McGrath 2004; Kraak 2013; Akoojee 2012).

Providing education and training options for youth and adults poses a particularly difficult challenge in South Africa. The academic high school route annually loses large numbers of young people through attrition and

failure, leaving many beyond school-going age outside the system. Nearly 50 per cent of school-age youths drop out between Grade 1 and Grade 12 and thereby fail to achieve the exit-level matric qualification (Cloete 2009; DBE 2011). TVET colleges (known before 1998 as technical colleges and thereafter as Further Education and Training or FET colleges) have been criticized for being ‘catch all’ institutions or second-chance education, but at the same time there are limited options for youth who do not have skills to be employed or self-employed or who have become disillusioned by the academic schooling route.

The former technical colleges prior to 1998 had a narrow menu of offerings in the so-called official Report 191 or NATED (National Accredited Technical Education Diploma) programmes, mostly in engineering, business studies, and the services industry (tourism, hospitality, haircare, and so on). These programmes, modelled on the UK system and delivered in a ‘block release’ format of trimesters or semesters, have been offered for over 40 years, with engineering modules providing the theory component of apprenticeship training. The trimester theory modules for particular trades in the case of engineering starts at N1 (roughly equivalent level to schooling Grade 10 and thus pre-tertiary) and ends at N6, at which point candidates could move into appropriate higher education (technikon) diplomas at level 5 in corresponding fields. In business studies modules, which are semester long and commence in the college at N4 (post-matric/tertiary level) through to N6, students could similarly enter level 5 diploma courses at some technikons. Even though N4–N6 programmes are ‘post-matric’ levels, these ‘part’ qualifications (a semester in length), which are official state-funded curricula, have never been regarded by universities as higher education qualifications, and they are not registered on the HEQSF.

The technikon qualifications referred to above were to change with the advent of the new higher education landscape after 1995 and the state-steered differentiation. This saw technikons become universities of technology and subsequent degree qualifications (Bachelor of Technology), which were better funded, replace the more applied diplomas being phased out. Students entering the TVET college route without a matric certificate as the basis for entry into university were not able to access the new degree programmes as the old diplomas disappeared.

With the economic downturn in the 1980s and the decline of apprenticeship training through guaranteed employer contracts in the 1990s, the engineering programmes no longer served only the needs of employed

learners. They also attracted the ‘pre-employed’ (i.e. unemployed youth) into ‘learnerships’ as a skills development model without the employment contract that is obligatory in an apprenticeship. But the NATED programmes had not kept pace with changes in industry and modernization in manufacturing. They were heavily criticized for being outdated and out of touch with the modern workplace and the needs of the new knowledge economy. Part of the problem appeared to be curricula of insufficient depth and disciplinary knowledge. An attempt to modernize the NATED programmes through qualifications with a stronger disciplinary base resulted in the new national certificates vocational (NCV). This consisted of a set of programmes at NQF levels 2–4 (i.e. pre-tertiary) across learning areas, with curricula structured along formal schooling lines into full-time, one-year programmes with a rigorous assessment regime.

The NCV qualification was meant to replace the NATED by 2007, but a backlash from employers and other stakeholders familiar with the old programmes stalled the intended ministerial phasing out of NATED. Consequently, NATED was allowed to run alongside the new NCV as state-funded official programmes. Since the formation of the Qualifications Council for Trades and Occupations (QCTO) in 2010, many of the trade-related NATED programmes have been located within that framework and quality assurance structure, at the same time being updated and made more relevant to their associated industries. Currently, the higher certificate at level 5 of the HEQSF is being seen as the qualification (offered mainly at universities of technology) that could become the entry-level university qualification enabling access in vocational fields. A range of higher certificates is also being developed, at various stages of implementation. It is considered possible that these higher certificates could, further down the line, be offered at TVET colleges through partnerships between universities and colleges. It is at this level of the qualifications framework that articulation between college and university qualifications are being seen to have the most possibility for success. This is discussed later in the chapter.

Alongside TVET reforms, adult learning and education has also been receiving policy attention since its inclusion within the post-school scope of authority of the DHET. In addition to offering second-chance high-school qualifications, public and private adult learning centres continue to provide adult basic education and training (ABET) programmes that focus on literacy and foundational competencies.

The post-school scenario has thus been fraught with a history of disconnect at all levels of education and training, despite integration efforts through the NQF (Allais 2007; Perold et al. 2012). While official policy intent is to arrive ultimately at a seamless post-school system, the boundaries that have become reinforced over many years, both within and across sectors of post-schooling, have yet to be made more permeable.

BOUNDARY CROSSING IN THE POST-SCHOOL SYSTEM

The Limitations of National Qualifications Frameworks

Student mobility and progress on credit accumulation and transfer and recognition of qualifications are still issues that need resolution in spite of advanced South African policy on articulation. Achieving a seamless system that assists learners to move from further to higher education and across institutions and programmes is a long-term goal, even in more mature systems, but mechanisms have been created for the purposes of boundary crossing, such as national qualifications frameworks and so-called dual sector institutions. South Africa established its NQF in 1995 but dual sector institutions, as attempted in the UK and elsewhere, have not really been a feature of this landscape for reasons with which the country is still grappling. These are discussed as follows.

Standpoints on the hierarchies of knowledge, the differences between types of learning and the boundaries between further/TVET and higher education institutions which preserve these separations are well established in the research literature (Bernstein 1999; Muller 2003). These standpoints which have been in evidence in South Africa too have been salient to widening the remit of FET/TVET colleges to increase access to higher education. Young (2006: 3) argues in the Bernsteinian tradition that ‘further’ and ‘higher education’, with all their various associations, ‘carry what might be referred to as ideological and identity work; they sustain identities and boundaries for both students and teachers and at the same time limit as well as enhance people’s expectations and possibilities’. What is being questioned here is how such separate identities and boundaries can be bridged, and whether the existence of a national qualifications framework which locates different types of qualifications on a single framework is the answer to systems integration.

In South Africa, the question of whether the NQF can create a seamless education and training system was answered negatively in the NQF review

of 2005. This highlighted the establishment of three concurrent sub-frameworks within the 10 levels of the NQF and with separate quality assurance bodies, as in a sub-framework for higher education (the HEQSF); for general education in schools and for TVET qualifications below level 4 (the quality assurance body known as Umalusi); and for occupational training certificates (the QCTO). Building a coherent articulation mechanism has been proposed as a means of bridging these various sub-frameworks. Understandings about the equivalence of types of knowledge and achievement are now more tentative and nuanced than when the South African NQF was first instituted in 1995 (see Report of the Ministerial Committee on Articulation Policy 2013).

Lortan (2019) notes the impact of the Higher Education Sub-Qualifications Framework for universities of technology. Prior to 2013, these universities had offered a three-year Bachelor in Technology (B. Tech). With the introduction of the HEQF, these B. Tech degrees were relegated to Diplomas in Technology, based at second-year undergraduate level. An additional fourth year was required for students to obtain the new B. Tech degree. All universities of technology are currently phasing out their B. Tech diplomas since professional registration as a technologist is tied to the B. Tech degree and no longer to the national Diploma in Technology.

Similarly, the South African Qualifications Authority (SAQA) introduced a policy for recognizing professional bodies and registering professional designations in 2018. Whereas pre-existing professional bodies such as the Engineering Council of South Africa were deemed accredited by this policy, new professional bodies that quality assured professional designations within commerce and industry increasingly tied their designations to undergraduate and postgraduate degree qualifications rather than to certificates and diplomas.

'Dual Sector' Institutions

Bathmaker's (2010: 3–4) research into widening participation in the UK suggests that dual sector institutions, as in the case of FE colleges that offer higher education programmes, especially for non-traditional students, offer 'ontological security' and 'renders HE [higher education] less of an alien world'. Such (dual sector) institutions, she argues, enable and support boundary crossing and soften the barriers between further education and higher education not only within the institution but also beyond

it. She cautions, however, that knowledge boundaries could still be strongly maintained within dual institutions but recommends that ‘epistemological boundaries must be explicitly navigated rather than ignored if students are to be supported in crossing them’ (Bathmaker 2010: 11). Her positive evidence found that ‘the boundary between further and higher education has proved permeable and workable, leading to relationships and alliances of many kinds, as well as new and changing configurations of further and higher education’ (Bathmaker et al. 2007: 14). These sentiments and findings resonate with the experience of early articulation proposals in South Africa, where offerings that span both further and higher education institutions have been mooted as a way to expand access to higher education via colleges and to relieve the pressure on universities (Stumpf et al. 2009).

It would appear that measures to level the playing fields and to create pathways for student progression and expansion of access have been undertaken across the world, with outcomes that have not always been in line with policy goals. Bold steps will be required to overcome deeply rooted divisions and mistrust among constituent institutions of our post-school system. This will allow the most vulnerable and disaffected of South African learners to find their way into and across education and training pathways and realize their education and training aspirations.

Access to University for TVET College Students— Articulation Attempts

National regulations with regard to TVET college students gaining access to universities have been in place since 2009. However, very few universities have adapted their entry criteria to the college-leaving certificate (NCV level 4), and requirements for access remain based on the matric or school-leaving certificate. Given the large numbers of school-leaving applicants annually, universities have an extensive and competitive pool to draw from, without having to consider the college equivalent.

A study of vocational college-university interaction in 2009 (Stumpf et al. 2009) revealed that there was limited access for vocational college graduates to universities and that articulation largely depended on relationships between institutions driven by champions within those institutions. Having a NQF in itself did not guarantee articulation, as the existence of three qualification councils with their own remits (for schooling and college qualifications; for trade and occupational qualifications;

and for higher education qualifications) required agreement on how these various qualifications could articulate. The models proposed in 2009 (*ibid.*) were those, *inter alia*, of ‘franchising’. In such arrangements, vocational colleges offered higher education programmes on behalf of universities and the qualifications were awarded by the latter; or some colleges were granted the right to offer specific higher education qualifications in their own right. These included the NQF level 5 or first-level university qualification or the higher certificate which could then lead to the student obtaining an advanced certificate and then a diploma. In addition, it was mooted that colleges might offer a wider range of tertiary occupational programmes than it did at the time, or create other institutional types such as the American community college. A disabling factor noted was the lack of harmony and synchronization between official higher education and TVET college policies.

The possibility of TVET colleges offering the level 5 higher certificate as the first undergraduate level of university study, and being able to progress into the second level at university, is an attractive one when considered in the light of university constraints on expansion. Furthermore, TVET colleges are more widespread across the country and have better reach, particularly among rural students for whom universities are often too distant. The higher certificate in the HEQF is an industry/vocationally oriented qualification which includes a period of work integrated learning, and the minimum entry requirement is a national senior certificate (*matric*). The focus of the higher certificate makes it an appropriate and relevant qualification for TVET colleges to offer.

But while most of the policy-building blocks might be in place (National Development Plan 2011; DHET 2013b), college-university interaction has to be based on broad national guidelines rather than on goodwill between individual institutions. Funding arrangements for colleges to offer bona fide higher education qualifications such as the higher certificate would also need to clarify university and college funding allocations and student fees and would require some earmarked funding above university enrolment targets. Depending on the levels of staff qualifications at colleges, there may need to be interactions between universities and colleges about teaching staff and sharing of expertise.

Since the 2009 recommendations (Stumpf et al. 2009), strides have been taken towards formalizing articulation arrangements between TVET colleges and universities, and there have been a few exploratory research projects. A small study of articulation between TVET college

qualifications and higher education programmes in one South African province showed a number of promising initiatives between a university of technology and colleges in the province, which included signed memoranda of understanding (Papier et al. 2016). However, the number of TVET students gaining access were very small, and there were indications that students who had completed matric at school were being accepted as second-chance entrants to university once they had completed TVET college qualifications (Papier et al. 2016: 54).

On the policy front, a Ministerial Task Team produced new policy on articulation in 2014 that included recommendations from the SAQA. This policy stressed that articulation needs to address systemic issues between the sub-qualification frameworks of the NQF and specific institutional issues, such as curricula alignment and equivalence of qualifications. The lack of recognition by universities for learners with vocational qualifications was also noted. This articulation was formalized for South Africa's post-school education and training sector in 2017 (Republic of South Africa [RSA] 2017). Despite this policy progress, articulation between post-school education and training institutions remains limited, as outlined in the following section.

A project that explored access into university qualifications for employed learners via an occupational qualification in the insurance industry highlighted the gap between TVET college curricula and the learning required for entry-level university qualifications (Needham and Papier 2018). In this project, an agreement was brokered with a traditional research university to allow graduates from the TVET college level 5 professional qualification to enter into an advanced diploma and a subsequent postgraduate diploma course. Thereafter graduates would be able to sit for a professional board exam for an internationally recognized designation in financial planning. The throughput rate for this articulation route turned out to be very low, and an analysis of reasons for this concluded that the workplace-oriented NQF level 5 qualification offered by TVET colleges did not prepare graduates academically for disciplinary-based qualifications at university. In addition, support structures offered by universities and TVET colleges for employed learners studying on a part-time basis were not sufficient to ensure their success (Needham 2018).

A key limitation of this vocational articulation route between TVET colleges and a traditional research university was that it only allowed alternative access to a faculty's undergraduate diploma and advanced diploma programmes. Graduates of this articulation route were not able to access

the more prestigious Bachelor of Commerce degree, despite holding second- and third-year diploma qualifications from the same university. Permission to sit for the board exam leading to the internationally recognized professional designation within the insurance industry was only accessible to graduates with a postgraduate diploma.

Undergraduate diplomas and advanced diplomas attract substantially reduced subsidy and formula funding from government and this serves as a further disincentive for traditional research universities to offer professional vocational qualifications through diplomas. As an example of this, the faculty offering the articulation route described above for the insurance industry subsequently ceased to offer the diploma and advanced diploma qualifications.

Another research and development project initiated by the SAQA more recently conducted a baseline study of learner transitions among South African post-school institutions (SAQA 2017). The study report provided evidence of learners transitioning from TVET colleges to universities of technology in the main, with access to higher certificates and diplomas rather than undergraduate degrees. Very early indications in 2020 from this consultative project show that there has been collaborative curriculum development between TVET colleges and a university of technology in subject areas such as information and communications technology (ICT) and mathematical sciences, although the number of students involved has not yet been finalized. What has been noted are the limitations on TVET college graduates accessing an undergraduate engineering degree, and the lengthy route it would take for TVET candidates to complete prerequisite university levels to become a candidate engineer. This contrasts with the more straightforward academic undergraduate route. Numbers of learners registered for higher certificates at universities in 2016 were estimated to be only 6.8 per cent of the university population, with the majority (76.6 per cent) being registered for bachelor's degrees or the national higher diploma (previously B. Tech) qualifications (Statistics South Africa 2019).

CONCLUSION

Vocational higher education is not a generally understood term in South Africa, where the post-school system remains structurally weak and fragmented. Systemic challenges include the separate sub-qualification frameworks that do not facilitate movement across pathways and into higher education. The overwhelming number of school leavers attempting to

enter higher education has resulted in minimal attention paid to access for vocational college graduates. TVET colleges offer legacy higher vocational programmes, but these are particular to the TVET college system, are not registered on South Africa's NQF, and articulate poorly with university qualifications. While the need for vocational higher education is recognized in policy within universities, student transitions into vocational pathways at university have remained low. More recently, there has been collaborative development of nationally registered vocational higher education certificates that offer progression to vocationally oriented diplomas, primarily within universities of technology. These interventions show that there is the will to overcome historic institutional divides and create systemic integration. Unlike in Australia, and to a much lesser extent in the UK, dual sector institutions offering both college- and university-level vocational qualifications currently do not form part of South Africa's education and training system. TVET colleges are largely limited to offering diplomas that do not facilitate access to undergraduate degree qualifications or professional designations recognized by industry professional bodies.

Bathmaker's (2010) notion of ontological security for students entering higher education is instructive for the South African vocational higher education sector. Current articulation policy cites the difficulties TVET college students face upon entering higher education as well as the inadequate levels of preparedness when students transition from school to TVET colleges. Introducing vocational higher education programmes within TVET colleges could make colleges more attractive to school leavers and address the critical shortage of spaces within the existing university system. More importantly, the development of coherent vocational higher education pathways into recognized professions will assist in producing some of the critical and scarce skills identified in South Africa's economic development plans. As can be seen from this chapter, the chasm that existed between the concerns of TVET colleges and that of universities is slowly being bridged, and persistent efforts to cross the divide are being made. This will undoubtedly benefit future generations of vocational college students and their communities. However, there is still significant work ahead to bring about parity of esteem between vocational and disciplinary degree qualifications.

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Higher Vocational Education in Canada: The Continuing Predominance of Two-Year Diploma Programmes

Michael L. Skolnik

INTRODUCTION

This chapter suggests that higher vocational education in Canada may be viewed as consisting of five types of programmes offered by the country's colleges. After providing a brief overview of Canadian higher education, the chapter describes each of these five types and explains why the author considers them forms of higher vocational education. In the section that follows this overview, it is suggested that what is distinctive about higher vocational education in Canada is both the scale of short-cycle tertiary education programmes and some of the specific types of programmes offered. Equity concerns are also addressed, noting that while promotion of greater equity was a major motive for the development of some types of

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higher vocational education in Canada, the evidence for its contribution to greater equity is mixed. The final section of the chapter contains concluding comments.

Maintaining a national focus in this chapter is difficult because of the considerable regional differences in the nature and role of colleges and the unevenness of higher education data across Canada. The chapter gives disproportionate attention to higher vocational education in Canada's largest province, Ontario, because some types are found predominantly in Ontario; data for some of the aspects of education addressed in the chapter were more readily available for Ontario than other parts of the country; and because of the author's greater familiarity with higher vocational education in Ontario from more than a half century of study.

OVERVIEW OF CANADIAN HIGHER EDUCATION

Canada is a federation consisting of ten provinces and three territories. Higher education in Canada is normally described as consisting of two distinct types of postsecondary institutions: universities and colleges. The universities, which can be traced back to the eighteenth century, or even earlier, have broad statutory authority to award degrees at the bachelor and higher levels. As of January 2020, Universities Canada, the organization that represents Canadian universities, had 95 member institutions.

By contrast, colleges did not exist until the twentieth century and most were not created before the last third of that century. In three provinces, colleges offer university-equivalent courses in arts and sciences that enable students to transfer to a university to complete a bachelor's degree, as well as career education programmes that prepare graduates for entry to the workforce. In the other seven provinces, colleges concentrate primarily on workforce preparation. In addition, colleges offer a variety of programmes and courses for academic upgrading, adult education, and community development. The credentials awarded most commonly by colleges are diplomas and certificates. The institutions in the college sector typically use the nouns college or institute in their name, and the national organization which represents them is Colleges and Institutes Canada (CICAN). As of January 2020, CICAN had 135 members, though some of the members were multi-campus provincial systems of colleges. A few former colleges that have attained university status are members of both CICAN and Universities Canada.

Canada does not have a comprehensive national qualifications framework. The closest it has to one is the Canadian Degree Qualifications

Framework, which was adopted by the provincial and territorial ministers of education in 2007 as part of the *Ministerial Statement on Quality Assurance of Degree Education in Canada* (Council of Ministers of Education Canada 2007). Two provinces, Alberta and Ontario, have provincial qualifications frameworks that include credentials normally awarded by colleges, in addition to those traditionally awarded only by universities (Government of Alberta 2020; Ontario Ministry of Colleges and Universities 2020a).

IDENTIFYING HIGHER VOCATIONAL EDUCATION IN CANADA

The most straightforward way of identifying higher vocational education in Canada is to (1) examine the various forms of vocational education and training (VET) that could potentially qualify for the appellation ‘higher’ and (2) determine which of those forms merit that modifier. A difficulty with the first task is that in Canada the term ‘vocational’ is used primarily for apprenticeships or for programmes in secondary schools. Charest and Critoph (2010: 58, 67) note that ‘vocational training is an imprecise term in the Canadian context’, adding that apprenticeship is ‘the one form of learning unequivocally recognized as vocational training in Canada’. However, by international standards, Canada has low rates of both apprenticeship and of secondary school vocational education (Lehman 2012). Only about one percent of secondary students start an apprenticeship, apprenticeships are used for only a limited range of occupations, and completion rates are very low (Charest and Critoph 2010).

A problem with the second task, determining which forms of VET warrant the appellation ‘higher’, is the lack of consensus regarding criteria for such determinations. Bathmaker (2017) suggests that the definition of postsecondary vocational education and training put forward in the OECD’s *Skills Beyond School* report might serve as a definition of higher vocational education and training: ‘the programmes and qualifications that prepare students for specific occupations or careers, that are beyond upper secondary level, and that would normally require at least six months full-time or equivalent preparation’ (OECD 2014: 22). Two types of postsecondary vocational programmes described in the *Skills Beyond School* report that are of particular relevance to this chapter are vocational bachelor’s degrees and short-cycle programmes that ‘normally’ are at International Standard Classification of Education (ISCED) level 5 (OECD 2014: 22). The linkage to ISCED level 5 poses a problem for

Canada, as one type of programme offered by Canadian colleges may meet the ISCED level 5 requirement for the ‘complexity and specialisation of its educational content’ (UNESCO Institute of Statistics 2012: 14), but not the requirement for minimum programme duration.

As Busemeyer and Schlicht-Schmälzle (2014) have noted, a lack of commitment to secondary vocational education and training may be compensated by greater provision of VET at the tertiary level. This is what has happened in Canada, as most vocational education occurs in colleges (Charest and Critoph 2010). Nomenclature commonly employed in Canada does not reflect the OECD recommendation to use the term ‘professional education and training’ to refer to postsecondary vocational programmes of more than six months’ duration (OECD 2014: 13). As in the United States (Bailey and Berg 2010), the term professional education is reserved mainly for programmes offered by universities.

POSSIBLE FORMS OF HIGHER VOCATIONAL EDUCATION IN CANADA

The five forms of higher vocational education that are considered in this section are diploma programmes of two and three years’ duration; one-year certificate programmes; graduate certificate programmes; and college bachelor’s degree programmes.

Two-Year Vocational Programmes

The two-year vocational programme is the predominant offering of most Canadian colleges. The goal of these programmes is to provide graduates with the knowledge and skills for particular occupations. There are two competing conceptualizations of where this type of programme fits in the educational system. These conceptualizations, which in an earlier publication the author labelled the parallel and vertical models (Skolnik 2016b), date back to the institutes of technology, which were the predecessors of today’s colleges.

The first technical institute in Canada was the Provincial Institute of Technology and Art, which opened in Calgary, Alberta, in 1916. The establishment of Canada’s first institute of technology so much earlier than any of the others was intimately tied to the rivalry between Alberta’s two largest cities (Baker 2011; Smith 1990). When Calgary lost out to

Edmonton in the struggle over the location of the capital city in the new province in 1905, Calgary leaders believed that it was only fair for it to get the provincial university and were disappointed by the decision of the legislature to also locate the University of Alberta in Edmonton. When civic leaders in Calgary subsequently sought the establishment of a junior college that could eventually become a university, the government appointed a Royal Commission to consider the matter. The commission, which consisted of the presidents of the flagship universities in three other provinces where the proliferation of universities was a concern, recommended against conferring degree-granting powers on a new college in Calgary.

However, the commission offered a consolation prize. It suggested that because of the 'substantial interest manifested by the citizens of Calgary in the improvement of educational facilities in their city', and because of the demand for more instruction in 'technological, social, economic and allied subjects', an institute of technology and art be established (Smith 1990: 295). The Provincial Institute of Technology and Art was thus established as an alternative to the existing university.

The next technical institutes in Canada were not established until the 1940s when some communities in Ontario sought support from the provincial government for training for local industries, particularly forestry, mining, and textiles. In responding to these requests, and subsequently in developing a system of technical institutes, the government drew upon the advice of Professor C. R. Young, Dean of the Faculty of Applied Science and Engineering at the University of Toronto (Ryerson University 1978; Young 1944). Young maintained that there was a serious gap in technical education in Canada between the secondary schools and the university schools of engineering. He recommended the establishment of a system of institutes of technology that would offer programmes that varied in length from one to four years. The programmes would prepare graduates for supervisory roles in industry and also for 'technical functions such as drafting, design of details, laboratory testing, inspection, construction in the field, or the technical aspects of sales work' (Young 1944: 150). Young viewed these institutions as comprising an intermediate component of the educational system and believed there should be provision for graduates of technical institutes to subsequently transfer to a university and complete an engineering degree.

As the early institutes of technology evolved into a larger and more complex system of colleges, these two conceptualizations of the relationship between colleges and universities persisted, with government at times

emphasizing one or the other, and sometimes both. For example, when the Ontario government established its present system of colleges in 1965, the Minister of Education referred to the colleges as completing the system of education ‘extending from the kindergarten to the postgraduate level’ (Ontario Department of Education 1967: 8). The Minister also saw colleges as ‘a new kind of institution that will provide, in the interests of students for whom a university course is unsuitable, a type of training which universities are not designed to offer’ (Ontario Department of Education 1967: 11).

Each of these conceptualizations has shortcomings. The vertical conceptualization is of dubious applicability if there is no pathway from the vocational diploma to the university bachelor’s degree. This was the case when Ontario’s colleges were established, as no provision was made for college students to transfer to university (Fleming 1971; Ontario Department of Education 1967). As of 2013, Trick noted that ‘to date it has not been Ontario government policy to use colleges as a significant means of providing access to university’ (Trick 2013: 5). Graduates of two-year diploma programmes in Ontario have a difficult time obtaining transfer credit at universities, and in 2014–2015, only 5.5 percent of graduates transferred to a university (McCloy et al. 2017). Graduates of college vocational programmes appear to have better access to universities in British Columbia (Cowan 2018) and Québec (Bégin-Caouette 2017) than in Ontario, but overall, nationally the situation is problematic.

The problem with the parallel conceptualization is the ambiguity of the term ‘alternative’ with respect to a form of education that is said to be an alternative to university. In the parallel conceptualization, the college vocational programme may be deemed so different from a traditional university undergraduate programme that the programmes of the two institutions cannot be compared on a common scale.¹ But if the quality or standard of the vocational alternative cannot be measured on the same scale with which university programmes are assessed, on what scale can it be measured?

Judging whether the two-year vocational diploma is a form of higher vocational education is different for the two conceptualizations of its place in the educational system. In the vertical conceptualization, the college diploma would be a higher credential in that it is normally pursued after completion of secondary school, not necessarily in the sense that the majority, or even many, of the courses in the programme would have been recognized for credit by a university. In the parallel conceptualization, the

justification for calling two-year vocational programmes a form of higher vocational education would be that these are signature programmes of what government regards as one of the two sectors of Canada's higher education system. In addition, experts in vocational education, employers, and practitioners regard them as providing an appropriately high level of vocational education. Drawing upon both conceptualizations, it would appear that the two-year diploma programmes of Canada's colleges fit within ISCED level 5 and thus within the definition of higher vocational education noted earlier.

Three-Year Diplomas

Although the two-year vocational diploma is the most prevalent credential in Canadian colleges nationally, there are also some three-year diplomas. In several provinces there is a smattering of programmes of three, or in some cases two and a half, years, presumably for fields where two years is insufficient for the coursework deemed necessary. In Ontario, college programmes of three years' duration are common and lead to a distinct credential: advanced diploma.

The Ontario Qualifications Framework (OQF) differentiates between a bachelor's degree, which must be six to eight semesters in duration, and an honours bachelor's degree, which requires eight semesters or more. Programmes of three years' duration constitute a small but not insignificant proportion of bachelor's degree programmes offered by Ontario universities. The conclusion of curriculum analyses undertaken by the association of Ontario colleges was that many of the sector's advanced diploma programmes either met the provincial standard for the three-year bachelor's degree or, with minor adjustments, could meet that standard (Colleges Ontario 2012). Colleges Ontario also found that internationally, three-year bachelor's degree programmes were quite common, while three-year diploma programmes were 'extremely rare' (Colleges Ontario 2012: 8). Based on its research, Colleges Ontario recommended that the colleges be allowed to convert advanced diplomas, on a case-by-case basis, into three-year bachelor's degrees. While the government did not accept that recommendation, the apparent similarity of the three-year diploma to the three-year bachelor's degree makes the rationale for regarding the three-year diploma as a higher vocational education credential even stronger than the rationale for viewing the two-year diploma that way.

One-Year Certificates

It was noted earlier that in Dean Young's vision of the technical institutes that were the precursors of today's colleges, the space between secondary school and university would include programmes that ranged in length from one year to four years. Vocational programmes of one year's duration are quite common in Canadian colleges. While these programmes are of shorter duration than what is normally required for ISCED level 5, they may meet its requirements for complexity and specialization of educational programmes. For example, in the Ontario College Certificate in Rural Recreation, graduates must acquire the knowledge and skills necessary 'to plan, organize and deliver inclusive recreation, leisure and wellness programmes and events that respond to identified needs, interests, abilities and available resources in remote or rural communities' (Ontario Ministry of Training, Colleges and Universities 2014: 5). The standards for the Ontario College Certificate in the qualifications framework include references to the application of 'a variety of thinking skills in a systematic approach to anticipate and solve problems' (Ontario Ministry of Colleges and Universities 2020a). Perhaps for these reasons, despite being of less than two years' duration, Canadian college certificate programmes are treated as short-cycle tertiary education in reporting statistics on educational attainment, although not in enrolment statistics (Statistics Canada 2017). Thus, there are grounds for viewing one-year certificates of Canadian colleges as a form of higher vocational education, even if those grounds may not be as strong as for longer duration diploma programmes.

Graduate Certificate Programmes

Graduate certificate programmes² are designed to meet the employability needs of individuals who have completed a bachelor's degree in a university or a diploma in a college. Many of these programmes require a bachelor's degree for admission, and in Ontario more than three-quarters of those enrolled in graduate certificate programmes possess a university degree (Wheelahen et al. 2017).

As of January 2020, the CICAN website listed 762 graduate certificate programmes, the majority in Ontario, and the next most in British Columbia (CICAN 2020). The programmes are intended to provide practical skills in specific job fields. In Ontario, the graduate certificate 'focuses on a narrow range of skills, and yet teaches these skills in depth'

(Thorsell 2015: 75). Examples of programme titles are Big data analysis, Bioinformatics, Brain disorder management, Brand management, Broadcast journalism, and Building information modelling. The programmes are typically of one year's duration. Many of the students are graduates of university arts programmes, and they seem to be attracted by the opportunity to gain technical skills that may improve their employment prospects (Toor 2020).

According to the OQF, the learning expectation of the graduate certificate programme is 'a level of knowledge and skill that enhances one's ability to perform a more specialized range of complex and non-routine activities within the field' (Ontario Ministry of Colleges and Universities 2020a). The placement of this type of programme in the OQF is at level 9, between the advanced diploma and the bachelor's degree. Toor (2020) has pointed out the irony of the graduate certificate being below the bachelor's degree in a hierarchical listing of qualifications when the latter is frequently required for admission to the former. Given it normally builds upon the bachelor's degree and is clearly vocationally oriented, the graduate certificate would seem to be a higher vocational education credential.

College Bachelor's Degree Programmes

Until the last decade of the twentieth century, one of the main factors that differentiated colleges from universities was that universities were authorized to award degrees while colleges were not. Beginning in the mid-1990s, colleges in some provinces were given limited opportunity to award applied bachelor's degrees. While the word 'applied' has not been formally defined in these authorizations, it is generally taken to refer to educational programmes that prepare graduates for specific types of occupations. Presently, there is some provision for colleges to award bachelor's degrees in seven provinces, but the great majority of college degrees are awarded in two provinces, Ontario and British Columbia. Excluding the programmes of university members of CICAN and collaborative programmes in which a university partner awards the degree, 32 colleges across Canada offer a total of 167 bachelor's degree programmes (see CICAN 2020), of which close to two-thirds are in Ontario. In 2016, college bachelor's degree programmes accounted for 5.7 percent of Ontario college enrolment and about 4 percent of all bachelor's degrees in the province (Wheelahlan et al. 2017).

Although there has been a recent trend towards somewhat broader degree titles like Bachelor of Design or Bachelor of Information Technology, many of the titles of college bachelor's degrees in Canadian colleges refer to a very specific application: Bachelor of Applied Technology in Geographic Information Systems; Bachelor of Applied Technology—Architecture—Project and Facility Management; Bachelor of Health Care Technology Management; and Bachelor of Early Learning Program Development.

Each bachelor's degree programme proposal must go through an intensive assessment. The difference in goals and pedagogy between applied programmes like the ones just noted and traditional university bachelor's degrees can raise issues in these assessments. Some jurisdictions have attempted to deal with these issues through such means as differentiating between learning expectations in applied and academic bachelor's degree programmes or having different sector agencies review the different types of programmes (Skolnik 2016a). Only in Alberta is there some difference in degree standards between the applied degree programmes of the colleges and the traditional degree programmes of the universities. For example, there is a recognized difference in the qualifications needed for faculty who teach in applied degree programmes (Campus Alberta Quality Council 2019).

A programme approval process in which colleges must demonstrate that their proposed bachelor's degree programmes meet the norms of a traditional university degree programme could constitute a coercive isomorphic force for academic drift. In this case, the type of academic drift that would be of particular concern would be that noted by Harwood (2010: 413): '[a] process whereby knowledge which is intended to be useful gradually loses close ties to practice while becoming more tightly integrated with one or other body of scientific knowledge'. Harwood suggests that this type of academic drift has been common in many fields of practice, including agriculture, engineering, medicine, and management.

In Ontario, college bachelor's degree programmes must meet exactly the same degree standards as traditional university bachelor's degree programmes and, in addition, the college programmes must satisfy other requirements such as the inclusion of work experience (Postsecondary Education Quality Assessment Board 2019). Colleges have expressed concern that the existing standards are 'over-weighted toward the academic culture of research universities' (Crow et al. 2011: 18). One of their major concerns has been that it is often difficult to recruit faculty with the right

mix of industry experience and the kind of doctoral degree expected by the assessment body. The substitution of faculty with a PhD in an academic field of science but no industry experience for faculty with relevant experience could contribute to the type of academic drift described by Harwood.

WHAT IS DISTINCTIVE ABOUT HIGHER VOCATIONAL EDUCATION IN CANADA?

While there are no published figures at the national level for enrolment or graduations for all of the five types of programmes described in this chapter, such figures are available for Ontario. Table 1 shows the percentage distribution of graduates by programme type for 2013 and 2017.

Although the share of graduates from diploma programmes declined slightly over this four-year period, in 2017 these programmes still accounted for almost half of higher vocational education graduates and almost three times the percentage for the next largest category. While a decline in the advanced diploma share was expected as a consequence of the development of bachelor's degree programmes, it is noteworthy that so many students still pursue the advanced diploma when the bachelor's degree takes only one year more. It is possible to obtain a national figure for the combined total of all kinds of diplomas, and nationally graduates of diploma programmes constituted 66.9 percent of higher vocational education graduates (see Statistics Canada 2020) compared to a total of 63.9 percent for the sum of diploma and advanced diploma graduates in Ontario. The largest increase shown in Table 1, more than four percentage points, is for the graduate certificate.

Table 1 Percentage distribution of graduates in higher vocational education, Ontario 2013 and 2017

	2013	2017
Diploma	51.1	49.1
Advanced diploma	16.1	14.8
Bachelor's degree	1.8	2.9
Graduate certificate	11.3	15.9
Certificate	19.7	17.3
	100.0	100.0

Source: Derived from Ontario Ministry of Colleges and Universities (2020c)

While it was not possible to obtain international data on enrolment or graduations from comparable programmes in most countries, international data on short-cycle tertiary education attainment could be used as a surrogate for estimating the relative scale of diploma and certificate programmes in different countries. In 2016, Canada had the highest percentage of the population aged 25–64 whose highest level of education was short-cycle tertiary education of any OECD member country (OECD 2017). Canada's rate of short-cycle tertiary education attainment was 26 percent, more than three times the OECD average of 8 percent, and only three countries had rates that were more than half of Canada's. The high rate of short-cycle tertiary education attainment is largely a reflection of the role of Canada's colleges in providing higher vocational education (Skolnik 2020).

Canada's high rate of short-cycle tertiary education attainment compared to other OECD member countries stands in contrast to its relatively low rate of college bachelor's degree activity. Earlier it was noted that in Ontario, the province with the greatest number of college bachelor's degrees, colleges account for only about four percent of all bachelor's degrees (Wheelahan et al. 2017). In contrast, in some countries, tertiary education institutions other than universities account for a large proportion of bachelor's degrees. For example, more than half the baccalaureate degrees in Finland are awarded by the universities of applied sciences (Statistics Finland 2020a, b). The comparison with Finland is of interest because, until the mid-1990s, technical colleges in Finland played a similar role as colleges in Ontario. However, with the reorganization of the former technical colleges into a system of polytechnics there was a shift of emphasis from short-cycle education to bachelor's degree programming. By 2015, the new institutions were the major providers of bachelor's degrees in Finland, but the short-cycle tertiary education attainment rate for the 25 to 34 age group, which reflected more recent trends, had declined to zero (OECD 2016).

Besides Finland, other examples of countries with high rates of vocational bachelor's degrees and negligible rates of short-cycle tertiary education are the Netherlands and Germany. Canada has a quite different pattern, with a very high rate of short-cycle tertiary education and a relatively low rate of vocational bachelor's degrees. Neither approach seems fully consistent with the OECD's advice for the provision of higher vocational education. Countries are advised to offer short-cycle programmes in 'a tier of institutions separate from universities' and 'make use where

relevant of the successful model of universities of applied sciences' (OECD 2014: 14). A generous interpretation of this pattern would be that, in regard to adopting elements of the university of applied sciences model, Canada has been overly restrictive in its interpretation of 'where relevant', while short-cycle tertiary education has gotten lost in the rush in many European countries to implement the degree structures of the Bologna Process.

The organization of higher education in Canada is broadly similar to that in Anglophone countries such as the United States and Australia. While the short-cycle tertiary education attainment rates in those countries are a little less than half of Canada's rate, in all three countries, colleges started offering bachelor's degree programmes at close to the same time and have similarly low rates of baccalaureate production (Floyd and Skolnik 2019; Wheelahan et al. 2009).

Canada's graduate certificate programmes are located mainly in just two provinces and constitute a relatively small proportion of higher vocational education nationally. Quantitatively, what is most distinctive about higher vocational education in Canada is the scale of college diploma programmes, which is extraordinary by international standards. This is especially significant given many other countries, which were once heavily invested in short-cycle tertiary education, have scaled back or virtually eliminated such programmes in favour of bachelor's degree programmes.

Equity Concerns

The establishment of provincial systems of colleges in Canada in the 1960s was part of a worldwide movement to develop new types of postsecondary institutions that would be more explicitly industry-focused than traditional universities and that would be more accommodating to the types of learners who were under-represented in universities. A priority for the new institutions was to provide higher education to those who, in the absence of these institutions, would not likely participate in it. The effort seemed successful in economic terms as graduates of college diploma programmes in Canada attained higher earnings than they likely would have if they had stopped their education after high school. Studies of the earnings of post-secondary graduates about two decades after the opening of the colleges found that rates of return for investment in a college diploma were comparable to, or in some cases higher than, those for a university degree (Boothby and Rowe 2002; Vaillancourt 1995).

In spite of such findings, by the mid-1990s the equity concern pertaining to colleges had shifted from providing higher education to those who might not otherwise be able to partake of it, to facilitating bachelor's degree attainment for the types of students who are more likely to attend a college than a university. These are people from low-income families; first-generation postsecondary students; Aboriginal people; persons with disabilities; racial and ethnic minorities; persons who had been unsuccessful in previous academic studies; single-parent families; and persons living in rural areas (Clark et al. 2009; Colleges Ontario 2015; Norrie and Zhao 2011).

The effort to improve opportunities for bachelor's degree attainment for college-bound students included both attempts to improve pathways from college to university and enabling colleges to award bachelor's degrees. The first colleges that were allowed to offer bachelor's degree programmes were in rural areas of British Columbia, where bachelor's degree attainment rates were lower than in the major urban areas, particularly for Aboriginal people (Dennison 1997). The first study comparing earnings of graduates of college bachelor's degree programmes with graduates of university programmes, which covered college programmes in British Columbia, Alberta and Ontario, showed that, on average, college graduates were earning about 12 percent more than graduates of university programmes two years after graduation (Frenette 2019). Most of the difference in overall average earnings could be explained by the fact that college graduates were more concentrated in higher earning fields such as business, management, public administration, and health.

It is difficult to say how much allowing colleges to award bachelor's degrees has improved opportunities for groups that were traditionally under-represented in universities to earn a bachelor's degree. This is due to the lack of comparative data on the characteristics of graduates of college and university bachelor's degree programmes. Interviews with college leaders in Ontario revealed that making bachelor's degree programmes more accessible to under-served populations was a major consideration in the design of the programmes, but evidence on the extent to which this goal was actually realized is quite limited (Skolnik et al. 2018). Some data could be found by comparing responses to the 2015–2016 Ontario Student Satisfaction Survey (see Wheelahan et al. 2017) in the college sector with information on 2014 university graduates from the 2016–2017 University Graduates Survey (Ontario Ministry of Colleges and Universities 2020b). These surveys provided data on whether the students/graduates

had physical, mental, or learning disabilities, whether they identified as Aboriginal, and/or whether they were first-generation students.³ The surveys did not capture family income or parental occupation. Almost the same percentage of college bachelor's degree students and graduates of university bachelor's degree programmes identified as Aboriginal (about 2 percent); a slightly higher percentage of the university graduates (27 percent) than of college students (25 percent) were first generation; and a higher percentage of college students (14 percent) than of university graduates (8 percent) had disabilities. On the basis of this limited set of indicators, college bachelor's degrees appear to be addressing inequities in regard to physical, mental, or learning disabilities but not necessarily in other respects. Moreover, the capacity of college bachelor's degree programmes to substantially reduce socio-economic disparities in bachelor's degree attainment in Canada is limited by its small scale. In the words of one policy leader, this makes its contribution 'more symbolic than real' (Wheelahan et al. 2017: 65).

The limited data available show also that higher credential programmes in colleges tend to have relatively fewer disadvantaged students than lower credential programmes. Compared to diploma programmes, both bachelor's degree and graduate certificate programmes have lower proportions of first-generation students; lower proportions of students with disabilities; and lower proportions of Aboriginal students (Wheelahan et al. 2017). The percentage of first-generation students is nearly 50 percent higher in diploma than in degree programmes, and the percentage of students with disabilities in diploma programmes is more than double the percentage in graduate certificate programmes. These findings are consistent with those cited in Australia (Wheelahan 2009; Gale et al. 2013; Webb et al. 2017) and England (Thompson 2009). As Wheelahan et al. (2017: 51) note, 'the higher the level of credential within colleges, the less likely students are to come from low socioeconomic backgrounds'.

While college bachelor's degrees could conceivably contribute to greater social equity, the justification for graduate certificate programmes lies primarily in their potential role in helping to create a more highly skilled workforce. As a high proportion of graduate certificate students already have a university degree, an expansion of graduate certificate programming could result in college resources being shifted from serving less economically advantaged students to serving more advantaged students. However, Toor (2020) has shown that many graduate certificate students are foreign students who are unable to obtain the types of jobs for which

they prepared because they lack a Canadian education credential. Completing a postsecondary programme that is of shorter duration and lower cost than a master's degree may help these students obtain a job in which they can realize their potential.

The higher vocational education credentials which likely have the most unequivocally positive implications for equity are the diploma and the certificate. Of the higher vocational education credentials considered in this chapter, these credentials have the highest proportions of students from historically under-served groups. Although certificate programmes have a higher proportion of students from under-served groups than do diploma programmes, the difference between diplomas and certificates in this regard is much less than the difference between diplomas and bachelor's degrees. Although the average earnings premium over high-school graduates is lower for diploma graduates than for university bachelor's degree graduates, there is considerable overlap in the earnings distributions of diploma and degree holders (Frenette and Frank 2016). For example, in 2010, the mean age-adjusted earnings of male graduates in engineering technology exceeded the earnings of male university graduates in agriculture, forestry, communications, journalism, biology, psychology, and several other fields.

CONCLUDING COMMENTS

Of the five credentials awarded by Canadian colleges that could be considered higher vocational education and training qualifications, the two-year diploma is the most prevalent.

College diploma programmes provide an alternative type of higher education for learners who do not find a university suitable to their needs. Two-year diploma programmes likely do more to address inequities in educational opportunity than college bachelor's degrees or graduate certificates, though that conclusion must be regarded as tentative given the limited data for a single province on which it is based. Diploma programmes provide a tertiary education option that is within reach of many secondary school leavers for whom a bachelor's programme may be a step too far. In addition, as the college diploma is under the jurisdiction of the vocational education sector it is less vulnerable to academic drift than the college bachelor's degree. For these reasons, it is likely that the two-year diploma will continue to be the predominant higher vocational education credential in Canada for the foreseeable future. And for the same reasons,

it is a credential that may merit consideration in other countries, including those that have abandoned it in favour of bachelor's degrees.

The most pressing questions concerning higher vocational education in Canada pertain to the future of the college bachelor's degree. Rather than expanding the provision of bachelor's degrees in colleges, in British Columbia and Alberta the colleges that were awarding the most bachelor's degrees have been converted into universities. Though these universities are still offering some sub-baccalaureate programmes, they are also increasing the scale of their Bachelor of Arts programmes. Because of the isomorphic tendencies towards the generalization of higher prestige institutional models in Canada (Harmsen and Tupper 2017), these institutions are more likely to evolve in the direction of the common Canadian university model (Jones 1998) than the European university of applied sciences model.

Colleges in Ontario have a significantly larger role in baccalaureate granting than colleges anywhere else in Canada, but the scale of that activity is still quite low compared to many European countries. Increasing the scale of the college bachelor's degree in Ontario to the point at which colleges account for a significant share of bachelor's degrees is not likely to happen through the approach that the government has taken to date. It will more likely require the government to adopt this as a goal, and develop a strategy to achieve it, which would include removing restrictions on the number of bachelor's degree programmes that colleges may offer and assessing whether the funding presently provided for college bachelor's degree programmes is adequate.

NOTES

1. The author was once taken to task by a senior official of CICAN's predecessor organization for using the term 'sub-baccalaureate' in referring to college diploma programmes. The infrequency of use of that term in the college community is perhaps an indicator of tacit acceptance of the parallel conceptualization of the relationship between college diploma and university bachelor's degree programmes.
2. Graduate certificate is the generic term used in the CICAN listing of advanced programmes in colleges (CICAN 2020). The Alberta Credentials Framework includes both a post-diploma certificate and a post-bachelor's certificate (Government of Alberta 2020). The Ontario Qualifications Framework contains only a post-diploma certificate but notes that it can

augment the knowledge and skills of graduates of diploma, advanced diploma, and baccalaureate graduates (Ontario Ministry of Colleges and Universities 2020a).

3. There was a difference between the two surveys in the wording of the question about first-generation status. College students were asked if their parents had attended a college or a university, while university graduates were asked whether their parents had completed a credential in a college or a university.

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The Origins and Contemporary Development of Work-Based Higher Education in Germany: Lessons for Anglophone Countries?

Lukas Graf and Justin J. W. Powell

INTRODUCTION

Today, higher education is typically seen as offering the most assured pathways to secure careers and low unemployment rates. Yet, increasingly some groups, not least higher education graduates and their families paying ever-higher tuition fees, question the taken-for-granted contributions higher education makes to individuals and society as a whole (Schulze-Cleven 2017). Despite decades of mass higher education expansion (Trow

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1973), even societies with strong systems continue to struggle to achieve their goal of universalizing participation and equalizing access (Smelser 2013). While in part this is due to limited public or corporate funding for (affordable) study opportunities, differentiated systems, such as in the USA, also lack policy coordination and effective governance, providing a surfeit of options (Labaree 2017; Meyer 2017). While participation rates have climbed worldwide, higher education systems continue to produce winners ('insiders') and losers ('outsiders'), even as the 'schooled society' shifts the occupational structure upward (Baker 2014). Furthermore, market-oriented higher education systems face increasing privatization, which also involves financializing university governance (Eaton 2017). Many states have retrenched investments that had once underwritten universities' flourishing and their moves towards massification. Tensions have deepened over who should pay for rising costs (Garritzmann 2017), exacerbated in an era of increasing status competition via higher education. In the face of such challenges globally, which alternatives exist?

A prominent possibility, pioneered in Germany in the 1970s, is 'dual study' programmes offered by several organizational forms, from vocational academies to universities of applied sciences. Such hybrid programmes fully integrate phases of higher education study and paid work in firms. Participants maintain multiple status, as they are simultaneously higher education students and trainees in firms as paid apprentices. In the short term, firms receive inexpensive but usually energetic labour. In the medium term, they benefit from personnel trained in the relevant context, while those who leave for other firms further expand the firm's network, often with important suppliers. Yet firms not only invest in selecting, recruiting, and training motivated future full-fledged employees, they also collaborate with higher education institutions to develop relevant curricula that promise to craft skilled workers with the skill set and, more than that, the ability to continue learning, that they will need in future. In such programmes, employers and educators cooperate to provide the curricular designs and the specific course work in 'dual' learning settings: on campus and in the workplace. Together, they shape a labour force oriented towards current challenges and opportunities in specific sectors, such as engineering, computer science, or business and economics. As these economic sectors have grown and skill demands rise, so too have dual study enrolments expanded dramatically, becoming more attractive. Currently many programmes are sought-after, even by the most advantaged secondary school leavers who aspire to careers with leading companies. In turn, graduates of

these programmes are attractive employees, not only in the firms in which they were trained (Krone et al. 2019).

Innovatively, dual study programmes systematically combine study (theory) and work (practice) phases in the process of attaining educational qualification(s). The term ‘practice’ is used to denote the structured learning experience in the workplace, whereas theory denotes learning within higher education institutions. As boundary spanning programmes, dual studies integrate elements of vocational training and of higher education, especially with regard to curricula, teaching staff, and funding. In coordinated ways, they connect the learning environments of firms and higher education institutions. Ideally, this establishes a varied but interwoven offering of settings to help master and integrate theoretical and praxis-based dimensions of the same subject. Concretely, academic organizations and firms work together when designing training curricula and administering programmes. What distinguishes German dual study programmes from work-based higher education in most other countries is the central importance given to the practice portion, which typically accounts for around half of the overall programme while being systematically integrated into the curriculum. Theory and practical phases often alternate in several-week increments, with the practical phases providing more synergies than the typical short-term internship separate from academy-based insights. Significantly reducing the financial challenges many students face, especially those from lower socio-economic status families, they earn wages throughout their studies, including the theory phases, as they are formally employed by firms for the duration of their studies. Such programmes become increasingly attractive for all youth as they transition to adulthood, especially in times of economic recession, such as that experienced globally in 2009. It seems likely this will also be true in the aftermath of the Covid-19 pandemic.

Different types of dual study programmes with special profiles exist (Graf et al. 2014). Students enrolled in dual study programmes that integrate a full-fledged apprenticeship programme (so-called *Ausbildungsintegrierende* programmes) earn a recognized vocational training certificate and a bachelor’s degree simultaneously. Alongside this original type, several other dual study programmes (a) offer extended periods of practical training within a firm or (b) allow working individuals to combine their part-time work with academic studies. Graduates of these latter types earn one degree (usually at bachelor level). Regardless of these options’ particularities in working time and degrees earned, to a great

extent, employers determine the quality of training. Importantly for the cross-institutional negotiations and cooperation agreements, as well as the selection processes, the firms active in offering dual studies include the most highly reputed companies in Germany, from Adidas to Volkswagen. They are often, but not exclusively, large firms that have considerable internal labour markets and professionalized human resource departments capable of screening, selecting, and supporting the best secondary school graduates from each cohort. These students, often among the strongest graduates of local schools, succeed in these high-paced study programmes that also often demand considerable spatial mobility. However, students and graduates do not always stay in their chosen field or firm (on transitions, see Krone et al. 2019).

Thus, dual study programmes manifest ways in which employer interests and investments are (re)shaping advanced skill formation. They produce new, higher level skills at the nexus of higher education and workplace-based training. We argue that such contemporary developments in Germany provide an innovative approach to simultaneously articulate and, ultimately, strengthen the links between (postsecondary) education and the economy. Co-developed and co-financed by employers, these programmes have many advantages. Benefits include encouraging employers to fund their own skill supply, at least partially. This could help to moderate the global trend towards saddling students with ever-higher education costs and student debt, a particularly grave concern in the UK and the USA, but also in other increasingly marketized higher education systems such as Australia.

Grounded in neo-institutional analysis, expert interviews, and document analysis, our analysis focuses on the relationship between higher education and firms in Germany, Europe's largest higher education system and economy. First, we introduce the historical-institutional context of advanced skill formation in Germany. Then, we analyse the genesis and rapid expansion of dual study programmes. In particular, we emphasize the role of employer interests and highlight distributional conflicts in the new politics of skill investment. Finally, in an era in which university-industry partnerships are becoming increasingly relevant, we present lessons other countries might glean from a newer form of work-based higher education.

THE GERMAN SYSTEM OF ADVANCED SKILL FORMATION AT THE NEXUS OF HIGHER EDUCATION, SCIENCE, AND INDUSTRY

Germany is the birthplace of the modern research university (Baker 2014). Its universities continue to be a reference point for other countries across disciplines and industries, as they function as the backbone of the third largest producer of scientific outputs worldwide. Whether in scientific advances (measured in research articles) or practical applications (measured in patents), Germany has enjoyed phases of pre-eminence, completely losing and then regaining its strengths in both theoretical and applied fields over the twentieth century (see Dusdal et al. 2020). University-industry cooperation, a driver of innovation across sectors and between public and private organizations, continues to rise in importance, especially because it facilitates knowledge transfer and the production of new technologies (see Mascarenhas et al. 2018 for a review of university-industry cooperation).

In contrast to heavily market-oriented systems like the USA, higher education in Germany is considered a public good. Within this context, and due to student protests against regionally variant implementation of tuition fees (Hüther and Krücken 2014), nearly tuition-free higher education is provided, regardless of nationality.¹ State provision of university-based education is taken for granted, although the private sector in postsecondary education has grown rapidly recently, extending the influence of markets on postsecondary studies even in one of the most state-oriented (and nearly wholly state funded) of all higher education systems.

Simultaneously, Germany's traditional secondary-level apprenticeship system, which links workplace training with vocational schooling in particular occupations, also continues to be attractive globally (Powell and Solga 2010; Euler 2013) and within Germany. This is despite the fact that it is challenged by 'academization' and the increasing attractiveness of higher education for more than half of each cohort.² Dual apprenticeship training at the upper-secondary level has a celebrated history in Germany, firmly embedded in corporatist governance structures that involve employer and employee representatives from business associations and unions as so-called social partners (Busemeyer and Trampusch 2012). These programmes lead to recognized certification according to the *Vocational Training Act* or the *Crafts Code* and thus govern access to specific occupations (Thelen 2004).

Both higher education and vocational training in Germany have in the past provided policy inspiration for other countries, such as in England over two centuries (Phillips 2011). Many countries worldwide have long been interested in learning from German models of practice-oriented training (Ertl 2014), an interest now extending to dual studies (Graf et al. 2014). However, currently, the German skill formation system is undergoing reforms to address issues of institutional permeability between the organizational fields of higher education and vocational training. Indeed, these fields' strengths, each defined by distinct rules, norms, and practices, led to a persistent divide between them, known as the 'educational schism' (*Bildungsschisma*) (Baethge and Wolter 2015). This is visible also in the larger divides between the church, state, and market and long-term secularization (Gordt 2019). This division, while strengthening both fields in their distinctiveness and providing a 'safety net' in terms of access to gainful employment for graduates from vocational training (Shavit and Müller 2000), has long hindered educational (and social) mobility. Today, this presents a problem, not least due to socio-political developments like the growth of the knowledge economy and rising educational expectations that risk lowering the status of vocational education and increase the demand for academic education (Powell and Solga 2010). In this context, dual study programmes, operating at the higher education level, can provide answers through higher level skill formation and promise to facilitate needed flexibility in educational careers and lifelong learning for all. This is relevant especially for young persons from disadvantaged socio-economic backgrounds who have managed to acquire a higher education entrance qualification but may refrain from more traditional forms of (unpaid) higher education given lack of funding. Yet, how could these hybrid programmes arise at the nexus of vocational training and higher education in a context in which these two fields are traditionally divided?

THE ORIGINS OF WORK-BASED HIGHER EDUCATION IN GERMANY

With the rise of dual study programmes, an 'extension' of the dual principle to the higher education sector took place. The concept of dual training at the higher education level originated from the so-called vocational academies. In 1972, on the initiative of large industrial firms, such as Bosch, Daimler-Benz, and Standard Elektrik Lorenz (Kramer 1981), the

Wuerttemberg Academy of Administration and Business (VWA) and the Chamber of Industry and Commerce of the Stuttgart region cooperated to create the first vocational academies, the prototype for dual study programmes (Beschoner 2009). This so-called *Stuttgarter Modell* aimed to help these firms recruit talented young people who had general academic skills and held a university entrance diploma (*Abitur*) into vocationally specific training. Given the growing demand for academically qualified workers with experience of, and a strong affinity for, actual work practice, a key motive of these large firms was to recruit qualified personnel who were more attuned to, and aware of, the firm's specific skills demands than regular higher education graduates (Mucke and Schwiedrzik 2000). In addition, dual study programmes minimized the time new employees needed to familiarize themselves with the job as well as with the organizational culture.

Initially, vocational academies were not taken seriously by most of the established actors in the vocational training and higher education fields (Graf 2018). This is because vocational academies were placed in a niche or grey area between the established but institutionally separated fields of vocational training and higher education. Indeed, in some German *Länder*, vocational academies are categorized as part of the higher education sector, and in others, they are part of the higher vocational training sector. The vocational academies also have a unique status regarding their representation at the national level, as they are neither part of the German Rectors' Conference (HRK), nor do they fall under the remit of the Federal Institute for Vocational Education and Training (BIBB). This location in an institutional grey area, which actually offered far more room for flexible interpretation of dual forms of training, is crucial. It implies that neither the standardization procedures of the collectively governed dualist vocational training sector nor those in the higher education sector directly applied to these newly created programmes. The discovery of this grey area allowed employers to initiate this new type of work-based training in cooperation with willing partners from education. At the same time, it should be noted that this evolution in a grey area also implies significant variation in the way dual study programmes are implemented in the 16 German states and, in turn, a certain lack of standardization and quality assurance at the national level (Deißinger 2000; Graf 2018).

Another indicator of their unique status and location in an institutional grey area is the absence of vocational academies from any general education policy plan (Kahlert 2006). They were first created by firms

defensively, at a time when the newly established universities of applied science (so-called *Fachhochschulen*, now simply *Hochschulen*) threatened firms' ability to recruit promising young people. Between 1969 and 1972, the first universities of applied science were established through a politically planned upgrading of technical and engineering schools to meet increased demand for tertiary education and improve the international reputation of this type of training (BMBF 2004). However, influential large firms in Baden-Wuerttemberg responded by launching the first dual study programmes to secure their hold on high-end vocational training. These firms feared increasing academization (Schwiedrzik 2001) and a loss of influence due to the greater institutional autonomy of the new universities of applied science (Kahlert 2006). In addition, in the aftermath of the mass student protests of 1968, these firms were sceptical of the capacity of these new universities of applied science to produce 'loyal employees' (Hillmert and Kröhnert 2003). In this context, large firms actively sought new options that would allow them to (a) recruit talented young people for their work-based training programmes and (b) ensure that these programmes would generate the needed skills. Thus, large firms acted as institutional entrepreneurs in pushing for greater differentiation in the established skill formation system.

However, large firms did not have sufficient influence within higher education in Germany—typically dominated by 'political legalism' (Goldschmidt 1991), the 'academic oligarchy' (Clark 1983), and the *Bildungsbürgertum* (middle-class intellectuals)—to directly influence the upgrading of the engineering and technical schools into universities of applied science. And the traditional dual apprenticeship system, with its strongly institutionalized collective governance system, also did not provide the level of leeway the firms needed to make more radical changes in response to broader academization. Thus, these firms opted to establish a new organizational form that specifically catered to their needs and integrated institutional elements from traditional dual apprenticeship training with those of higher education. They neither sought to entirely displace the newly established universities of applied science nor the traditional dual vocational training programmes but instead established a new organizational form in a grey area between these two established ones (Graf 2018). In grafting dual study programmes—by way of a bottom-up layering process—on top of traditional dual apprenticeship training, the firms managed to evade the veto power of both trade unions and smaller firms,

whose influence in the policy field of education is firmly grounded in the traditional apprenticeship system alone.

In fact, the German Trade Union Confederation (DGB) was very critical of the launch of dual study programmes, which it described as a short-term, narrow-gauge mono-education (Walitzek-Schmidtko 2014). Smaller firms also opposed the reform of this traditional system, albeit for different reasons. While trade unions are typically largely in favour of increasing the academic content of apprenticeship training, they feared that more differentiation and flexibilization of the system would lead to a greater dominance of firm-specific instead of industry-specific skills. This would increase the dependence of apprentices and workers on specific employers, thus reducing the power of labour associations. In contrast, the main issue for smaller firms is that they do not need high-level academic skills as much as larger firms do. Large firms, especially export-oriented ones, often experience greater demands to upgrade their workers' skills—and they usually have greater financial leverage to do so. Yet, smaller firms' interest in maintaining the traditional model tends to be rather the result of the wage compression that comes with national collective bargaining and certification. This allows them to recruit relatively well-qualified apprentices at reasonably low cost. Indeed, smaller firms' involvement in apprenticeship training often depends on the productivity or added value of apprentices during the training phase. Hence, as an increase in academic skills means less time spent in the workplace, this would reduce the economic viability of apprenticeship training for smaller firms.

As indicated earlier, large firms' initial move to create vocational academies can be characterized as a defensive response to increasing academization and especially the rising numbers of young people entering academic secondary schooling. This was partly enabled by social democrats as key proponents of making selective academic secondary schools more accessible to the lower middle classes (Nikolai and Rothe 2013). However, these firms subsequently realized that they had created a new institution upon which the trade unions and smaller firms did not have direct governance claims. It is in this regard that dual study programmes differ from the more traditional sequential vocational training-higher education model. Within this model, ambitious, academically motivated individuals first complete dual apprenticeship training and later move on to study at a university of applied science (e.g. in engineering). In this sequential model, the overall training period is longer and, more importantly, the two

sequences are firmly embedded within the governance mode of either vocational training or higher education. For example, trade unions and works councils are well positioned to organize apprentices and workers below the level of higher education trained engineers (Herrigel 2015) and, therefore, trade unions are still somewhat connected to engineers coming out of the sequential model. Yet, this is no longer true for most higher education graduates of dual study programmes. Additionally, from the firms' perspective, dual study programmes decrease the risk that candidates hired for an apprenticeship programme at the upper-secondary level will later decide to acquire a higher education qualification and quickly leave the firm.

In sum, this historical analysis shows that the genesis of dual study programmes is characterized by the reform initiative of large employers, with small firms and unions playing a rather marginal role. While the vocational academy can be seen as the birthplace of dual study programmes, such programmes were later adopted by universities of applied sciences and even research universities (referred to collectively as universities in this chapter) as the starting point of an impressive expansion phase. In 2016, the number of students in dual study programmes broke the 100,000 benchmark (BIBB, 2018: 196), implying that in certain subject areas, dual study programmes already represent a sizeable proportion of the relevant student groups. While dual programmes have existed since the 1970s, they have grown very rapidly, especially over the past decade (Krone et al. 2019: 13).

DUAL STUDY PROGRAMMES: A NEW PILLAR OF GERMANY'S MODEL OF WORK-BASED SKILL FORMATION

Dual study programmes were initially launched by German employers, especially in manufacturing, to ensure the practical relevance of the academic skills higher education graduates acquire. Responding to this challenge, in the 1970s employers began to cooperate with various types of educational organizations to build dual work-based academic programmes at a higher level. By uniting firm-based training with postsecondary academic education in applied courses of study, these new 'hybrid' programmes facilitate making the most of technological change and academic upgrading of curricula.

Over the past decade, this unique feature of Germany's higher education system has expanded markedly (BIBB 2015; Ertl 2020). In joining elements of apprenticeship training and higher education, this specific type of work-based higher education accomplishes institutional boundary spanning, especially with regard to curricula, teaching staff, and funding. Such connections between the learning environments of the firm and the academy extend far beyond the summer internship or abbreviated on-the-job training common in the USA. When teachers in academic organizations and employers work together in systematic ways to design curricula, they ensure that students have learning opportunities guided not only by academic faculty but also by company experts. Employers cover the costs of training during the praxis term, paying students for their work and studies, thus reducing the financial burden on families. Dual studies provide a sought-after pathway for young adults to learn and earn simultaneously. Crucially, this enables young adults to jump-start their careers. For employers, such programmes attract, mature, and maintain valuable talent.

The core principle of such programmes is their interactive combination of the workplace and the seminar room. These two distinct learning environments offer necessary but distinct opportunities to gain practical and academic knowledge. Dual study programmes are most common in economics, engineering, and computer science, but are also growing in other disciplines, such as health-related fields (Graf et al. 2014). Thus far, subjects have been concentrated in areas close to growing economic sectors. Students apply directly to the firm, which in turn collaborates with the university to provide academic education. All involved parties (the student, the firm, and the university) are bound by a formal agreement and students continue with that same firm for their entire undergraduate study period. The firm is responsible for financing the in-firm training. It also pays the student a salary, typically equivalent to, or higher than, that for traditional apprentices in the respective industry. A large portion of the costs for the programme's academic part is state-financed, as most dual study programmes are offered through public universities (of applied sciences). However, where firms cooperate with a private university, they usually cover much or all of the incurred costs.

Dual study programmes usually lead to a bachelor's degree in about three to four years (dual studies at master's level are still rare but also expanding) and connect two didactic principles, namely, scientific grounding and practical training. The original type of dual study programme integrates an initial vocational training certificate (otherwise acquired when

graduating from vocational training at the upper-secondary level). Here, graduates attain double qualifications—an upper-secondary-level vocational training certificate and a bachelor's degree from the university—thus improving access to specific occupations.

Notably, the impressive recent expansion of such work-based higher education programmes in Germany is due more to employer initiative than to government action or party politics. While in Germany, state (*Länder*) governments and also the federal government are the decisive players in regulating and financing higher education, this is only partly true for dual study programmes. Rather, collaboration between employers and universities is crucial, with these programmes developed bottom-up, as discussed earlier. This is indicative of an innovative development in German higher education that resonates with certain developments in the USA. What has long been acknowledged and valorised in the USA, namely, that higher education institutions are strong organizational actors in their own right, is increasingly evident in Germany as differentiation proceeds and universities develop more specific profiles.

This emergent field of work-based higher education exhibits similar cleavages and coordination challenges that exist in the traditional dual training system. Key arenas of contention include the provision of training, its financing, as well as the related mechanism of control and public oversight (see Busemeyer and Trampusch 2012 on dual training at the secondary level) but also the conflictual politics of general versus specific skills more broadly (Streck 2012). In the traditional German dual vocational training system (at upper-secondary level), a balance between the various interests of the involved stakeholders (capital, labour, and the state) is feasible due to the tradition of practiced corporatism. In contrast, in the field of higher education, we encounter a largely unexplored terrain of negotiations and, crucially, decentralized cooperation (Culpepper 2003; Emmenegger et al. 2019) around work-based training programmes developed by higher education institutions and firms, more or less collaboratively.

However, to date, research in the tradition of the political economy of skills has mainly focused on the study of the traditional dual training system at the secondary level as one of the hallmarks of corporatism in German capitalism (Hall and Soskice 2001). Thus, given recent developments, the political economy approach to skills requires adaptation to account for more recent developments in higher education (Hölscher 2012). When political economists analyse skill formation, they tend to be

especially interested in the role of firms (or employer associations) and trade unions in the vocational training system. Yet, as the dual principle is upgraded to the tertiary level, employers take centre stage in negotiating new governance forms of higher education. Consequently, we observe changing constellations and coalitions of actor groups within higher education. We argue that the interactions of these groups, including employers and universities and their associations, among others, provide fruitful ground for future analyses of advanced skill formation.

THE POLITICS OF WORK-BASED HIGHER EDUCATION IN GERMANY

The governance of dual study programmes represents shifting lines of conflict in advanced skill formation. Crucially, through the bottom-up development of such schemes, two actors have gained influence relative to the others. Employers as original drivers behind dual study programmes and universities as entrepreneurial actors in their own right. In contrast, the actor that seems to be left behind is the unions, traditionally a key partner in German skill formation. While German unions concentrate on the governance of traditional dual apprenticeship training, their attention on developments in higher education has been limited, as they struggle to win tertiary graduates as a new main source of members. Thus, in an era of structural changes in the economy and rising educational expectations, unions have had difficulty in realizing opportunities in advanced workplace-based training. This is even more relevant given that a lack of union involvement could result in such programmes focusing too narrowly on firm-specific skills.

Furthermore, current institutional innovations could well undermine traditional high-level dual apprenticeships at secondary level, as these are gradually shifted to higher education. However, lower skill apprenticeships are not being similarly upgraded. Thus, dual study programmes are unlikely to close the gap between high- and low-skill sectors but rather academize the medium sector of traditional apprenticeships, for example, in industry and commerce occupations. The losers might be those who previously would have gained access to traditional medium-skill occupational training but are now potentially left behind as academization accelerates. While dual study programmes were thought of initially as potential equalizers, now it is generally the top secondary school graduates who are

selected into them. Nevertheless, especially from a trade union perspective, dual studies in principle *could* offer opportunities to successfully complete higher education for those without sufficient capital to invest. This participation would provide access to attractive career pathways. More generally, dual study programmes tackle issues stemming from limited market absorption at the nexus of vocational training and higher education. When successfully implemented, they embed employers' knowledge about current and future skills demands into advanced skill formation.

THE POTENTIAL OF DUAL STUDY PROGRAMMES AT THE NEXUS OF HIGHER EDUCATION AND EMPLOYMENT

Dual study programmes are quickly becoming a key element in the German higher education system (Ertl 2020). This development is more likely to be successful if these programmes invest equally in the provision of high-level academic skills and hands-on practical skills. Employers increasingly demand this combination in recruiting talented young people for high-level training programmes. More broadly, the combination and feedback processes between educational organizations and firms promise innovation at the nexus of education and economy. This, in turn, opens up new perspectives for the comparison of advanced skill formation.

In an era of growing constraints on public funding in many countries, such programmes facilitate needed private investments in higher education. This development relates to the blurring of traditional boundaries between higher education and vocational education and training in many countries around the world (Powell and Solga 2010), also reflected in a gradual convergence of these fields across Europe (e.g. in France and Germany) (Powell et al. 2012). In the USA as well, some work-based higher education programmes resemble the German dual study programmes: higher-end apprenticeship programmes offered by American community colleges as well as a vast range of cooperative study programmes (Graf 2017). However, these USA variants often do not successfully or sufficiently combine workplace and academic learning.

In this context, a key lesson that can be learned from the German case is the need to build structures that allow higher education organizations and employers to cooperate and overcome potential conflicts between the worlds of academia and work. Compared to traditional vocational training, universities are more alike in Germany and the USA. Thus, universities' relations with firms can be relatively similar in the two countries,

especially with increased privatization and the growing need for private investments in education. However, what is crucial is inter-employer coordination. This can be facilitated by local and national intermediary organizations, such as business associations or chambers, that facilitate the joint development of such programmes and prevent free-rider problems related to poaching. In such settings, firms understand that they have to pay (more) for the advanced skills they require.³ This may involve greater private costs in training programmes and student salaries. It also implies investments in academic skills that may well transcend immediate firm-specific skills. Concurrently, the academy faces the challenge to develop tools that ensure systematically integrated work- and theory-based learning experiences. For this, university representatives must leave the ivory tower to negotiate and develop with employers eye-to-eye.

As a recent development, the insertion of the dual principle of vocational training that alternates phases of theory and practice into German higher education, as evidenced by the dual study programmes, provides both opportunities and risks. At the intersection of higher education and vocational education, such programmes imply increasing corporate influence in higher education. Simultaneously, expanding work-based higher education programmes may stimulate innovation. The closer link of higher education to the economy may facilitate advanced practice-oriented skill formation while spurring educational and social mobility within, and beyond, higher education. Thus, if policymakers set the right incentives for decentralized cooperation between public and private actors and discourage detrimental dynamics that threaten the collective spirit of work-based skill formation, this type of dual higher education may lead firms to invest more heavily in high-quality tertiary-level education programmes, as well as salaries for student employees. Finally, a key principle of such a system is that employers and the state *jointly* cover the costs of work-based higher education. The costs would be balanced by benefits such as integrated curricula, enhanced firm competitiveness, and better skill matching.

Another strength of dual study programmes is the high degree of curricular integration between the two learning environments of the university and the firm. Yet this ideal tends to be quite challenging to implement on the ground. In Germany, it partly derives from a long-standing tradition of collective governance in the field of work-based training through key stakeholders such as educational organizations, employers, trade unions, and state agencies. Dual study programmes that integrate a formal vocational training certificate and a bachelor's degree exemplify this crucial collaboration. In these programmes, the chambers of commerce are

involved, for example, in examining candidates for vocational training certification. To foster the cooperation of all involved actors and enhance necessary fine-tuning between the learning experiences in universities and the workplace, it seems worthwhile to explore how cooperative study programmes in the USA could offer a double qualification: a bachelor's degree and a registered apprenticeship certificate. An additional advantage is that if students realize that achieving a bachelor's degree is too demanding for them, they still have the option of earning a registered apprenticeship certificate. Where this reduces higher education dropout rates, it would save the loss of human capital and help individuals qualify for entry into (skilled) labour markets.

Another potential advantage of apprenticeship training being offered in conjunction with higher education is that this would boost the reputation of apprenticeships overall. Connections between vocational and academic educations within organizations provide a type of permeability essential to address persistent inequalities in higher education participation (Bernhard 2019). The German experience indicates that the attractiveness of the apprenticeship training system, as a whole, can be bolstered when it offers a viable pathway for those individuals with a traditional university entrance certificate. If these students seriously consider and choose advanced work-based higher education, this may well increase the standing of apprenticeship training among students, their families, and employers. Thus, dual study programmes provide an innovative model for policymaking and implementation. Dual study programmes excel when considering strategies to improve skill formation overall, to reduce the costs individuals must bear in attaining higher education, and to improve the fit between the expectations of employers and potential employees regarding skill formation programme. The origins and contemporary developments in work-based higher education in Germany thus can offer lessons and inspiration for Anglophone countries, with their strong and differentiated higher education systems, to further bolster study programmes coordinated with firms.

NOTES

1. In Baden-Württemberg, foreign students from outside of the European Union pay €1500 per semester (MWK 2020).
2. This refers to the comparison of the number of new entrants into higher education and the number of entrants into vocational education and training (BIBB 2018: 89; Dionisius and Illiger 2015: 45).

3. Crucially, a lack of such willingness to invest on the part of firms represents a serious obstacle to the transfer of dual study programmes to other countries (Graf et al. 2014: 117). In fact, in many countries, employer investment in training has been declining (e.g. Oliver and Wright 2016 on Australia). In such contexts, a training levy may provide a viable remedy. However, for such a levy to work well, it needs to be implemented systematically, taking into account relevant contextual factors (e.g. Richmond 2020 on the UK).

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Higher Vocational Qualifications: Differing Approaches Within the United Kingdom to Meeting Skills Needs for the Twenty-First Century

Fiona Reeve and Jim Gallacher

INTRODUCTION

This chapter focuses on the opportunities associated with the introduction of a new generation of higher vocational qualifications in the United Kingdom, namely, higher and degree apprenticeships in England and graduate apprenticeships in Scotland. Very different policy contexts have emerged in Scotland and England and the implications of these for the types of provision which have been developed are considered. The

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different policy frameworks have both strengths and limitations and the implications of these for the range of programmes which are now being established are analysed.

However, the first section of the chapter also considers the earlier generation of higher vocational qualifications. The limitations of these qualifications have helped create the context in which there is a perceived need for these higher level apprenticeships as a response to the education and training needs of the UK in the twenty-first century.

This comparison between Scotland and England can also provide an opportunity for ‘policy learning’. David Raffe and his colleagues have advocated the value of ‘home international’ comparisons and the idea that the UK can be a ‘natural laboratory’ for policy learning (Raffe and Byrne 2005). Given that England and Scotland are now developing graduate-level apprenticeship schemes, in quite different ways, there may be an important opportunity for ‘policy learning’, which could improve developments in both countries and further afield.

HIGHER VOCATIONAL QUALIFICATIONS IN ENGLAND AND SCOTLAND

England and Scotland have developed quite different approaches to the provision of higher vocational education and training over the last 20 years. These differences began to emerge clearly in the early 2000s. However, these developments cannot be seen as producing a very strong tradition of vocational education at this level in either country. In England, foundation degrees (FDs) were established in 2001 to provide a new form of vocational qualification. This was associated with a growing concern about a perceived skills deficit at the intermediate (associate professional and technical) level. In the past, Higher National Certificates (HNCs) and Higher National Diplomas (HNDs) were the main higher level vocational qualifications in the college sector in both Scotland and England. These are at level 5 on the International Standard Classification of Education (ISCED) and can be seen as examples of short-cycle tertiary education. They could be studied on a part-time or full-time basis. However, there was a perception in England that HNC/Ds were failing to address this skills deficit problem and a view that there was increasing dissatisfaction with these qualifications amongst employers. This led to the conclusion that a new qualification was needed to respond more effectively to these

issues (Department for Education and Employment [DfEE] 2000). As a result, new FDs, also at level 5 on the ISCED, were to be designed in ways which, it was hoped, would have greater impact in responding to these concerns. The importance of work-based learning was emphasized, and the contribution of this to the students' learning experiences was seen as crucial. A related theme was to encourage employers to take an important role in the development of these qualifications, ensuring their vocational relevance. Finally, it was emphasized that 'partnerships' between employers, universities, colleges and Sector Skills Councils (SSCs) would be seen as vital in providing programmes that were relevant, valid and responsive to the needs of learners and employers.

While the numbers on FDs grew rapidly in the period up to 2010, partly as a result of funding incentives to encourage their growth, they did not achieve the impact as vocationally focused qualifications which had been hoped for. This was partly because an important additional objective built into these qualifications was to enable students to progress to bachelor's degrees in universities. While many FDs were delivered in colleges, they had to be validated by a university (although several colleges eventually received FD awarding powers). A number of college staff involved stated that this led to an emphasis on academic criteria in the validation processes rather than vocational and work-related ones (Gallacher et al. 2009). Additionally, while work-based learning was welcomed by students, its extent and type varied considerably between FDs. It was also often difficult to secure the level of employer involvement in these programmes which had been anticipated, so the idea that they were employer led and focused on preparation for employment was an ideal that was not achieved in a number of these programmes (Gallacher et al. 2009).

Establishing FDs had been an important policy initiative associated with the Labour government which was in power in the UK from 1997 to 2010. However, this government was replaced by a Conservative-led coalition in 2010 that did not provide the same level of support for FDs. As a result, while in 2007–2008 there were almost 72,000 students registered in FDs (Higher Education Funding Council of England [HEFCE] 2008); this figure had fallen to just over 60,000 by 2015–2016 (RCU 2018). Although FDs remain the single largest qualification type at ISCED level 5 in England, HNCs and HNDs have remained a significant part of the vocational qualifications landscape, accounting for around 34,400 students in 2015–2016, with a further 26,000 students registered in bachelor's degrees in English colleges. However, concern has been expressed

regarding the continuing decline in enrolments at this short-cycle level and the impact on skills gaps, particularly in technical subjects. This was highlighted in the Augar Report, a major review of post-18 education and funding commissioned by the UK government (Augar 2019). This report also noted that in competition with a more prestigious university sector, and with finance mechanisms favouring full degree study, short-cycle courses are now less attractive to learners.

There was no similar radical reappraisal of higher vocational education in Scotland, and confidence was expressed in maintaining HNC/Ds as the main qualifications. However, a five-year 'modernization' programme was initiated in 2003. As part of this modernization, the Scottish Qualifications Authority (SQA) referred to the role of HNCs & HNDs in supporting 'technician, technologist and first line manager occupations for over 75 years', and the need to ensure that the new or revised programmes will 'continue serving these occupations' (SQA 2005: np). As a result, HNC/Ds have continued to be the main short-cycle qualifications in Scotland. These programmes are concentrated in colleges rather than universities and, in 2018–2019, 35,835 students were registered on HNC/Ds, accounting for 72 per cent of all of the higher education students in colleges (Scottish Funding Council [SFC] 2020). However, the nature of HNC/Ds has been changing over the years. While many of the HNC/D programmes were traditionally a means to obtain vocational qualifications through part-time study for those in work, these programmes are now mainly full-time. Many students use these qualifications to progress to bachelor's degree programmes in universities, rather than as terminal vocational qualifications (Gallacher 2017). Some indication of this change can be seen from data published by the Scottish Funding Council (SFC) showing that in 2016–2017, 70 per cent of full-time qualifiers from higher education programmes in colleges proceeded to further study. Many of these students progressed to complete bachelor's degrees in universities, while only 26 per cent went directly into employment (SFC 2018). There is a range of work-based learning in HNC/D programmes, with some having it as a key aspect of the course while others have none (Gallacher et al. 2012).

A NEW APPROACH TO PROVIDING HIGHER VOCATIONAL QUALIFICATIONS: HIGHER/DEGREE APPRENTICESHIPS AND GRADUATE APPRENTICESHIPS

These earlier approaches to providing higher level vocational qualifications in both England and Scotland have not created a strong tradition in either country. This has led to a new interest in developing higher level and degree apprenticeships in both England and Scotland. However, the policy framework within which these new initiatives are emerging is now quite different in the two UK countries, with significant implications for what is emerging.

AN ENGLISH QUASI-MARKET

The policy context within which higher vocational qualifications have been shaped has been identified as a ‘highly marketised path’ (Hodgson and Spours 2019: 226). This is traced back to the history of incorporation, beginning in 1993, which resulted in further education (FE) colleges becoming independent institutions with charitable status, and competition between providers emphasized as a means of reducing costs. Keep (2017: 744) notes the ‘overt shift towards the organising principle of market’ that occurred under recent Conservative administrations. He also observes that the situation within English FE diverges from definitions of a market in key ways: in the role of public funding, regulation and policy. This means, in reality, a more bounded version of a market prevails (Keep 2018). Hodgson and Spours (2019) also note the importance of central policy steering through funding and inspection regimes. They identify phases of reform encompassing the setting up and abolition of government funding agencies and the increasing importance of the Office for standards in education, children’s services and skills (Ofsted) (which inspects the quality of FE provision). Through these waves they suggest that marketized education provider relations prevailed, which, they argue, resulted in a reactive competitive national sector. They express hope that the recent devolution of some of the adult education budget to a small number of Mayoral Combined Authorities and the Greater London Authority, and plans for local strategies and agreements, might introduce some limited devolution and create space for greater collaboration between providers.

The Augar Report also argues that post-18 education cannot be left entirely to market forces. It argues for a ‘managed market’, with additional capital funding that might lead to a ‘strong national network of high quality provision of technical and professional education’ (Augar 2019: 134). While FE colleges compete in multiple markets, at the higher education level they are in competition mostly with post 1992 universities.

The Scottish Context: A ‘Managed’ System

Scotland has developed a more ‘managed’ approach to skills policy reflecting a strong steer from government with respect to policy, planning and provision. Keep (2017) has drawn a distinction between the retention of an education and skills ‘system’ in Scotland, arranged as a series of linked levels and types of provision, with the creeping marketization of English education and skills provision. Two key agencies in this skills system are Skills Development Scotland (SDS), which is responsible for the apprenticeship system in Scotland, and the Scottish Funding Council for Further and Higher Education (SFC), which funds all Scottish colleges and universities. The idea of a skills system has been further strengthened through the Enterprise and Skills Review which established a Strategic Board for Enterprise and Skills to ensure that the various agencies involved work to a common agenda. This supports the Scottish government’s objective of securing greater alignment between the elements within the skills system. Alongside the theme of alignment has been the recognition of the varied, and sometimes provisional, nature of what is deemed the ‘learner journey’. This has generated a policy ambition to draw together different providers and agencies to coordinate, support and maximize progression. Recent developments with respect to graduate-level apprenticeships can be seen in this context.

APPRENTICESHIP RENEWED

It is in context of these very different policy developments that the interest in developing higher level apprenticeships has emerged. Apprenticeships are a feature of vocational education and training (VET) across the UK and have been the focus of renewed interest in both England and Scotland in recent years. They are identified as a key feature of the UK wide Industrial Strategy (Department for Business, Energy and Industrial Strategy [DBEIS] 2017), as a vehicle for developing the technical skills

which the economy will require as it adapts to technological change and an ageing population. The key starting point is that an apprenticeship is a job with a formal programme which includes on-the-job and off-the-job training. The learner is primarily an employee, either newly recruited to a role or an existing employee who is reskilling (to a new role) or updating. While apprenticeships vary between one and six years, in practice, the average lasts 1.69 years in England (DfE 2019a) and typically two years in Scotland. Both are shorter in duration than many European comparators (Kuczera and Field 2018).

To support the expansion of apprenticeships, a UK wide levy was introduced in April 2017. This requires those employers with an annual payroll of over £3 million to contribute 0.5 per cent of their wage bill towards funding apprenticeships. That much holds true across the two nations, but how that money is spent, how apprenticeships are created and supported, and the role played by colleges and universities in supporting apprenticeships diverges significantly as a result of devolution. In England, employers can reclaim their levy payments to contribute to the cost of their apprenticeships. In Scotland, the levy funding contributes to the overall cost of the apprenticeship programme and to a Flexible Workforce Development Fund. The latter enables employers to develop a tailored programme with their local college to address skills gaps in their workforce. We will explore the implications of this divergence for apprenticeships at the higher levels below, taking opportunities for policy learning across the two systems.

England

As an Organisation for Economic Cooperation and Development (OECD) review of English apprenticeships noted ‘Few countries can match the energy and range of reforms currently being pursued in England’ (Kuczera and Field 2018: 10). Indeed, this major reform in 2017 was the latest in a series of changes which had seen the redevelopment of the system in England from the mid-1990s with the aim of promoting growth. The expansion of the system included the announcement in 2010 of the introduction of higher apprenticeships at level 4 (at a similar level to an HNC) and then level 5 (at a similar level to an HND) in the English system (BIS 2010). However, concerns that the system was not responsive to the needs of employers or the labour market culminated in the *Richard Review of Apprenticeships* (2012). This review was influential in shaping subsequent

changes (Augar 2019; Kuczera and Field 2018). These included moving from multiple apprenticeship frameworks towards a single ‘standard’ for an occupation which would specify the skills, knowledge and behaviours required. A minimum length of one year, a requirement that 20 per cent of the time be spent in off-the-job training, and an independent end point assessment are features that were intended to improve quality (Augar 2019; Kuczera and Field 2018). Standards could, where justified, include the provision of a relevant existing qualification.

The launch in 2015 of degree apprenticeships was significant in extending the scope of apprenticeships to the highest levels (Business Innovation and Skills [BIS] 2015a), thereby making a claim for equivalence of the high-level skills and knowledge within them. Degree apprenticeships combine study for a bachelor’s or master’s degree with employment as an apprentice. Thus, in summary, apprenticeships have been expanded to cover levels 4 (equivalent to the initial level of higher education learning) through to level 7 (equivalent to master’s level), with proposals in development even for level 8 (associated with a doctorate). These apprenticeships may incorporate a recognized higher education qualification, such as an FD or a degree, but there are apprenticeships at these levels that do not take this option. It is worth bearing this in mind as we look at the number of apprenticeship starts at these levels, as shown in Table 1. The picture is generally one of decline in the lower level apprenticeships and consistent growth in those at level 4 and above, with rapid growth in level 6 (bachelor’s degree) and particularly level 7 (master’s degree level). While the vast majority at level 6 are bachelor’s degree apprenticeships (about 90 per cent in 2018/2019), at level 7 only a minority confer a higher education master’s qualification, at 33.7 per cent in 2018/19 (DfE 2020a).

Table 1 Apprenticeship starts by level—England

<i>Level</i>	<i>2014/2015</i>	<i>2015/2016</i>	<i>2016/2017</i>	<i>2017/2018</i>	<i>2018/2019</i>
Level 2	298,280	291,330	260,650	161,390	143,590
Level 3	181,760	190,870	197,66	166,220	174,727
Level 4	7090	9510	11,920	16,800	25,006
Level 5	12,590	16,870	22,960	20,480	27,573
Level 6	100	740	1650	6370	10,824
Level 7	–	30	50	4500	11,655
Total	499,900	509,400	494,900	375,800	393,375

Source: For 2014/2015 to 2017/2018 (DfE 2019a, Table B) and 2018/2019 (DfE 2020a)

Equivalent figures for the level 4 and 5 apprenticeships that incorporate an HNC, HND or FD are not accessible.

A Quasi-Market Approach to Apprenticeships in England

The expansion of apprenticeships is shaped by the quasi-market approach to VET in England, which we outlined earlier. Here employers are put in the ‘driving seat’ as ‘nobody knows the skills employers need better than the employers themselves’ (BIS 2015b: 2). Employers must lead what have been described as ‘trailblazer groups’ that develop proposals for a new ‘standard’, identifying the duties of the specific occupation, the skills, knowledge and behaviours it requires and demonstrating demand from the wider sector (Institute for Apprenticeships and Technical Education [IfATE] 2019). While they may well work with educational providers, including universities and colleges, to develop their proposals, employers are promoted to the crucial role in designing a new standard. Within the apprenticeship reform, the reliance on employers to commit to trailblazer groups raises a number of issues, including the danger that the current needs of industry are the focus rather than future skills needs (Higher Education Commission [HEC] 2019: 15). Employers themselves argue that they need more pedagogic and administrative support to fulfil their key role and that standards will need to be easier to tailor to local needs and will require efficient updating (ISE 2019, 35). Many of the frustrations of employers involved in trailblazers stem from the features that make apprenticeship a quasi-market. All proposed standards need to be approved for use by the Institute for Apprenticeships and Technical Education (IfATE), which also makes crucial recommendations on funding bands (level of costs that will be met from the levy) to the government. Despite criticism of the slow and drawn out approval process (House of Commons 2018; Universities UK [UUK] 2019) and the lack of transparency in its decision-making, particularly around funding bands (UUK 2019), the IfATE remains a key government gatekeeper as levy funding can only be used on approved apprenticeships.

Within this approved range, employers decide on their apprenticeship numbers and are ultimately responsible for the recruitment of learners who are either new or existing employees. The distribution of apprentice numbers resulting from employer demand has raised questions about whether the system is meeting the expectations for high-level technical skills that policy created (DBEIS 2017). In practice, the most popular apprenticeships with employers are those in the fields of business,

administration and law. These dominate at level 4/5, with 24,997 apprenticeship starts in 2018/2019. In contrast, engineering, manufacturing and construction together had only 3159 starts (DfE 2020a). At level 6 the picture is more even, with 4030 starts for business, administration and law against 3174 for engineering, manufacturing and construction. However, the disparity is at its most extreme at level 7, with 10,584 compared to 229 starts. Such apprenticeships are clearly vocational, but they are not the technical subjects which have been promoted as most beneficial to the economy. Employers now find themselves criticized by ministers for their free market choices. In ordering a review of the senior leader master's degree apprenticeship by the IfATE, Education Secretary Gavin Williamson said 'I am unconvinced that having an apprenticeship standard that includes an MBA paid for by the levy is in the spirit of our reformed apprenticeships or provides value for money' (Inews 2020). Alternative voices may reflect a degree of self-interest in arguing for the principle of employer choice and that leadership and management are vital to enhancing productivity (UUK 2019). With 3410 starts on that level 7 apprenticeship in 2018/19 (DfE 2020a), it is an attractive market for universities. The concern is not just one of principle or 'spirit', but the disproportionate funding such high band standards might capture from the levy pot, leaving little for other purposes, including supporting non levy payers (Augar 2019; Association of Colleges [AoC] 2019). As the OECD report predicted, it was the levy funding arrangements themselves that promoted rapid degree apprenticeship growth (Kuczera and Field 2018: 108). In light of this, and in order to restrict costs, the gatekeeper IfATE is applying keener scrutiny of plans to embed higher education qualifications within new standards (UUK 2019).

The Nature of Higher and Degree Apprenticeships as Vocational Programmes

So far, we have looked at the rapid expansion of higher level apprenticeships and the role of the market and regulation in shaping where the expansion has taken place. Now we will look more closely at the nature of the higher and degree apprenticeships as vocational programmes. The key starting point is that 'an apprenticeship is a job with a formal programme of training' (IfATE 2019). There are roughly equal numbers of employees with less than three months' experience and more than 12 months' experience within the system (DfE 2019a), suggesting it is balanced between these two learner groups. As indicated above, the content of the

programme is now specified in an occupational standard. A key stipulation for the new standards is that at least 20 per cent of apprentices' normal working time must be spent in off-the-job training (IfATE 2019) for the purpose of achieving new knowledge, skills and behaviours. In this way it is differentiated from on-the-job training for immediate performance in their role. Off-the-job training can take place at the workplace or off-site, for example, at an educational provider or via supported distance learning (DfE 2019b). The focus on ensuring off-the-job training takes place and is directed at new skills reflects concerns about the quality of prior apprenticeship systems. Writing as the new approach to standards was developing, Kuczera and Field (2018) wrote (on behalf of the OECD) that, in contrast to other systems, there is limited focus on employer-provided learning. Instead, financial flows (to training providers) drive the system in England and absorb the policy focus. Work-based learning they suggest was at that time relatively undeveloped in English apprenticeships. There was scope for greater collaboration between providers and employers, with a need for better guidance for the workplace supervisors on blending work and learning. Kuczera and Field (2018) also note that close alignment of on-the-job employer and off-the-job provider training will be crucial for degree apprenticeships.

Higher and degree apprenticeships embed a higher education-level qualification: HNC, HND, FD, diploma of higher education, bachelor or master's degree. These can either be 'integrated' apprenticeships, in which the overall programme is designed to support and test off-the-job and on-the-job development, or 'non-integrated', in which the off-the-job training is largely separate to workplace activity. End point assessment is necessary in both cases, but in integrated apprenticeships, it can attract credit within the embedded qualification. Thus, integrated approaches reflect the kind of closer alignment called for in the OECD report. UUK (2019: 27) suggest degree apprenticeships are 'catalysing transformative developments' as employers and universities collaborate. They highlight the flexible forms of delivery and new approaches to content, such as individualized learning models and content tailored for employers offered to 'closed cohorts' (UUK 2019: 33), as well as support for workplace mentoring. UUK (2019: 37) does, however, note some employer concerns about inflexibility and communication with universities, with some employers reporting that degree apprenticeships were considered perhaps an 'add-on' to the main focus of the university. The report and earlier work on skills shortages argues for the importance of higher

education-level skills across the whole range, from level 4 to master's, and makes a claim for universities' existing and necessary involvement in vocational education. This opposes calls from Augar for the expansion of apprenticeships to be focused at levels 4 and 5 and restrictions on funding for level 6 and above to those employees who have not already undertaken a publicly supported degree (Augar 2019). The focus in the Augar Report on further education as a key provider of higher level technical skills suggests the policy tensions that are emerging. The Association of Colleges (AoC) anticipated that colleges would be strong contributors, particularly for STEM (science, technology, engineering and mathematics) and for niche markets (AoC 2016). As it stands, general FE and tertiary colleges had 9170 higher apprenticeship starts in 2018/19 (DfE 2020b), representing 12 per cent of the total. In the same year there were 13,587 degree apprenticeship starts (DfE 2020a), requiring university involvement and indicating that universities are already significant providers. The opportunity for university college partnerships in apprenticeship delivery is raised by both UUK (2019) and the AoC (2018), particularly with regard to progression to a degree apprenticeship. However, the notion of progression from a higher apprenticeship to a degree apprenticeship may conflict with their vocational purpose. Given the standards are tied to a particular occupation, progression will only make sense where there is a ladder in terms of jobs and the associated vocational knowledge and skills.

Scotland

Scotland has also expanded its apprenticeship programme, albeit more slowly. Whilst retaining the core of 'modern apprenticeships' frameworks (ISCED level 4), two new options have been added: the lower foundation apprenticeship (combined with school) and the graduate apprenticeship. Officially launched in 2017, the graduate apprenticeship has been used to refer to apprenticeships at the higher education levels, incorporating higher education awards at short cycle (HND) up to degree and master's levels. While the term higher apprenticeship has been used to refer to a framework containing an HND, this is very limited in terms of visibility and actual use, as we shall see. Graduate apprenticeships are aimed at key sectors, and a series of pilots gradually expanded the offer to 12 frameworks by 2018/2019, as shown in Table 2. A further two pilots 'Early years and childcare' and 'Accountancy' started in September 2019. As in England, at least 20 per cent of the apprentice's time must be spent on

Table 2 Scottish graduate apprenticeship frameworks in 2018/2019, number of delivery partners and learner numbers in 2018/2019 (Phase 2)

<i>Graduate apprenticeship programmes offered</i>	<i>HND level (no. of delivery partners)</i>	<i>Honours degree level (no. of delivery partners)</i>	<i>Master's degree level (no. of delivery partners)</i>	<i>No. and % of learners (2018/2019)</i>
Business Management & Business Management: Financial Services		8		314 (34%)
Civil Engineering	2	6		125 (14%)
Construction and the Built Environment		4		64 (7%)
Cyber Security		4	2	80 (9%)
Data Science		2		17 (2%)
Engineering: Design and Manufacture		6		123 (13%)
IT: Management for Business		4		48 (5%)
IT: Software Development		8		126 (14%)
Engineering: Instrumentation, Measurement and Control		1		24 (3%)
Total				921 (100%)

Source: SDS (2019)

off-the-job learning. In contrast to the English approach, however, there are no apprenticeships at these higher levels that rely on industry qualifications, all incorporate a higher education qualification.

The expansion of the graduate apprenticeship is at an early stage and numbers remain small overall (see Table 2). A third phase is planned for 1300 starts in 2019/20 (SDS 2019). The vast majority of apprentices are on frameworks that incorporate an honours degree (bachelor) (see Table 2).

A Managed Approach to Graduate Apprenticeships in Scotland

The development of graduate apprenticeships is shaped by the managed approach to skills policy outlined above. SDS manage the budget for the overall apprenticeships programme and they set out their commissioning requirements on an annual basis. Funding is allocated by the Scottish

government so, in contrast to England, employers cannot draw on their own levy account. SDS award apprentice funded numbers to providers on the basis of their bids, including evidence of employer demand. The Scottish Apprenticeship Advisory Board, an employer-led body, sets the overall apprenticeship strategy. At the more detailed level, the content of sector apprenticeships is developed by technical expert groups, which consist of employers alongside other interest groups such as universities and professional bodies. Thus, in contrast to the English approach the employers contribute to a more collective process of development, rather than taking the leading role.

Instead of allowing apprentice numbers to follow the market, SDS mediate employer demand to steer towards sectors, particularly STEM sectors, which are seen as critical to the growth of the Scottish economy. While business and management has a significant number of learners, it is less dominant than in England. Programmes serving the public sector are not a focus for these early developments in Scotland, in contrast to the role these play in England. The final, and potentially crucial, aspect of the managed system has been the concentration on the bachelor's degree level, almost to the exclusion of other options. Despite being an early part of the programme, there is only one apprenticeship at the HND level currently (Civil Engineering), and SDS confirm that there are no plans to create any further higher apprenticeships (Personal communication).

Nature of the Graduate Apprenticeships as Vocational

Learners on graduate apprenticeships are employees, with over 70 per cent being existing employees (of more than nine months) rather than new recruits. This picture does vary, however, across the frameworks: from 89 per cent existing employees in business management to 63 per cent new recruits for information technology software development (SDS 2019). Time spent in off-the-job training represents at least 20 per cent of the employee's time. Given the graduate apprenticeships are all new programmes, there is an emphasis on incorporating academic and work-based learning into the programmes as credit bearing, reflecting the more 'integrated' strand seen in England (SDS 2019: 23). Employers have a role in supporting work-based learning and assessment and must provide workplace mentoring. Examples of considerable employer support for study skills and reflective practice are promoted (SDS 2019). Two new pilot programmes have been identified by SDS to test a model for the teaching and assessment of 'meta-skills' to 'create adaptive learners'. The clear focus

on graduate apprenticeships at bachelor's degree level suggests that SDS see these higher level skills as the priority.

It is suggested that graduate apprenticeships are transforming the 'learning and skills landscape' by drawing Scottish universities into work-based learning (SDS 2019). The widespread take up of the opportunity by 12 universities so far, including the oldest and most prestigious, suggests that graduate apprenticeships represent an attractive opportunity. However, while the new graduate apprenticeship is strengthening the vocational contribution of universities, the same cannot be said for colleges. Only one college is leading a programme (civil engineering at the HND level) and this higher apprenticeship is not continuing beyond 2020. At present there are only two partnerships between colleges and universities to support graduate apprenticeships, and one of these is within the University of the Highlands and Islands (UHI), where the college involved is itself an 'academic partner' in the university. Despite 'emergent evidence suggesting there is an appetite amongst universities to work collaboratively with colleges on GA [graduate apprenticeship] delivery' (SDS 2019: 7), to date there is little evidence of partnership delivery. Given the very extensive involvement of colleges in other forms of vocational higher education-level provision we noted above, this very marginal role for colleges is surprising and could weaken the ability of the programme to support a range of vocational skills in local communities. Despite a commitment to the 'learner journey' through short-cycle higher education elsewhere (Scottish Government 2018), at present there are only limited opportunities for this within graduate apprenticeships.

LOOKING ACROSS THE ENGLISH AND SCOTTISH EXPERIENCE OF HIGHER LEVEL APPRENTICESHIPS

There are certainly differences in the ways in which these higher level apprenticeships have been implemented in England and Scotland. This provides opportunities for policy learning. In England, the actions of the quasi-market have sparked a tussle over the 'spirit' of the apprenticeships. As we have indicated above, employers have had a key role in shaping the development of higher apprenticeships and degree apprenticeships in England. Whether they are supporting the right types of learners and are aimed at the right occupations and skills levels is increasingly debated. In the managed system of Scotland, we do not see similar concerns expressed,

as SDS determines the match between skills needs and development. In both nations, higher level apprenticeships are offering new forms of vocational higher learning, including some interesting models of integrated vocational and work-based learning. In Scotland, the emphasis has been on degree-level graduate apprenticeships supported by universities, with small numbers in this early stage. The role for colleges is limited, despite their greater vocational experience. In England, the higher apprenticeship numbers compare reasonably well to those on existing vocational short-cycle programmes (FDs and HNC/Ds), and these secure some role for English colleges in this new apprenticeship provision (although private providers are actually stronger in the higher apprenticeship market). Degree apprenticeship numbers are growing particularly rapidly in England but remain small overall, representing approximately two per cent of the numbers engaged in traditional undergraduate degrees. Although degree apprenticeships in England and graduate apprenticeships in Scotland are providing new routes to vocational qualification in the university sector, in both countries their impact so far has been marginal. However, the interest in higher level apprenticeships is derived not only from their vocational skills contribution, but also from their link to policy concerns for ‘parity of esteem’ and social mobility. In this way their mission is stretched beyond the vocational.

Parity of Esteem

If you choose a degree apprenticeship, you still get to graduate with your cap and gown, along with several years of work experience under your belt. (Which and National Apprenticeship Scheme [NAS] 2020: 2)

In England, the equivalence of the degree embedded within a degree apprenticeship is seen as crucial to the ‘brand’. Much emphasis is placed on the double benefit of gaining a degree without the debt associated with studying in England (Which and NAS 2020). A UUK (2019, 15) survey of engaged employers suggested that ‘crucially, degree apprenticeships are seen as having parity of esteem with traditional degrees, thus helping to raise the appeal of vocational education opportunities more broadly’. This is a significant expectation to place on one development however, and there is evidence that, so far, recognition of ‘parity’ amongst potential learners, schools and families is low (HEC 2019; UUK 2019). A Higher Education Commission (HEC) report calls for an urgent increase in the

availability of advice and guidance for young people and parents (HEC 2019), with the assumption that, once it is all made clear, concerns will fade. However, the relative complexity of the English system could make it hard to convey clear messages about these options. For example, within this system, level 6 is sometimes described as ‘degree level’ but not all apprenticeships incorporate a degree. UUK argue that the value placed by employers and learners on degrees provides a strong reason for their continued inclusion at this level, despite the concerns of the IfATE in England to restrict them (based, it is assumed, on cost grounds) (UUK 2019). As we have seen in Scotland, SDS has focused almost entirely on the bachelor’s degree level within the graduate apprenticeship programme, working almost exclusively with universities. It is emphasized that ‘individuals are expected to achieve the same academic rigour required for any university degree’ (SDS 2019: 27). Graduate apprenticeships have potentially a clearer identity in Scotland, but with fewer intermediate options. In neither country are parity of esteem arguments made on the basis of short-cycle qualifications of the types often supported by colleges.

Social Inclusion

The expectations on higher apprenticeships extend further to contributing towards social inclusion. In England, the Office for Students (OfS) and the IfATE have been asked to ‘work together to encourage the growth of degree apprenticeships as a means of widening access to higher education for underrepresented groups of people’ (OfS 2019a: 1). Here the advantages of debt-free study and a wage are emphasized to potential recruits (Which and NAS 2020), with the assumption that this will be particularly attractive to those from lower socio-economic groups. However, the initial data from 2016/2017 indicate that higher and degree apprenticeships recruit only slightly more learners from areas which are under-represented in higher education than comparator full-time degrees (OfS 2019b). In terms of ethnicity and disability, the new routes are actually less diverse and less inclusive than the comparators (OfS 2019b). The disappointing initial data have led to some, including the then Minister of State (Education), Ann Milton, to suggest ‘Fears of a middle-class grab on apprenticeships are valid’ (Milton 2017). The data on higher apprenticeships indicate slightly better results for social inclusion than for degree apprenticeships, suggesting they may make a contribution in this respect. In a recent report, the HEC (2019) is damning, suggesting degree apprenticeships are exacerbating exclusion rather than widening participation.

They point in particular to the unequal geographical distribution of opportunities, which sees degree apprenticeships replicate, rather than fill, the ‘cold spots’ for higher education that already exist.

In Scotland, graduate apprenticeships must contribute to ‘inclusive growth and fair work’ (SDS 2019: 5, 18) and, to this end, ‘widen participation as a key target of recruitment’. Therefore, equality of access is monitored for under-represented groups. The initial data is also disappointing in Scotland, with the 2018/2019 cohort having fewer entrants from areas of most deprivation and fewer black and minority ethnic learners or those with a disability (SDS 2019). Here, the lack of involvement of the colleges, so key to social inclusion for other forms of higher education-level learning (Gallacher 2017), may be depressing the contribution graduate apprenticeships can make.

Of course, recruitment to a higher level apprenticeship is not directly to an educational institution but to the primary role, employment. As such, employers are the key influence on social inclusion. As we have seen, roughly half the apprentices at these higher levels are already employees, so here the focus becomes not only on initial recruitment but also on selection for participation from within the workforce. Bradley et al. (2018) suggest that for employers, social inclusion is less about the requirements of the OfS and more about achieving a broader, more diverse talent pool, a point echoed in the UUK report (2019). It is also suggested that the differences in conception between providers and employers, and between employers themselves, needs to be brought to the surface and addressed when co-creating programmes (Bradley et al. 2018). UUK (2019, 21) propose a dedicated fund to develop innovative strategies to support disadvantaged learners (UUK). The initial evidence suggests that the mere creation of the higher level apprenticeships is not enough to increase social inclusion.

CONCLUSIONS

The perceived needs for higher level skills and knowledge in the twenty-first-century economy have led to policy developments in both England and Scotland. Rather than working with existing vocational qualifications, new higher level apprenticeships have been created. Here policy learning is relevant not only from one nation to the other, but also from the past.

Development of the graduate apprenticeships in Scotland has been carefully managed to focus on key areas of the economy, particularly

STEM sectors. Concerns are surfacing in England that, by following a quasi-market approach, the balance of apprenticeships at the higher levels has been distorted, away from those sectors that are most supportive of the industrial strategy towards the more immediate management and leadership concerns of the current economy. If, as seems likely, the government in England wishes to steer the market away from the latter, they will have to introduce more constraints on employers or on the use of these standards. While Scotland's determination to control the development of graduate apprenticeships has advantages, it has paradoxically led to an over emphasis on bachelor's degree-level qualifications within the programme, limiting the contribution of technical skills at the short-cycle levels and thereby limiting the contribution of colleges with their vocational experience. In this light, the greater use of level 4 and 5 in the English system provides a more flexible model that may have relevance for the wider economy.

There are also lessons that can be drawn from the past. Introducing the FD in England was designed to provide a more work-based learning experience that would support areas of the economy, as well as provide progression on to bachelor's degrees. As we have seen, these hopes faded after funding incentives in higher education changed and the recognition of FDs as qualifications diminished. Despite commandeering the title of 'degree', they remained sub-degree qualifications and their important progression function encouraged a process of academic drift away from the vocational focus. This experience indicates the difficulties of establishing new qualifications. This time apprenticeship policy has incorporated the bachelor's degree and sought to draw explicitly on its status, in a move that is seen as significant for the whole of vocational learning. Yet these attempts to draw together the best of everything give rise to tensions, as the FD experience suggests. Higher level apprenticeships are primarily a preparation for a particular occupation, yet they must also enable completion of a higher education programme, while increasing social inclusion and diversifying the workforce. We can perhaps see the implications of these multiple agendas in the call for degree apprenticeships to introduce 'stop-on and stop-off points' to support a widening participation agenda. These, it is recognized, would also have to 'align with the occupation' (UUK 2019: 23). These earlier experiences suggest that it not just growth and recognition of the higher level apprenticeships that need to form the agenda for the next phase, but also a careful process of research and scrutiny of the tensions in the system.

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Post-secondary Higher Education Pathways to Workforce Credential Attainment in the United States of America

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INTRODUCTION

The evolution of the postsecondary education landscape in the United States of America is fuelled by workforce development and training through career and technical education (vocational), the lynchpin to filling middle-wage and high-skill, high-wage jobs. Community colleges, in particular, have served as open-access institutions, as the people's colleges of America's higher education system. These colleges have a rich history

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of providing access to relevant job training and educational opportunities which lead to higher wages and a better quality of life (Floyd 2005; Floyd et al. 2005; Gleazer 1998; Roueche et al. 1987). As a whole, the American postsecondary system of education (technical colleges, community and state colleges, private colleges, and public universities) works to identify national skills gaps and address the nation's workforce needs (D'Amico et al. 2019, National Governor's Association 2017).

This chapter describes the structure of workforce education in the USA within postsecondary education, with an emphasis on community colleges. The terms vocational education and career and technical education will be defined to shed light on the variety of workforce programmes. Examples of community college workforce programmes will be described to illustrate some of the types of training delivered. Selected state and federal policies, programmes, and initiatives aimed at workforce development are discussed in context, as a historical framework for postsecondary programming in the USA. The chapter concludes by offering summary thoughts and questions about our ever-changing and unpredictable future, which afford us opportunities to realign our workforce programmes in effective and relevant ways.

US POSTSECONDARY HIGHER EDUCATION WORKFORCE AND CAREER AND TECHNICAL EDUCATION DEFINED

Education in the USA is facilitated through a 'large, diverse, and decentralized' system (US Department of Education 2008). Americans who are interested in pursuing high-skilled technical occupations, whether they require a bachelor or sub-bachelor qualification, have a wide range of training and education options (National Academies of Sciences, Engineering, and Medicine [NASEM] 2017). As such, workforce development in the USA is broadly defined as a system of 'multiple programs designed to meet the employment and skill needs of American jobseekers and employers' (Clagett 2006: 2). This system of programmes can be found at both the secondary and postsecondary (vocational/tertiary) levels (US Department of Education 2008). While decentralized, and

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governed at the state level, federal support for workforce education is recognized within the US Department of Education's *Workforce Innovation and Opportunity Act* (Department of Labor n.d.). This legislation was created to improve the country's public workforce system, eliminating barriers to high-quality employment by assisting employers with hiring and retaining skilled employees (US Department of Education 2020b). Outlines the different workforce educational pathways provided by various postsecondary institutions. These pathway options include both vocational and higher education certifications, diplomas, and degrees.

In general, all postsecondary education in the USA is considered workforce education (Carnevale et al. 2017). However, many American postsecondary institutions do not offer high-skilled technical labour market readiness based in vocational/career and technical training. The US Department of Education (2020a) definition of vocational education is based on that written in the *Perkins Act*, as follows:

organized educational programs offering sequences of courses directly related to preparing individuals for paid or unpaid employment in current or emerging occupations requiring other than a baccalaureate or advanced degrees.

Federal funding for vocational education in the USA was first authorized as a part of the *Smith-Hughes Act of 1917* (Perkins Collaborative Resource Center [PCRC], n.d.). Continued support for vocational education would be included in the *Vocational Act of 1973*, the *Elementary and Secondary Career Education Act of 1976*, and the *Carl D. Perkins Act of 1984* (Perkins). Legislation for Perkins has been reauthorized several times. Originally situated as vocational education, America's workforce education 'morphed into career education under the leadership of Sidney P. Marland Jr., U.S. Commissioner of Education' (O'Banion 2019: 2). Responsible for the *Elementary and Secondary Career Education Act of 1976*, which would eventually support the creation of the *Perkins Act*, Commissioner Marland and his colleagues positioned workforce education as a continuum, beginning with secondary education and extending to senior citizens interested in new and/or continuing postsecondary workforce training (vocational/tertiary) (O'Banion 2019).

Overseen by the Office of Career, Technical, and Adult Education (OCTAE), career and technical education (CTE) seeks to provide students with challenging academic, technical, and employability skills that will allow for success in postsecondary education and in-demand careers.

OCTAE focuses on the academic and technical skills needed for students to be prepared for a high-skill, high-wage, or high-demand occupation in the twenty-first-century economy. OCTAE administers the state formula and grant programmes of the *Perkins Act*; assists states with programme quality, implementation, and accountability improvement; and establishes national initiatives for states to implement rigorous CTE programmes. In addition, OCTAE supports community colleges in the advancement of CTE programmes through supporting centres of innovation and training and promotes strategies for the completion of postsecondary certification and degree programmes (US Department of Education 2020a). Today, CTE is the most common term for workforce education in America (O'Banion 2019).

Determining how education in the USA responds to workforce needs can be understood through examples of demand during major events, such as the Coronavirus or COVID-19 pandemic. Such events may lead to increases in the popularity of one programme of study or a group of programmes of study that reflect the need for workforce education providers to make a shift (D'Amico et al. 2019). Lists health-related workforce programmes that have been in high demand during the COVID-19 pandemic and the options for workforce education and training progression that are currently available at one community college.

THE CRITICAL ROLE OF WORKFORCE AND CAREER EDUCATION IN THE USA

For the past 100 years, the critical role of workforce and career education has evolved through various movements. This includes training programmes such as 'apprenticeship training, manual training, trade schools ... industrial education, agricultural education, vocational education, and career and technical education' (O'Banion 2019: 218). No doubt, workforce and career education programmes are most effective when they afford citizens an equitable opportunity for higher wages and a better quality of life (D'Amico et al. 2019; Organisation for Economic Cooperation and Development [OECD] 2012). While universities, trade schools, and technical colleges have made valuable contributions to workforce and career programmes, 'postsecondary workforce development is one of the major innovations of the community college' (Jacobs and Worth 2019: 167).

Jacobs and Worth (2019) noted that the evolution and growth of US community colleges parallels the historical evolution of workforce education. As the needs for accessible and diverse workforce education programmes grew, so did the availability of junior and community colleges to meet these needs. Junior colleges in the early 1990s focused on two years of education and training for transfer to universities and, for those who wanted to enter the workforce without a baccalaureate degree, valuable terminal associate degrees. In response to employers' needs for skilled workers and students' desires for training to meet these needs, community colleges' 'explicit goal is to provide open-door, relevant occupational education and training to a diversified workforce' (Jacobs and Worth 2019: 167).

The US government has an evidenced record of targeting and instituting major legislation and funding initiatives to address workforce, vocational, and job training needs for the whole nation and to contribute to a stronger economy. The USA's establishment of the *Servicemen's Readjustment Act of 1944* (commonly known as the GI Bill) following World War II has been regarded as the first historical intervention by the federal government to provide financial aid directly to veterans. The benefits provided by the GI Bill assisted 7.8 million veterans by 1956, of which 2.2 million attended colleges or universities and an additional 5.6 million completed vocational and workforce training programmes. This federal aid provided support for USA higher education and vocational jobs training programmes that grew the nation's human capital and led to a resurgence of economic growth (Bennett 1996; Gilbert and Heller 2013; Roach 2009).

In 1946, during this same post-World War II era, President Harry Truman appointed the first official national body to address federal higher education policy, The President's Commission on Higher Education, also known as the Truman Commission. This commission's work provided policy guidance for the federal government to assume a more prominent role in higher education, including providing financial assistance directly to students in both workforce and vocational fields. The work of the commission led to developments such as the *Higher Education Act of 1965*, federal financial aid, and the USA's community colleges (Gilbert and Heller 2013; Roach 2009).

It is widely believed that the Soviet Union's 1957 launch of Sputnik was a watershed moment for USA policymakers who began to recognize that a well-educated workforce must be competitive globally, especially in skilled

workforce and vocational fields. The Soviet's launch spawned fears that the USA did not have adequately trained scientists, engineers, and foreign language experts to guide programmes that were believed to be vital to our nation's safety and defence. In direct response to the need for more training in these fields, the USA Congress passed the 1958 *National Defense Education Act* (NDEA). The NDEA provided federal funds for curricular reform, expansion of libraries, and student loans targeted in these critical workforce fields. Twenty years later, in the early 1980s, more concerns over the lack of the USA's global competitiveness led to national quality reforms and outcomes assessments. This was aimed primarily at high schools and resulted in a report from the National Commission on Excellence in Education (1983) called *A Nation at Risk*. Then, in the 1990s, *An American Imperative: Higher Expectations for Higher Education* (Brock 1993) called for similar reforms in the postsecondary education system. Many other large-scale initiatives have followed, as O'Banion (2019: 220) states:

There have been a number of innovative reforms in vocational education in the last several decades. A 'New Vocationalism' emerged as an expansion from the emphasis on vocational education to an emphasis on career and technical education.

The American recession of 1982 accelerated the linkage of the private sector and community colleges in partnership to offer relevant workforce training which would aid in a much needed economic recovery. This private sector and community college partnership proved equally important for recovery during the American recession of 2008–2010, when the stock market fell and unemployment rose to record levels. During both these recession periods, student enrolment in workforce training programmes increased, especially in community colleges, as unemployed and underemployed adults sought skills training to enhance their employability (Jacobs and Worth 2019). Many community colleges created programmes to support entrepreneurs; to provide technical assistance for start-up businesses; and to advance new start-up companies through business incubators and accelerators. In addition to the increased offerings of short-term skill training, some colleges expanded apprentice and job shadowing initiatives (Grove and Montgomery 2003; Haveman and Smeeding 2006; Jacobs and Worth 2019).

As the world now faces responding to the Coronavirus, or COVID-19 pandemic, the US federal government has stepped in to provide financial

assistance to each state and the nation's higher education institutions for the purpose of economic recovery. Through the *Coronavirus Aid, Relief, and Economic Security (CARES) Act*, approximately \$14 billion was distributed to institutions of higher education (US Department of Education 2020c). In a letter from the US Department of Education dated 2 April 2020, the Secretary of Education, Betsy DeVos, explained that \$12.56 billion would be distributed to institutions using a formula based on student enrolment. At least 50 percent would be dedicated to assisting students with expenses related to the disruption of campus operations due to COVID-19 in the form of emergency financial aid grants. The additional 50 percent was allocated for assisting institutions with recovery efforts, specifically to support instruction (US Department of Education 2020c). We predict that, once again, community colleges and other postsecondary providers will assume partnership roles in workforce and career training and education, as the nation lives through this COVID-19 pandemic and realigns training in response to this new normal.

EXAMPLES OF WORKFORCE DEVELOPMENT AND EDUCATION SUPPORT POLICY AND INITIATIVES IN THE USA

During the past decade, at both the state and federal level, a number of new initiatives have been launched which are aimed at workforce development. Some of these initiatives, such as the College Promise programme, focus on new approaches to financing postsecondary education at the individual state level. Policy proposals for free community college tuition have been debated at the national level and implemented by a handful of states as a way to ensure that the cost of an education is not a barrier to access. Recently, other initiatives, such as apprenticeship training, have received national attention as models for relevant job training in partnership with employers.

College Promise Programmes

College Promise programmes represent a form of direct student aid that is distinct from existing state financial aid. They provide free tuition to a significant subset of students. The college promise is to 'remove financial barriers by making the first two years of community college—at a minimum—as universal, free, and accessible as public high school has been in

the twentieth century' (College Promise Campaign 2016). The central goals of these programmes are to increase the rate of higher education attainment, prepare students for the workforce, and minimize the burden of college debt (College Promise Campaign 2016; Mishory 2018; Perna and Leigh 2018). The first College Promise programme was the Kalamazoo Promise, which was started in 2005. Based on a pledge by anonymous donors, this location-based programme was created to support graduates of the public high schools of Kalamazoo, Michigan (Kalamazoo Promise n.d.).

Over the last 15 years, a steady rise in College Promise programmes has been fuelled by successful early initiatives in Tennessee, Oregon, New York, and Rhode Island (College Promise Campaign 2016; The Regional Educational Laboratory West 2016). Although the Kalamazoo project was the first of its kind, Tennessee was the first state to establish a state-wide, non-location-based programme. Funded through a \$300 million endowment from surplus lottery money, the programme began providing support starting with the high school class of 2015.

A total of 16 states have at least one state-wide promise programme (Mishory, 2018). Of those 16 states, 10 have enacted and funded a Promise programme since 2014, with eight states enacting a Promise programme in 2017 alone. With the exception of the Excelsior programme, in New York State, almost all Promise programmes work in state partnerships that create pathways to postsecondary higher education credentials through community colleges (Mishory 2018). Other forms of support for workforce development programmes have come in the form initiatives driven by the White House.

Obama Initiative—Free Community College

Driven by an agenda to increase postsecondary education completion, in 2009 President Barack Obama launched the American Graduation Initiative (AGI). This initiative was conceptualized as a \$12 billion pledge towards creating 'an additional 5 million community college graduates by 2020' (Brandon 2009). President Obama continued to support the importance of workforce development and the completion agenda. In his 2015 State of the Union address, he discussed an initiative to make community college free through a federal-state partnership (White House 2015). A nationwide model for free community college has not been realized to date, but some progress has been made. While the AGI fell short

of its \$12 billion funding goal, the programme was successful in addressing student success and employment measures by contributing \$2 billion to the support of the Trade Adjustment Assistance Community College and Career Training (TAACCCT) Grant Program (D’Amico 2016).

Trump Initiative—Apprenticeship Programmes

As a part of the drive to expand and support workforce development, [Apprenticeship.gov](https://www.apprenticeship.gov) was launched in 2018. This is a centralized website that compiles apprenticeship information (US Department of Labor 2018). Established as part of President Donald Trump’s 2017 Executive Order (White House 2017), the Task Force on Apprenticeship Expansion recommended expanding access to apprenticeship opportunities. Through this expanded access, individuals in the USA can take advantage of a ‘learn-while-you-earn’ pathway towards becoming a high-skilled worker (US Department of Labor 2018). Designed as a one-stop platform, the [Apprenticeship.gov](https://www.apprenticeship.gov) website provides information related to workforce pathways for job seekers and serves as a repository of state and federal resources and information, accessible to job creators and training providers.

COMMUNITY COLLEGES: UNIQUE ROLES IN WORKFORCE AND CAREER EDUCATION

Community colleges are unique in many ways. They provide local access to various types of credentials, including certificates, diplomas, and degrees. Workforce education and training is offered through short-term programmes for continuing education credit and more traditional formats for college-level credit. Often, workforce and career programmes are designed, so training may be combined and ‘stacked’ or ‘laddered’, affording the student opportunities to obtain additional credentialing in a coordinated manner.

Community colleges offer various associate degrees such as an Associate of Arts, Associate of Science, and Associate of Applied Sciences. Increasingly, efforts are made to articulate these associate degrees with baccalaureate degree programmes at universities and, most recently, community colleges. Over the past few decades, community colleges in almost half of America’s states have been approved to expand their offerings to baccalaureate degrees, especially in workforce and applied fields such as business, teaching, allied health, and technology (Floyd et al. 2012).

Community colleges are also unique in that they are accessible local institutions, within driving distance for most citizens. They have an evidenced history of providing relevant workforce education programmes that are responsive to local community and employer needs and wants. They also offer robust programmes in a wide variety of curricular areas and diverse formats such as online, short-term non-credit training, credit certificate and degree training, and more (D'Amico et al. 2019). Some community colleges receive local fiscal support while others do not, but all pride themselves on being community-based people's colleges regardless of their sources of funding (Floyd 2005; Floyd et al. 2005; Gleazer 1998; Roueche et al. 1987).

CHANGING LANDSCAPE: COMMUNITY COLLEGE BACCALAUREATE DEGREES IN APPLIED AND WORKFORCE FIELDS

A major landscape change in American postsecondary higher education is the addition of baccalaureate degrees among community college offerings. Historically, community colleges offered workforce credentials such as certificates, diplomas, and applied associate degrees (vocational postsecondary) that prepared students for entry into the world of work. For others, first- and second-year courses leading to general associate degrees (tertiary, but sub-baccalaureate) provided students a foundation for transferring to universities to pursue baccalaureate degree studies. And, for community college graduates to successfully navigate baccalaureate degree studies, the community colleges and universities needed strong articulation agreements and creative partner delivery models such as university centres, online programmes, and extension offerings.

However, despite many strong partnerships and articulation agreements with universities and community colleges, not all who desired baccalaureate degrees have been ensured access to these degrees, for reasons of cost, geography, and the availability of relevant programmes. Stimulated by workforce needs, a movement for community college applied and workforce baccalaureates has emerged over the last 20 years, representing evolutionary change in the landscape of American higher education (Floyd et al. 2012; Floyd and Skolnik 2019).

Mark D'Amico (2016: 245) noted that 'In nearly every study that explored the purpose of community college baccalaureates, meeting local

workforce needs emerged as the primary driver'. This evolutionary change in community college missions and programmes was a direct response to employers' expectations for a higher trained and skilled workforce, especially in areas of teacher education, allied health, and business. In many states and communities, there was a mismatch between available jobs, postsecondary providers of baccalaureate programmes to fill the jobs, and students desiring access to baccalaureate degrees. For these reasons and more, the community college baccalaureate degree movement has grown, with almost half of America's states authorizing one or more of their community colleges to confer their own baccalaureate degrees (Floyd et al. 2012; Floyd and Skolnik 2019).

According to Floyd and Skolnik (2019), who reported on actual degree conferrals using 2014 National Center for Education Statistics (NCES) data, 136 host institutions in over 20 states have conferred a total of 957 baccalaureate degree programmes. The actual number of states and colleges is higher, since many who have received approval have not yet conferred degrees that are recorded by NCES. Prior to 2000, only a handful of community colleges offered select baccalaureate degrees in specialized areas and most of those eventually became four-year colleges or universities (Floyd et al. 2005). Then, about 20 years ago, Florida began a major landscape shift with a movement among community colleges to offer applied and workforce baccalaureate degrees in response to unmet local workforce needs. As the eighth state to offer a community college bachelor's degree, Florida was an early adopter of the model (Fulton 2015, 2020).

St. Petersburg Junior College (now St. Petersburg College) was the first Florida community college receiving authorization to offer baccalaureate degrees in specific areas of high workforce demand (Floyd and Falconetti 2013). In the following years, legislation was enacted that authorized other community colleges to offer Bachelor of Applied Science degrees in technology-related fields and Bachelor of Science degrees in nursing and education (Bilsky et al. 2012).

Today, 27 of Florida's 28 community colleges offer a total of 188 baccalaureate degree programmes and confer two degrees: Bachelor of Science and Bachelor of Applied Science (Floyd and Skolnik 2019). Florida's Bachelor of Science degrees may be classified into one of four degree structures: (1) inverted baccalaureates—lower division discipline courses and upper division general education and electives; (2) general management—upper division emphasis on management and business courses; (3) advanced discipline and management—upper division focus on advanced courses in

management; and (4) discipline saturation—upper division focus on advanced content in the Associate of Science degree (Bilsky et al. 2012).

Many of Florida's community colleges renamed themselves state colleges, as they symbolically transitioned to offering baccalaureate degrees. Only one of the 28 colleges in the Florida college system (formerly the Florida community college system) has retained the word community in its name—Hillsborough Community College (HCC). However, most of the 28 colleges in the system still consider themselves to be community colleges by mission (Florida Department of Education 2020). Baccalaureate degrees are offered in these colleges in addition to CTE programmes, not as a replacement of these programmes (Floyd and Skolnik 2019).

Ironically, Florida has long been known for serving as a state model for articulation and partnerships among universities and community colleges. However, those articulation arrangements did not fully meet the demands for specialized workforce baccalaureates in applied fields such as allied health, nursing, business, technology, and teaching. Co-location university centre partnerships, such as the one with Florida Atlantic University and Broward College in Davie, Florida, worked well for some. Yet they did not produce relevant baccalaureate degree programmes to meet local needs in high-demand areas such as teaching, nursing, and business. Thus, these new community college baccalaureates have not replaced partnership degree programmes but may be new degree programmes designed to serve unmet workforce needs (Floyd and Skolnik 2019).

In addition to being an early adopter of the community college baccalaureate (Fulton 2015, 2020), Florida is considered a national leader in employing effective articulation agreements between postsecondary institutions, providing students with a seamless pathway to degree completion. Florida's 2+2 articulation policy mandates the acceptance of all state college and community college Associate in Arts degrees, and some Associate in Science degrees, by four-year state universities (Florida Executive Order 19–31 2019).

The articulation agreement illustrates the commitment that has been placed on long-term workforce development opportunities in the USA, at all levels. The 2+2 articulation model demonstrates transfer partnerships that would allow students to consider pursuing workforce education at the bachelor's level, in programmes not offered in a community college setting. For example, the University of South Florida's (USF) FUSE programme is designed to guide the transition of students from eight partnering community colleges towards limited access programmes upon

the attainment of requirements at the sub-baccalaureate (tertiary) level (FUSE 2020). Another example of partnerships, centred in workforce education beyond the sub-baccalaureate (tertiary) level, can be found in the relationship between Valencia College and the University of Central Florida (UCF). The university sponsors the Direct Connect programme, which ensures Valencia College students admission to the UCF once they have met the requirements of the Associate of Arts degree (tertiary sub-baccalaureate) (University of Central Florida, 2020). Both programmes, FUSE and Direct Connect, demonstrate a commitment to success by utilizing benefits such as joint academic advising from both the community college and university institutions, as well as the opportunity to complete university courses via a partner campus or through transient enrolment (FUSE 2020; University of Central Florida 2020).

EXAMPLES OF COMMUNITY COLLEGE WORKFORCE DEVELOPMENT PROGRAMMES

Adequately describing the numerous examples of current effective programmes and initiatives that support workforce and job training in the USA could be the focus of an entire book, not just a chapter. However, in this section, we describe three workforce development and education initiatives at community colleges as examples of postsecondary and industry workforce partnerships in Florida, Ohio, and Texas. The colleges selected won Bellwether Awards from the Bellwether College Consortium, which is an organization that honours outstanding workforce development programmes and initiatives.

Cuyahoga Community College—Ohio

Cuyahoga Community College (Tri-C), opened in 1963 as Ohio's first and largest community college, serves more than 50,000 credit and non-credit students annually (Cuyahoga Community College 2014). In 2017, the institution was named the Bellwether College Consortium Workforce Development programme winner for its programme titled 'Integrated Pathways: From Pathways to Pipelines to Student Success'. This programme highlighted the work of the school's Manufacturing Center of Excellence (MCE), which provides students with 'an integrated and accelerated pathway to completion and a pipeline to industry through

training in high demand areas’ (Bellwether College Consortium 2017). The programme’s goal is to serve as a bridge between the college, the community, and the industry by helping students attain postsecondary credentials (vocational) and credits (tertiary sub-baccalaureate) (Cuyahoga Community College 2014).

Alamo Colleges District—Texas

Serving more than 90,000 students, the Alamo Colleges District is the largest provider of higher education in south Texas (Alamo Colleges District 2020). Established in 1945, the district is composed of five institutions: North East Lakeview College, North West Vista College, Palo Alto College, St. Philip’s College, and San Antonio College. The district offers a variety of two-year associate degrees (sub-baccalaureate). In 2015 and 2016, the district was named the Bellwether College Consortium Workforce Development programme winner for its programmes titled ‘Alamo Colleges I-BEST’ and ‘The Student’s Unique Journey and Alamo Academies—An Industry-Driven, Higher Education Program of Studies, Workforce and Economic Development Partnership: Boosting the School-to-Careers Pipeline’ (Bellwether College Consortium 2017).

The Alamo I-BEST initiative uses accelerated contextualized skills-based instruction to help low-skilled adults earn high-demand occupational certificates. This is intended to meet the workforce demands in the San Antonio area through industry partnerships. It provides at-risk youth with tuition-free career pathways into critical demand technical STEM (science, technology, engineering, and mathematics) occupations (Bellwether College Consortium 2017). The programme’s curriculum awards postsecondary vocational certificates and limited Associate of Science (tertiary sub-baccalaureate) credits (Alamo Academies 2019).

Polk State College—Florida

Established in 1964, Polk State College, located in Polk County, Florida, serves more than 20,000 students. The multi-campus institution offers a wide range of postsecondary workforce education options, including certificates, Associate in Arts and Associate in Science degrees, Bachelor of Applied Science, and Bachelor of Science (Polk State College 2020). In 2019, the institution was named the Bellwether College Consortium Instructional Programs and Services category winner for its programme

titled ‘Transforming Advanced Technical Education Through Innovative New Models’ (Bellwether College Consortium 2017).

Polk State College’s Advanced Manufacturing Institute (AMI), award-winning Mosaic EIA (Electrical, Instrumentation, and Automation), and Mechanic/Millwright Apprenticeship programmes serve as successful examples of workforce development and education programming. Since 2007, approximately 150 students have successfully graduated from these hands-on and apprenticeship programmes, entering the local workforce in high-wage jobs (Polk State College 2020). The instructional methods used are varied and include industrial instrumentation courses; process control and automation; electrical and mechanical courses; and industry certification programmes (vocational), such as the Manufacturing Skills Standards Council (MSSC) Certified Production Technician (Polk State College 2020).

Each of these programmes highlights the diversity of workforce development education in the USA. As mentioned earlier in the chapter, at both the state and federal level, America has been purposeful in creating initiatives (e.g. Promise programmes, Obama’s free education initiative, and Trumps’ apprenticeship initiatives) to support a variety of high-skill occupation and training pathways (NASEM 2017). These examples provide opportunities for education partners, both domestic and international, to consider and share best practices.

CONCLUDING THOUGHTS

In 2019, when we began writing this chapter, the world was in a far different space than it is now in 2020. No doubt, change is a constant and the world will continue to challenge us to adapt and lead. We can no longer rely on old paradigms to define what the world will be like a year or five years from now. Nonetheless, we can borrow from the past to help design a future that is better and more responsive. The challenge for higher post-secondary education institutions is to model the way by designing and delivering programmes and connected pathways that lead to graduates who are educated, adaptable, competent, and with the relevant skills required of the future world of work.

For those committed to workforce training and education, we know there are numerous models and processes that can provide strategies and programmes to benefit both individuals and society. We have shared some of these models, exemplary programmes, and policy initiatives in this

chapter, discussing both their current status and their historical roots. We know there are many effective international models and programmes that would be beneficial to American leaders as we continuously look for ways to strategically implement change and create impactful and effective programming. Our challenge is to learn and be open to change.

Looking to the future, we should intentionally embrace change, asking new questions rather than turning to outdated solutions. Which workforce programmes and models are tried and true? Which programmes should continue, perhaps with changes to fine tune their effectiveness? What lessons did we learn from the COVID-19 pandemic that are beneficial to our planning and programming in the future? What are the skills employers need their workers to have now and in the future? What can we learn from past national and state policy initiatives that would be useful in framing support for workforce programmes today and in our future? What new professions are needed in this new world and how can postsecondary higher education institutions (and partners) work to fill these needs? How do we prepare students to succeed in this new world and be adaptable to change that we know is never ending? What can we learn from international colleagues about effective workforce policies, programmes, and systems? Is this the time to focus on pathways and partnerships across nations, not just within our own country? If so, how do we begin? The list goes on. If we start with questions, together we may find the solutions.

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Higher Education in Vocational Institutions in Australia: What's Going On?

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INTRODUCTION

Wrestling with economic shifts and their implications for post-school education are troubling issues for Australia, just as they are for other advanced economies. Australia's post-compulsory system has traditionally segmented the tertiary routes. These routes consist of higher education provided by publicly funded universities and vocational education and training (VET) provided by the state-owned technical and further education institutes (TAFEs) and other private providers (including a handful of universities and numerous private colleges). Each state and territory has policy and

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funding responsibility for vocational education, while higher education policy and funding is primarily a federal government responsibility.

This chapter focuses specifically on higher education qualifications that are positioned at higher education levels within the public state- and territory government-owned vocational institutions, TAFEs. These qualifications include associate degrees, bachelor degrees, and higher education graduate certificates/diplomas. Since the early 2000s, the vocationally orientated TAFE institutions, which have specialized in occupational entry forms of vocational education provision, have been able to award higher education qualifications under the accredited authority of the higher education quality assurance agency (Webb et al. 2017).

In the last two decades, in response to the influence of economic pressures on tertiary education (Lingard et al. 2005), a number of changes have taken place that have complicated the tertiary education field in Australia. These include the introduction of a qualifications framework, initially in 1995, revised first in 2011 and then in 2013 and most recently being the subject of a review (Department of Education, Skills and Employment [DESE] 2019); national standardized protocols for higher education providers (first introduced by the Ministerial Council on Education, Employment, Training and Youth Affairs [MCEETYA] 2000); and the creation of quasi-market systems in both vocational education (Wheelahan 2015) and higher education with a financial imperative, which inevitably increased competition (Marginson 2006).

The effect of the introduction of the national standardized protocols for higher education in 2000 (MCEETYA 2000) was that there was steady growth in the numbers of higher education courses run by non-university higher education providers (Webb et al. 2017). Many of these were small specialist providers, such as music institutions running a range of non-accredited courses or vocational and higher education courses and divinity colleges. However, increasingly state- and territory-owned TAFEs began to apply for rights to run their own higher education-level courses in

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specialist subjects. The first bachelor degree to open was in Australia's second most populated state, Victoria,¹ when the Northern Melbourne Institute of TAFE had their Bachelor of Applied Aquaculture accredited² in 2004 (Rood 2004). This complemented their range of vocational education aquaculture courses. From then on, a trickle of courses at bachelor and associate degree level were accredited in Victoria, South Australia, and Western Australia, but usually in small numbers, for small groups of students and in specialist occupational areas. During this time, other broader focused higher education degrees were provided in the TAFE institutes in these and other states, but as franchised provision operating under the control of a university (Brett et al. 2018). The growth of higher education in vocational institutions increased significantly after 2011 when the national quality assurance agency was created. The Tertiary Education Quality and Standards Agency (TEQSA) was established to ensure consistent processes for all higher education providers, including non-university providers such as TAFEs, to offer nationally accredited degrees (Webb et al. 2019). Universities had also to be registered with the quality assurance agency, but were granted self-accrediting status, whereas TAFEs and other non-university providers had to have each course accredited by TEQSA.

This chapter focuses on these organizational- and system-level matters concerning changes that have enabled the growth of higher education in Australian vocational institutions. In doing so, it addresses the questions posed throughout this book. Specifically, these questions include: What (if anything) is distinctive about these evolving forms of higher education in vocational institutions? How are these forms of provision positioned in relation to existing university HE? How are these forms of provision responding, if at all, to changing economic or employment conditions and the labour market?

Finally, the chapter considers some implications for equity in these new and evolving forms of higher education provision. In the main, the chapter draws on a recent empirical study of the growth of higher education in the publicly owned vocational education sector institutions (i.e. the TAFEs).³ The chapter explores these structural issues and the implications for distinction and equity. It does so to account for the relatively small scale of higher education activity in vocational institutions compared to some other country systems discussed in this volume.

COMPETING IN TWO MARKETS

TAFEs' position in the VET market has become increasingly contested over the last 20 years, their share of provision of vocational certificates and diplomas has been greatly diminished and their unit cost price for teaching hours driven down (Wheelahan 2015) by the introduction of a market for government funding that has facilitated the growth of much smaller for-profit providers. In response to struggling in this newly competitive vocational sector, TAFEs have used the recently introduced protocols to register themselves as non-university higher education providers. On face value, the higher education sector looks less fraught with competition: '[the] VET sector had almost three times as many students, yet around 35 times as many providers as the higher education sector' (Korbel and Misko 2016: 26). However, in the higher education market, the multiversity model dominates, leaving little space for alternatives (Marginson 2018). Therefore, rather than escaping competition in the VET market by entering the higher education sector and awarding their own degrees once approved, the TAFEs now experience competitive struggles in two different markets.

Thus, the emergence of higher education in TAFEs in Australia has been beset by difficulties. These do not relate directly to the economic and social need for high skills or demand to which higher education in vocational settings is seen as a response in some other countries. These challenges may explain why this form of higher education in public vocational institutions in Australia, known in some other contexts as college-based higher education, remains less than 1 per cent of Australian higher education enrolments and only 0.4 per cent of domestic student higher education enrolments (Australian Government private data request 2018).

AUSTRALIA'S FEDERATED EDUCATION CONTEXT

As a federal system, there are divisions of responsibility between the Australian federal government, state and territory governments, and national arrangements that span all jurisdictions. TAFE institutions are legislated and organized by each state (New South Wales, Queensland, South Australia, Tasmania, Victoria) and territory (Northern Territory, Australian Capital Territory), with differences between the states and territories as to how these institutions work. Some TAFE institutions cover

whole states (New South Wales, Queensland, and South Australia), while multiple TAFEs maintain a degree of autonomy from each other in other states (Victoria, Tasmania, and Western Australia). Within these divisions, there are differences in the responsibilities and policy directions of the two sectors, with higher education policy and funding largely the responsibility of the federal government, while VET policy and funding are largely the responsibility of state and territory governments.

VET policy in Australia is framed around clients, consisting of industry, providers, and, to some extent, students. Higher education [HE] policy is framed around students, teaching, research, and impact, in relation to providers such as universities and other institutions. Both sectors have been cast as central to government agendas in relation to innovation, productivity, and skills (Banks 2012).

The number of TAFE providers of HE is relatively small in comparison to the other publicly funded providers of higher education, the public universities (14 TAFEs to 43 universities). The small number of registered TAFE providers of HE unevenly spread across the states reflects the different ways that states organize their TAFE institutions. As indicated above, some states have a single TAFE legislated for the whole state, where provision might then take place in multiple locations. By contrast, in Victoria in particular, the state has maintained separate TAFE institutes that have autonomy about their individual direction. In terms of HE provider categories according to the national quality agency, TAFE institutions are usually grouped with other non-university private providers, even though they are publicly owned institutions.

For all TAFE institutes, it is also important to note that the sector has been somewhat volatile as a result of institutional and state policy, particularly relating to market competition from non-governmental providers and access to funding. These funding decisions, significant marketization, and changes in patterns of international students choosing to study in Australia have all impacted TAFE operations. In the 18-month period between the national statistics used in this chapter being collected (mid-2018 to the end of 2019), for example, the provision of higher education in TAFEs in one of the country's large states, Western Australia, has totally ceased and arrangements have changed significantly in Queensland and South Australia.

QUALIFICATIONS AND QUALIFICATION FRAMEWORKS

This chapter looks at bachelor degrees run in TAFE institutions which are usually directed towards a specific occupation (Knight et al. 2018) rather than broad disciplinary knowledge and further study.

Higher education provision in TAFEs is separated from high-level VET qualifications such as diplomas and advanced diplomas as they are awarded outside the higher education quality system and operate within an industry-led competency-based system. Australia's competency-based system is entrenched, if much critiqued (Wheelahan 2007; Moodie and Wheelahan 2009; Hodge 2014; Wheelahan 2015; Kearns et al. 2017), and is based on the codification of occupational competences, overseen by industry panels. Conceptually, the Australian implementation of competency-based training can be described as:

units of competency texts [which] are of a roughly comparable size across occupations and levels of expertise, and all represent occupational competence in terms of performance (elements, performance criteria) and lists of concepts and principles that are intended to capture the knowledge and other attributes believed to be necessary for the performance. (Hodge 2017: 2)

This strict and inflexible system has meant that vocational education can be scaled up and produced at a lower cost point. However, it has also meant that the expansion and take up of higher vocational education in Australia, such as diplomas, advanced diplomas, and vocational graduate certificates and diplomas⁴ has been constrained by the occupational competence that has been encoded in the VET system and its perceived relevance to changing industries and students (Hodge 2014).

In Australia, like in other nations, the last 20 years has seen the emergence of new kinds of qualifications, some of which straddle the two sectors of tertiary education and seek to extend the kinds of VET qualifications offered by TAFE into higher education. The Australian Qualifications Framework (AQF) provides a matrix to understand this provision, in the form of a national qualifications framework covering all states in the education system, including VET (1–6) and HE (6–10). It also provides a standardization of qualifications across Australia that sets a benchmark for judging the preparation of students prior to enrolment in institutions. These new kinds of qualifications mainly fit into levels 6 and 7 out of the 10 levels, although some TAFE institutes and other VET providers have offerings at level 8 and 9. Recently, a review of the AQF recommended changes to

Table 1 Australian qualifications framework levels, VET qualifications, and HE qualifications

<i>AQF level</i>	<i>VET qualification</i>	<i>HE qualification</i>
10		Doctorate
9		Masters
8	Vocational graduate certificate/graduate diploma	Bachelor honours degree Graduate certificate Graduate diploma
7		Bachelor degree
6	Advanced diploma	Associate degree
5	Diploma	Diploma
4	Certificate 4	
3	Certificate 3	
2	Certificate 2	
1	Certificate 1	

Source: Adapted from the AQF. <https://www.aqf.edu.au/aqf-levels>

simplify the framework, address the overlap of VET and HE qualifications, and align the AQF levels with the eight band levels in the United Nations' International Standard Classification of Education (ISCED) 2011 (DESE 2019). Table 1 summarizes the overarching hierarchy of qualifications from AQF 1–10, to highlight the differences across the levels.

This framework positions the associate degrees and bachelor degrees offered by higher education providers at levels 6 and 7 and diplomas and advanced diplomas awarded through the VET quality system at levels 5 and 6. VET and HE qualifications overlap at level 6 in part because the intention of the AQF was to establish equivalency of qualifications to help guide recognition of higher learning for students wishing to pursue further studies (Pitman 2009). As a consequence, there are likely to be differences in the forms of knowledge being developed by these different awards, with the higher education quality-assured qualifications including greater underpinning education and theoretical content than the competency-based qualifications (Wheelahan 2015).

PROVISION OF HIGHER EDUCATION IN TAFES IN CHANGING ECONOMIC CONDITIONS

We now move to an account derived from our recent empirical study of higher education provision in TAFEs in Australia, in order to give a sense of the scale and scope of the provision of bachelor degree programmes in

Table 2 Domestic bachelor enrolments by fields of education

<i>Provider type</i>	<i>Enrolled students in 2016</i>	<i>% of enrolled students</i>
Public universities	716,478	94.31%
Private universities	11,270	1.48%
TAFEs	2892	0.38%
Private providers (excluding TAFEs)	29,072	3.83%
Total	759,712	100%

Source: Australian Government private data request [2018](#)

particular and explore their distinctiveness. This analysis of provision draws on new national data procured specifically for the research study from the Australian Department of Education, Skills and Employment (DESE).⁵ Furthermore, to help contextualize the narrative account, the chapter presents qualitative data collected from institutional leaders and educators representing different TAFEs.⁶ It also includes data from an in-class survey administered in two different TAFEs (the largest of the 11 TAFEs offering higher education), representing a 20 per cent coverage of bachelor students in those two institutions.

In terms of bachelor degrees (AQF level 7), the total numbers of students undertaking degrees at TAFEs is small in comparison to the HE sector as a whole. This is illustrated in Table 2, showing the domestic enrolment numbers of both public and private universities alongside TAFEs and other non-university providers.

As shown in Table 2, domestic enrolments are less than half a per cent of total enrolments and are ten times smaller than those of the other non-university higher education providers.

A Distinctive Curriculum?

Whilst the scale of provision in TAFEs may be small, more noteworthy is the distinctiveness of the curriculum when compared with universities. The fields of education that recruit most strongly in TAFEs are different from the dominant fields in public universities, as shown in the two pie charts (Figs. 1 and 2). These compare the proportions of different fields of education in public universities, the biggest provider, and TAFEs, the smallest provider of bachelor degrees for domestic students.

Visual comparisons between these two types of providers in Figs. 1 and 2 show that the fields of education which are important to TAFE providers,

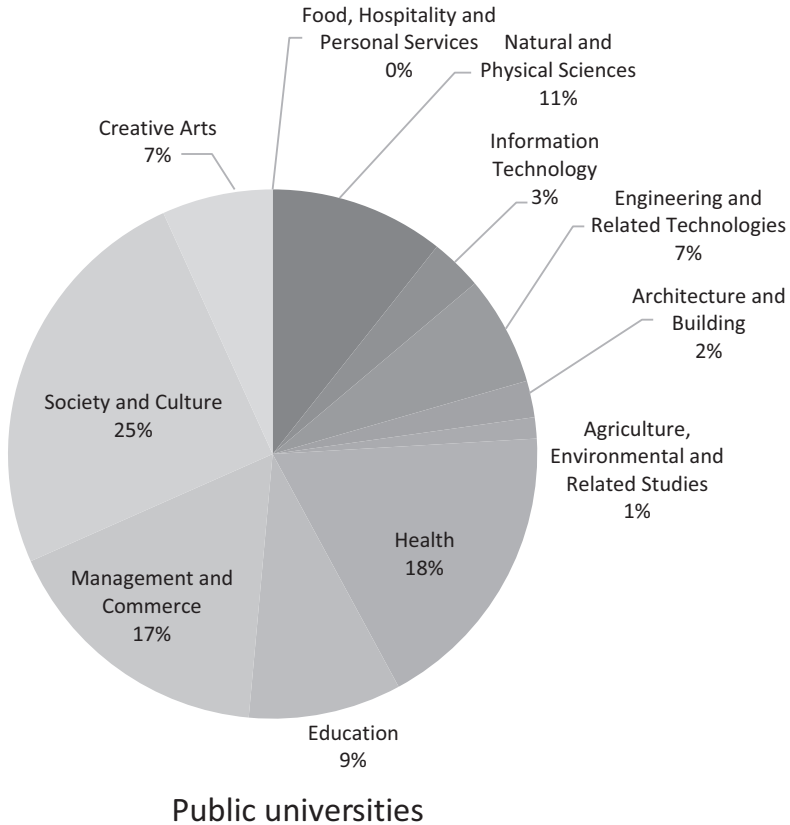


Fig. 1 Public universities domestic bachelor enrolments in broad fields of education. (Source: Australian Government private data request 2018)

such as creative arts (32 per cent of TAFE provision) and architecture and building (8 per cent of TAFE provision), are of much lesser importance to public universities. In contrast, the areas comprising a very small proportion of the TAFE provision, such as society and culture (2 per cent of their provision), natural and physical sciences (2 per cent of their provision), and engineering and related technologies (2 per cent of their provision), are of greater significance to the comprehensive provision of

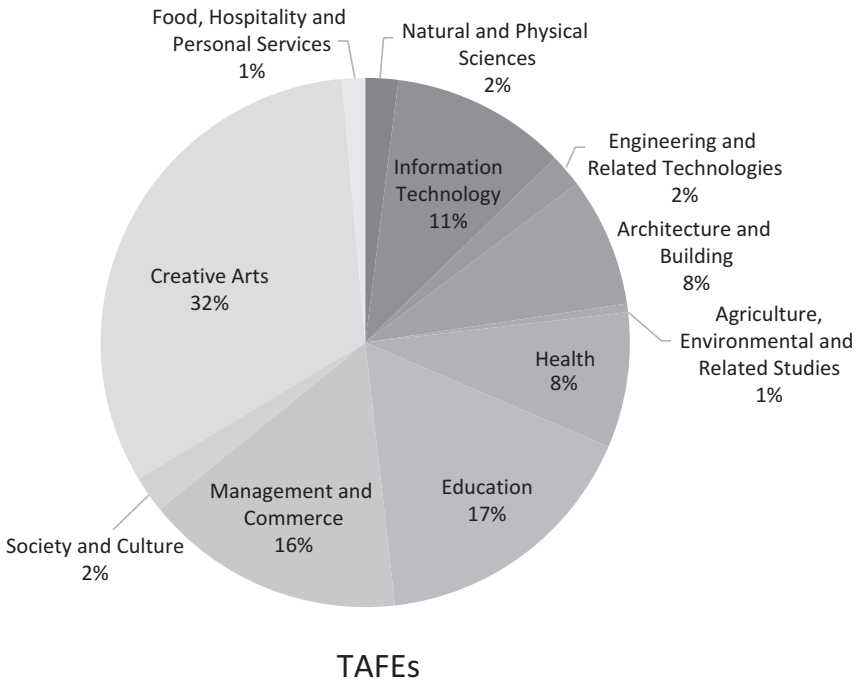


Fig. 2 TAFE enrolments domestic bachelor enrolments in broad fields of education. (Source: Australian Government private data request 2018)

universities. Across both types of providers, the fields of management and commerce and health are important, as is education.

Generally, the fields of education that recruit most strongly in TAFEs are different from the dominant fields in public universities. As seen in Fig. 2, TAFE is the only institutional type that has food hospitality and personal services, and TAFE institutions have the highest proportion of architecture and building (8 per cent of enrolments in TAFEs against 2 per cent of enrolments in public universities) but also have the lowest proportion of society and culture (2 per cent in TAFEs against 25 per cent in Public Universities). Interviews with TAFE representatives at institutions providing higher education suggest the enrolment differences reflect the specific gaps that TAFE has identified in provision and the perceived industry needs for vocationally focused bachelor degrees (Webb et al. 2019).

Our documentary analysis into marketing materials of the courses and research agrees with this narrative given by the institutional and educational leaders from the TAFEs. It indicates that higher education curriculum in TAFEs is understood to be strongly influenced by industry. Analysis of the degree titles in the areas of management and commerce, education, and health in TAFEs shows a propensity to awards that include specific job titles or additional accreditation for industry-specific recognition to practise (Webb et al. 2019). In this regard, the TAFE bachelor degrees are distinctive in being closely aligned to specific occupations. Arguably, this distinctiveness is associated with the TAFEs' institutional heritage and its embeddedness in industry-led competency-based training awards (Wheelahan 2015). This contrasts to the predominance of more general occupational and discipline-based degrees offered by public universities.

Contrasting higher education in TAFE curriculum development with that in traditional universities, one TAFE leader explained that,

our points of differentiation are around the vocational connection I suppose, making sure that industry has helped us not only to design our courses but our learning outcomes and our students do placements and they're in industry and they do a lot of problem based learning with industry as part of their program. So I guess that industry connectedness. (TAFE 'C' case site)

A representative from another TAFE echoed this point:

The difference is that it is strongly influenced by industry when we're putting the course together. We do have several meetings, we've pulled together an industry reference board, and they strongly influence what the course looks like, what they believe should be required and the content of it. (TAFE 'I' case site)

A Distinctive Pedagogy?

Bachelor degrees in TAFE are not only distinctive in terms of their curriculum. Data gathered by the authors suggests pedagogical practices in these degrees involve a greater level of practical activity than might be expected in university studies. In many cases, the traditional mass lecture was not employed, with teaching and learning efforts focused on workshop and tutorial-style activity. Closer relationships between teaching staff and students were frequently reported, a feature associated with generally

smaller class sizes. Institution leaders, marketers, teachers, and students alike described a ‘hands-on’ approach to learning, perhaps tied to the distinctive curriculum components of technical skill development and (in some cases) the use of employer materials, equipment, and facilities. According to a TAFE institute marketing manager:

it’s about getting them in and supporting them through that change and providing that kind of hands on practical learning and experience. So there’s a lot of work integrated learning, there’s the internships and the guest speakers from industry and a lot of industry briefs that students work on so they’re really getting into a job, effectively, as they’re studying. So, yeah, I think it’s about making it real and rather than here’s your book, study and lots of exams you’re just immersed in it so it just grows on you. (TAFE ‘F’ case site)

One institutional narrative account argued that the distinctive pedagogy in higher education provision at TAFEs was a consequence of the institutions’ VET track record. However, other informants challenged this narrative, suggesting pedagogical practices are closer to traditional university approaches. Informants explained that the textbooks used in some bachelor degrees in TAFE courses were the same as those used in comparable university offerings. Practices employed in universities might also be conveyed into higher education in TAFE programmes due to the shared use of teaching staff from universities. Interestingly, fewer examples were provided of VET teachers migrating over into teaching on higher education in TAFE courses. Regulations demand that higher education teachers hold qualifications that, in many cases, are not typically held by VET teachers (Knight et al. 2020). Another way in which the learning experience within higher education in TAFE is close to university provision is assessment. Informants consistently reported methods that were identical to traditional higher education, including examinations and written essays. For instance:

when we put our course plans together and work with TEQSA to get them accredited there’s a certain expectation of certain types of assessments and I guess to ensure that students are developing the skills that they would if they were going to any other institute. So there’s a lot of essays, there’s exams and all of the same kinds of things. We do try to focus more on real world and problem based, but they have a pretty similar assessment experience to any other student. (TAFE ‘C’ case site)

However, portfolios and practical demonstrations and products were also among the assessment methods described. It should be observed that practices surrounding such techniques did appear distinctive, with substantial flexibility typically afforded students. That is, the close relationships frequently reported between teachers and students could result in stronger support for individual students going through assessment processes and more opportunity to re-sit or re-submit assessments. The criterion-referenced and mastery-style assessment practices of the VET sector seem to be influential in the higher education in TAFE setting in permitting students the opportunity to retake assessments until they had demonstrated mastery of the programmes' outcomes. Yet in other respects, criterion-referenced and mastery-style assessment practices typical of competency-based training were described by educators in ways that sought to differentiate their higher educational practices from those in VET teaching (Sinclair and Webb 2020). The narrative accounts from TAFE staff and nearby comparator universities, as well as documentary evidence of the pedagogical practices, identified some operational differences between the TAFEs and universities. However, the shared quality assurance context faced by TAFEs and universities to meet the standards and requirements of TEQSA also explains some of the homogenizing tendencies in these narratives of TAFE and university pedagogies (Skolnik 2016). This points to the tension between being the same or as good as higher education institutions as judged by the national regulator TEQSA and also, in many cases, industry regulators (e.g. the standards set by early years or nursing accreditation bodies), while also highlighting the distinctiveness of the TAFE offering.

Completion and Progression

Graduate employment is connected strongly with the rationale for these programmes from students and staff alike. In terms of outcomes, the overall rate of TAFE bachelors degree completions is very similar to that of public universities, with some statistics showing only a 0.4 per cent difference between the two institutional types (Australian Government private data request 2018). The narratives collected in the research project would suggest that students on the higher education in TAFE programmes study for employment rather than for progression for further study. This is reflected in the significantly lower percentage of further study rates of

TAFE graduates (8 per cent at TAFEs compared to 21 per cent at public universities) (Australian Government private data request 2018).

The overall employment rates of graduates in TAFEs three months after graduation are similar to universities, with 82.6 per cent of graduates finding some work in the period post graduation compared to 86.7 per cent for public universities (Australian Government private data request 2018). However, there are some differences in relation to full-time employment immediately post qualification, with TAFE students having 65.6 per cent full-time employment, compared with public university students at 71.6 per cent. These differences are not surprising given that the composition of subjects offered as bachelor degrees in TAFEs show a narrower range as seen above. In TAFE higher education offerings there are higher proportions of subject areas such as creative arts, which infrequently lead to full-time jobs, therefore the structures of different labour markets may go some way to explaining the slight disparity in official graduate employment rates. However, while in Australia the calculation of the effects of institutional type on graduate-level employment are harder to determine, the effects on student satisfaction are clearer. Student satisfaction with the development of disciplinary skills in TAFEs, at 83 per cent satisfied, is above the rate of satisfaction with disciplinary skills in universities, at 81 per cent (Australian Government private data request 2018).

PUBLIC DATA ON STUDENT COMPOSITION OF BACHELOR DEGREES IN TAFES

There are several key differences in the composition of student cohorts enrolled in bachelor degrees in TAFEs and those in Australian universities. However, as indicated in other studies (Koshy et al. 2020), in some ways these differences are difficult to discern given the current Australian government practices of recording few student characteristics and the limited current categories identified as equity targets, as authors have written about elsewhere (Koshy et al. 2020) and mean national comparison is difficult.

Students in TAFEs bachelor degree programmes tend to be older than those in university. The public university market has been traditionally oriented to secondary school leavers, with public university bachelor places predominantly filled with students aged between 18 and 24 years (Department of Education and Training 2019). In contrast, the most

recent data shows that 36 per cent of all students enrolled in higher education in TAFE bachelor degrees are over 25 years old, compared with 19 per cent in university bachelor degrees (Department of Education and Training 2019).

TAFEs are an institutional type with an espoused commitment to equity made explicit in relation to VET provision in Australia (Wheelahan 2015). However, there are funding differences for students and institutions that create barriers for TAFEs seeking to engage in equity work in higher education provision as Australian students studying in TAFE institutes have no access to places supported by the national government. These can increase the costs for students choosing to study bachelor degrees in TAFEs. Not surprisingly, the higher proportion of students of low socio-economic status who are enrolled in TAFE institutions in vocational education programmes (Wheelahan 2015) is not reflected in the makeup of higher education enrolments. Nevertheless, despite the higher education provision in TAFE institutions not being identified in any federal equity policy and, therefore, not being eligible for any funding to target equity groups (DET 2019), bachelor degrees in TAFEs are enrolling close to the sector average proportion of students from low socio-economic status groups. Data indicate that 14.7 per cent of students enrolled in TAFE courses come from the lowest socio-economic group, compared with 15.9 per cent for the higher education average (Australian Government private data request 2018).

There are other clear differences in enrolment patterns. A small majority of students in higher education in TAFEs are international, full fee-paying students (DESE 2019). This is an unusual feature of Australian provision compared to higher education in vocational institutions in other countries. Although previous figures shown in this chapter were of domestic students (mainly Australian citizens with a small number of students who qualify for Australian government-supported fees), the high proportion of international students enrolled in bachelor degrees in TAFEs is a most noteworthy feature of this public higher education in non-university institutions. Data show that 44 per cent of enrolments are international students, compared with 20 per cent for all providers offering bachelor degrees (Australian Government private data request 2018). This proportion is also high when viewed against international enrolments in VET. Although Australian VET has experienced growth in international enrolments over the past decade (Tran and Dempsey 2017) with international fee-for-service enrolments increasing by 37.3 per cent from 2015 to

2018, international students currently represent only 4.8 per cent of all VET enrolments (National Centre for Vocational Education Research [NCVER] 2018).

HOW ARE STUDENTS CHOOSING HIGHER EDUCATION IN TAFE INSTITUTES?

As part of the research project undertaken by the authors, a survey of students was conducted in two of the largest TAFEs offering higher education. The survey's purpose was to help researchers understand why students choose higher education in TAFE and whether they were considering vocational or higher education study in their choice process. Students were asked if they had applied for any vocational education institution courses at the same time as their current degree course and if they had applied to another higher education provider at the same time as their current course provider. The proportion of students applying to other vocational courses is shown in Table 3 and the proportion of students who applied to other higher education courses at the time of applying for their higher education in TAFE course is shown in Table 4.

Table 3 Responses to survey question: 'Did you apply for ANY vocational education/VET courses (e.g. certificate IV, diploma or advanced diploma) at the same time as you applied for your current bachelor degree?'

<i>Question</i>	<i>Domestic student response numbers</i>	<i>Domestic %</i>	<i>International student response numbers</i>	<i>International %</i>	<i>Total</i>
Yes	22	12.15%	16	7.21%	38
No	159	87.85%	206	92.79%	365

Table 4 Responses to survey question: 'Did you apply for ANY other higher education courses at other institutions at the same time as you applied for your current bachelor degree?'

<i>Question</i>	<i>Domestic student response numbers</i>	<i>Domestic %</i>	<i>International student response numbers</i>	<i>International %</i>	<i>Total</i>
Yes	64	35.75%	32	14.41%	96
No	115	64.25%	190	85.59%	305

The majority of students in every category stated they did not apply for any other higher education or vocational education courses. Higher education in TAFE seems to have been the preferred option for both domestic and international students currently studying higher education in TAFEs. Although, more of the domestic students (at least one third), compared to the international students, also applied for courses with other HE providers. Given the higher number of older students enrolled in higher education in TAFE, and research evidence indicating that mature students may be more focused in their choice of institution due to other constraints in their lives related to family or employment (Lavender 2020), the predominance of the older age composition of the TAFE cohort may account for these responses, since only a minority of entrants had applied when leaving school.

The majority preference of respondents seems to be to study HE specifically in TAFE. It appears to be a preference for higher education over vocational education-level programmes and an orientation to TAFEs as an institutional type, rather than universities. Given the narrow range of bachelor degree provision in TAFEs compared to the comprehensive provision of universities, this application pattern suggests a very focused kind of student choice and raises questions about the place of these qualifications in the market. Choosing bachelor degree studies in TAFEs is not the mainstream choice of school leavers. This is shown in our analysis of one state's application data for a particular year (2017 entry), when amongst 500,000 application preferences expressed by school leavers, only 100 were for higher education in TAFEs (VTAC 2018).

International students, however, apply in different ways. Most applications are made while these students are overseas and their applications are often supported by education agents. Interview responses from international students indicate that higher education in TAFE was presented by their agents as a good option. This was because of lower fees, compared to other university providers, and the slightly different admissions practices, which considered the applicants' suitability more broadly than selecting purely on academic grades.

Motivations for Choosing a Bachelor Degree in TAFE

Survey respondents from the same population were also asked to select from a list of reasons why they chose the current degree course. They could select as many options as applied. The results are shown in Table 5.

Table 5 Domestic student responses to the question: ‘Which of the following applied to you in deciding to enter your current course?’

<i>Question</i>	<i>Response numbers</i>
... I enjoy studying the subject(s)/topic(s)	113
... To enable me to get a rewarding job	107
... I want to study the particular subject/course	104
... The course is part of my longer term career plans	103
... To enable me to get a high-paying job	61
... I wanted to stay in my local area	39
... I get good grades in subject(s) related to this course	36
... My mother encouraged me to apply	32
... My previous course had a pathway into my current course	31
... My teachers encouraged me to apply	24
... I wanted to stay at the institution where I had completed my previous course	23
... Of another reason	23
... My father encouraged me to apply	20
... I wanted to study in a vocational setting	14
... My classmates encouraged me to apply	10
... My careers counsellor or agent encouraged me to apply	9
... My VET tutors advised me to continue onto a bachelor course	7

A significant number of survey participants indicated that their reasons for deciding to enter their current course were a preference for that subject (113). Employment-related reasons were also a notable part of choice making. Of the respondents, 103 indicated that their course was part of longer term career planning; 107 indicated that they saw their choice as helping them in securing a rewarding job; and 61 saw their choice as helping them in securing a high-paying job.

Potentially, the clearer occupational focus of higher education in TAFE degrees appeals to an older student cohort, while the more generic orientation of many university degrees (e.g. Bachelor of Science, Bachelor of Arts) appear to be the preference of younger students less certain about their occupational track (Billett et al. 2020). Open text responses to the survey question ‘What was the other reason you applied for your course?’ support this suggestion, as evident in the following student comments:

I started a degree 20 years ago and never finished, I was unable to get very senior jobs without a degree so I have returned to study. (Domestic student, Business course, Male)

To make use of skills gained during a previous year of study at [well known elite public university]. (Domestic student, Interior design course, Male)

Would like to change my career path (Domestic student, Fashion course, Female)

Because I studied Early Childhood Care and Development back in my country and TAFE was offering this course at a reasonable cost. (International student, Early childhood course, Female)

The students were also asked to respond to a number of statements about what was important to them in their choice making. These statements and the responses against each are shown in Table 6.

Table 6 Domestic student responses to the question: ‘How far do you agree with these statements?’

<i>Item</i>	<i>Agree</i>	<i>Not sure</i>	<i>Disagree</i>	<i>Total</i>
Studying with a hands-on approach was important to me	166	9	3	178
Studying with tutors working in the industry was important	151	21	4	176
Being a higher education student provides opportunities for personal growth and independence	144	27	6	177
Being a higher education student gives me the opportunity to clarify my career options	139	30	8	177
Studying in small groups was important to me	131	13	33	177
Studying for a degree in TAFE is a good preparation for employment	109	65	3	177
Studying for a degree in TAFE is a better student experience of a degree than in a university	71	89	18	178
Studying for a degree in TAFE would make me more employable than studying at a university	38	110	29	177

Many of their choices related to the perception of the student experience being more hands-on, connected with industry and employment preparation, and conducted through small group learning. However, many of the reasons selected by students aligned with tropes that frequently appeared in institutional marketing and materials. The students' suggestion of a 'hands-on' approach is a frequent differentiator between vocational education and higher education, which suggests some of the signals connected to the vocational institution are similar to (or transferred to) the degrees in these institutions. Equally, the difference between VET's connection to industry and universities' position as elite and based on book-learning is recognized in the strength of the answer to 'tutors working in the industry'. However, the relatively low number of students who agreed that studying in a TAFE is better for employability than in a university shows significant concern about the graduate outcomes of degrees in TAFE or at least recognition that there are some significant forces that may not recognize these new degrees. The overall impression from the responses is that there were particular elements of the experience of TAFE study which justified student choice or perhaps they felt they would not succeed as well in a university environment that deployed different approaches.

CONCLUSION

This chapter has dealt with issues around the emergence and provision of higher education in TAFEs (higher education in vocational institutions) in Australia, in a tertiary system that functions through two separate sectors: vocational education and training and higher education [VET/HE]. It builds on arguments that have examined the way higher education in vocational institutions has appeared and is regulated in different Anglophone and other European, especially German-speaking, countries (Webb et al. 2017; Wheelahan and Moodie 2017; Graf 2013). Taking Australia as its context, this chapter has explored the significance of a particular, and perhaps exceptional, form of higher vocational education, the policy settings in which it has emerged, its offerings by providers, its uptake by students, and its outcomes.

Australia's tertiary sector is now showing its age and was last subjected to major restructuring in the 1980s. Treating the post-school education provision of Australia's bifurcated system as separately functioning markets, configured around different objects and regulatory systems, is having a problematic impact. In discussing the structures and traditions of the

Australian tertiary education sector, and exploring how these contexts are creating problems, this chapter shows how structural issues are having complex effects on the development of higher education in vocational education. It also shows that as TAFEs have experienced the marketization of the VET system and the strictures of the competency-based training of qualifications, they have explored opportunities created by new national quality assurance regulations for higher education. With the support of some industry bodies, TAFEs have taken the arduous steps to have bachelor degrees accredited in a narrow range of occupational fields.

We have indicated some of the complexities of Australia's post-school landscape. Australia's federal system of government divides responsibility for post-school provision. The national government generates policy around higher education and is primarily responsible for its funding. Each state or territory government develops VET policy and has the greatest responsibility for funding this part of tertiary education, including higher level VET, which overlaps with higher education provision. Yet, when TAFEs offer bachelor qualifications as part of their higher education curriculum, they become providers of non-university higher education and operate within the federal regulated higher education sector. Insofar as any programme design and delivery is appropriately undertaken by providers with a track record in vocational education and industry liaison, then higher education in TAFEs is within the state-owned and policy-framed VET provision. But because governments and resources are arrayed either side of the VET-HE divide, higher education in TAFEs is something of a policy and funding conundrum. This is most acutely seen in relation to the differences in policies and funding available to support access to higher education for equity groups, with TAFEs and TAFE students not having access to the funding support for equity targeting available to universities.

The chapter has also highlighted the ways in which bachelor degrees in TAFEs are distinctive from those offered in public universities, reaching some students that might otherwise not undertake a higher education qualification. Moreover, in being regulated by the same standards for higher education that apply to universities, TAFE provision is formally on a par with the rest of the HE sector. However, TAFE institutions do not have the same autonomy as universities in developing bachelor degrees and their provision is not publicly funded to the same level as that in universities. More than that, there are real disincentives to participation, with Australian students who enrol in higher education in TAFE degrees required to pay higher up-front fees and higher interest charges on loans

compared with students entering mainstream higher education at a university.

Yet there are good reasons to persist. There is the unrealized potential that students who would otherwise avoid higher education find a more comfortable transition in moving to higher education in TAFEs after following a path through VET qualifications. Higher education in TAFEs stands to improve participation in higher education for non-traditional groups, especially mature aged students. Higher education in TAFEs also signifies a new type of skill provision for Australian industry. The opportunity to work closely with providers to develop bachelor degrees for high-skill industries is feasible when those providers have a track record in VET provision. Higher education in TAFEs is also a way for industries to circumvent the slow-moving machinery of generic, competency-based VET curriculum (Hodge 2014). Current provision has involved industry to a high level. If Australia seeks to transform its industries and workforce, higher education in TAFEs is an obvious way to leverage advantages presented by VET and higher education. It may also help overcome educational inequalities, bringing a new generation of students into higher education particularly those who need access to higher education during their working lives.

Despite this potential, the bifurcated VET-HE tertiary system in which policy responsibility is shared between the federal and state/territory governments is resulting in mixed messaging and mixed policy incentives to encourage higher education in TAFEs. As a result, there is considerable variation in practices across different states and territories. This is affecting the agility of VET to be responsive to industry needs and restricts practitioners in developing the potential of high-skill-level programmes in vocational institutions to widen access to higher education. Systematic support of the provision of higher education in vocational institutions could make a significant contribution to social equity and create an extremely niche part of provision that adds to Australia's economy in an effective, scalable way.

NOTES

1. There had previously been discussion in the South Australian parliament in 1998 about the commencement of TAFE degrees.
2. The degree was accredited using the National Protocols through the state-based higher education office in the Victorian Department of Education.

3. The empirical data presented and discussed in this chapter was collected as part of the Australian Research Council Discovery Project DP170101885: Vocational Institutions, undergraduate degrees: Distinction or inequality?
4. These higher vocational qualifications are equivalent to the International Standard Classification of Education classification (ISCED) level 5 (except the Vocational Graduate Certificates/Diplomas) or what in some European systems is termed short-cycle higher education. Although the qualifications overlap with Australian higher education qualifications, the quality assurance arrangements are distinct from higher education and the final award is below ISCED level 6, the bachelor degree.
5. Important to note, although the tables that follow draw together a range of statistics, government datasets do not recognize vocational institutions as a distinct category of higher education provision. Rather, the tables display statistics related to HE provision by TAFEs that are registered as non-university HE providers. This construction of a statistical category for HE in TAFEs excludes dual sector providers registered as universities. In dual sector universities, higher education provision in the VET part of the institution is attributed to the university part of the institution in statistical returns to government.
6. Further details of the empirical study, the methodology, and methods of data collection can be found in Webb et al. (2019).

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Quebec *cégeps* as Models of Social and Curricular Adaptation

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EDUCATION SYSTEMS IN CANADA, THE UNITED STATES OF AMERICA, AND EUROPE

History, culture, and practices have led to points of convergence between the structures of education systems found in Canada and the United States of America (USA). For historical reasons, state or provincial authorities segment the 12-year school journey into distinct levels of equal length, either two six-year levels or three four-year levels. Upon successful completion of the twelfth year, graduates receive a diploma, often referred to as ‘high school diploma’ or ‘general education diploma’.

Postsecondary education encompasses all education opportunities made available to high-school graduates. Two broad categories of

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postsecondary education stand out: liberal arts and vocational. The former focuses on the development of critical thinking and a sound mastery of advanced knowledge in ‘fundamental’ disciplines. The latter’s design emphasizes specialized training to prepare students for a specific purpose in the workforce. The teaching of the former is generally the purview of traditional postsecondary institutions such as colleges and universities. The latter is often set in educational institutions dedicated to vocational training, such as trade schools or technical colleges. Vocational training also takes place at the university level, both as undergraduate (as for teacher training) and as graduate (such as law or medicine in most American states) programmes.

In North America, junior colleges appeared in the early 1900s to provide non-traditional students with an academic course of study (Raby 2009). The idea of comprehensive community colleges, which would also offer vocational training, emerged during the depression and World War II (Bossman and Roberts 1973). In Canada, each of the ten provinces and three territories has exclusive jurisdiction over education and there is strong diversity in community college models, with the province of Quebec having the most distinctive form. Notwithstanding this diversity, colleges, as technical and vocational education institutions, face similar challenges caused by the transformation of the economy and growing concerns regarding social mobility.

Since the 1960s, the Quebec education diverged from the rest of Canada with several major differences. Secondary school lasts only five years and students obtain their diploma at age 17 years. They may then attend a *cégep* (*college d’enseignement général et professionnel*, general and vocational college), which is a higher education institution that offers three-year vocational programmes (known as technical programmes), as well as university preparation programmes lasting two years. Both types of programme offer the same common course core. Completion of a vocational (technical) programme usually leads to the entry into the workforce, while a university preparation degree is the traditional prerequisite for admission to undergraduate university studies. In Quebec, most bachelor’s degrees last three rather than the normal four years in North America. In the end, a bachelor’s degree requires the same length of schooling in Quebec as everywhere else in Canada and the USA (16 years).

Canada and the USA are both federal countries that grant their constituent federated entities some autonomy over education. On the face of it, the coexistence of 60 distinct educational jurisdictions at the

provincial/state level should foster broad societal and political pressures towards isomorphism and homogenization of such public policies, as has been the case in the European Union (Radaelli 1997). Why, then, did a single province design such an educational system? And how has this unique system fared when exposed to modern pressures? Answering those questions will shed light on the key characteristics of *cégeps* in promoting social mobility.

To answer those questions, this paper contains five parts. After examining how the *cégep* and its vocational education fit in UNESCO's International Standard Classification of Education (ISCED) and providing the relevant historical and educational context, we present an overview of the current structure of the *cégep* system, with an emphasis on the vocational education track. Based on a literature review of public discourse regarding college education in Quebec, we then shed light upon two sets of tensions that have emerged regarding colleges and vocational education: internal tensions and external tensions. We finally draw the relevant conclusions for vocational education programmes and design in comparable jurisdictions.

GENERAL AND VOCATIONAL EDUCATION IN THE ISCED CLASSIFICATION

One common way of understanding systems and their internal logic is to compare their key characteristics with those of other similar systems. In the case of Quebec's college system, UNESCO's 2011 ISCED is a relevant frame of analysis. The classification provides a useful distinction between postsecondary education and tertiary education (UNESCO 2011: 43). Tertiary education is close to the common North American understanding of higher education, as it includes advanced vocational or professional education:

Post-secondary education that is not considered at the tertiary level provides learning experiences building on secondary education, preparing for labour market entry as well as tertiary education. It aims at the individual acquisition of knowledge, skills and competencies lower than the level of complexity characteristic of tertiary education. (UNESCO 2011: 44)

The classification therefore characterizes tertiary education as an advanced stage of education beyond the secondary level, while

postsecondary non-tertiary education would be a supplement to secondary education. The ISCED further distinguishes programmes based on their orientation—that is, whether their design mainly prepares students for the labour market or for more advanced education (UNESCO 2011). For postsecondary non-tertiary programmes, these orientations are labelled ‘vocational’ and ‘general’, respectively (UNESCO 2011), while at the tertiary level, they are classified as ‘professional’ and ‘academic’.

Each orientation has a set of curricular objectives. Vocational programmes ‘are designed for learners to acquire the knowledge, skills, and competencies specific to a particular occupation, trade, or class of occupations or trades’ (UNESCO 2011: 13). By contrast, general education programmes ‘are designed to develop learners’ general knowledge, skills, and competencies, as well as literacy and numeracy skills, often to prepare participants for more advanced education programmes at the same or a higher ISCED level’ (UNESCO 2011: 13).

Comprehensiveness and Vocational Education in Quebec

For the first hundred years following the conquest of the former New France in 1760,¹ the British Crown supported several reforms to increase literacy and skills proficiency. Nevertheless, a social divide appeared between the Anglo-Protestant and the Franco-Catholic populations, as access to quality positions in the rapidly industrializing economy required fluency in English and advanced technical skills. Over a century of socio-economic stratification was exacerbated by the limitations placed on educational opportunities made available to Franco-Catholics. Access to elementary education suffered significant disparities based on geography and religious affiliation.

In 1875, a series of reforms split Quebec education in two separate systems: one Catholic and one Protestant. The Catholic Church seized control of the Catholic branch and, for the next 90 years, managed it with little to no involvement from the state. Institutions under church influence often did not offer vocational education. This reluctance contributed to the widening of the existing historical skills gap between Anglo-Protestant and Franco-Catholic populations. As the need for skilled tradespersons increased and diversified, government ministries took to opening their own vocational schools to provide the job market with enough qualified workers. A distinct education system emerged, made up

of trade and technical schools that were run by various government agencies.

In the 1960s, the province of Quebec went through the ‘Quiet Revolution’. The government appointed Father Alphonse-Marie Parent, a former president of Université Laval, as chair of the Royal Commission of Inquiry on Education (Parent 1964). The commission identified three core issues: the structure was disorganized; students were forced to specialize at an early age; and the system appeared to reproduce social status and inequalities.

When the commission analysed the secondary level of education, they found it was rigidly split in two tracks: one vocational (trade schools) and the other, preparatory to advanced studies (*cours classique* or grammar schools). Once enrolled in one track, students could not access the contents of the alternative curriculum due to the lack of horizontal mobility and shared courses between the tracks. Moreover, access to universities and university-level education was almost entirely limited to graduates of the *cours classique*. As one would expect, participation in one track or the other became heavily correlated with socio-economic status.

In response, the commission’s recommendation was to streamline the various institutions in the overall education system and tracks into a single, unified system. The commission then put forward key aspects of the concept of ‘comprehensiveness’: both general and vocational education should coexist, both in the same school and within curriculum. Comprehensiveness was deemed to foster social equality for two reasons. First, it would push back the moment of the final career choice. Allowing the prospect of pursuing longer studies was paramount to fostering social equality between socio-economic strata. As choices are made later and later during the studies track, students can adapt and change their progress as interests and abilities are crystallized, rather than being heavily influenced by their socio-economic background (Savard 2016). Second, students pursuing vocational or general education coexist in the same institution, have some courses in common, and engage in the same extra-curricular activities. Coexistence would promote mutual understanding and respect and make it socially acceptable to transfer from one stream to another (Tardif and Balleux 2003).

Higher education was also in dire need of reform. Like the secondary school system, the postsecondary system was, at the time, split between a vocational track and a more general curriculum (the aforementioned *cours classique*), which borrowed from the Jesuits’ *ratio studiorum* and

emphasized Latin, philosophy, rhetoric, and fine arts. Upon completion of the *cours classique*, students received a bachelor's degree from one of the few degree-granting universities in the province (CSE 2008). Postsecondary vocational education, on the other hand, was organized in a patchwork of specialized professional schools, such as teacher's colleges or technology institutes. As in the secondary system, mobility between tracks was limited, with comparable results.

The authors of the Parent Commission (1964) thought it necessary to create a new level of higher education. This new level, which would come to be known as colleges, would allow students to choose their own destiny, either by enrolling in a two-year programme that prepares them for university studies or, without any prejudice, by enrolling in a three-year professional programme designed to prepare their entry into the labour market. Whether in pre-university or professional programmes, students share a general core of education and can migrate from the academic track to the vocational track (or the other way around), thus expanding opportunities (Dassylva 2006).

Structure of the College Vocational Training System

In late fall of their last year of high school, Quebec students who wish to pursue tertiary education must choose between three-year technical programmes that provide the appropriate training to enter the job market with a professional qualification (the technical diploma of college studies or TDCS) or two-year pre-university programmes. Each leads to a diploma of college studies (DCS) preparing for a specific set of university programmes. This latter education track crystallizes the pre-university portion of the college system as a feeder for universities in Quebec. Figure 1 portrays the different postsecondary pathways and credentials available to students. Yellow blocs represent the three credentials awarded by *cégeps*.

The two types of programmes share the same basic structure. Both have the same 'common core' of general education courses. The design and course content of the 'common core' are mandated by the province's Ministry of Education, in a structure made up of four segments. Table 1 presents the general design of college-level programmes as at 2019. One unit represents 45 hours of learning activities. The first segment (labelled 'common core courses') groups the mandatory courses for all programmes and covers language of instruction and literature, humanities, second language, and physical education. The second component

(‘programme-specific general courses’) groups additional courses in language of instruction and literature, humanities, and second language that are specifically designed for the programme in which they are available. For example, the ‘common core’ mandates the completion of four courses on language and literature. Three of those are available to all students, while the content of the fourth one is adapted to be specific to each programme. The third component is a small bloc of complementary courses, which must be chosen in subject areas different from a student’s programme of enrolment. For example, a student enrolled in a pre-university DCS in social sciences would have to choose two courses outside of social sciences, such as science and technology, modern languages, or arts. Again, this is a measure intended to prevent students from focusing exclusively on one discipline or field of study. The fourth component is a set of courses specialized in the field of the programme itself. For example, a DCS programme in Life Sciences offers a course of Advanced Organic Chemistry. Table 1 presents the allocation of course units to each component for the diplomas already discussed, the DCS and the TDCS.

These four components are in line with the vision laid out by the Parent Commission (1964) report. What the report did not anticipate was a third type of programme, in addition to the DCS and the TDCS. To fulfil industries’ specific needs and attract students who are not typically interested in higher education studies, *cégeps* developed the attestation of college studies (ACS). Unlike DCS and TDCS, ACS are usually one year in length and do not include any common (e.g. philosophy), programme-specific (e.g. introduction to biology), or complementary courses; they only include field-specific courses. The minimum and maximum number of units varies between ACS programmes. The range of units per programme is presented in the far-right column of Table 1. Finally, in contrast to DCS and TDCS, the design and management of ACS programmes are left mostly to college institutions, with little or no state-imposed provincial norms. There are 807 ACS programmes compared to 185 TDCS and 9 DCS programmes (Compétences Québec 2019).

Evolution of Enrolment in College-Level Programmes

If the current state of the data makes it difficult to present a longitudinal perspective from the point of view of the programmes, it does allow it from an enrolment perspective. Tables 2, 3, 4, 5, 6, and 7 summarize the Ministry of Education and Higher Education’s (Ministère de l’Éducation

et de l'Enseignement supérieur [MEES] 2017) enrolment data in college programmes from 2007 to 2016, by type of college-level institution and by type of programme. Even though our study does not discriminate between full-time and part-time students, it is interesting to note that, during the 2005–2016 period, full-time students represented between 89 and 91 per cent of enrolment, defined here as an individual, non-weighted student population.

From a systemic point of view, four different types of college-level institutions exist: public colleges known as *cégeps*, private colleges that receive partial funding from the state; private colleges that do not receive any state funding; and finally, college-level educational institutions operated directly by government departments. It is also interesting to note that *cégeps* enrolment represents 90 per cent of college enrolment, whether we consider both full- and part-time populations, or just those enrolled full-time (MEES 2017).

As presented in Table 2, total enrolment in *cégeps* rose to the tune of around 7000 per year from 2007 to 2011, after it declined to reach 222,737 students. Much of the growth was absorbed by *cégeps* and state-funded private colleges.

Table 3 sheds light on the evolution of enrolment in pre-university programmes. The total increase between 2007 and 2016 accounts for approximately only 6700 students out of the 31,000 reported in Table 2. Almost all growth in pre-university programme enrolment can be attributed to *cégeps*, while private colleges without state funding report barely any enrolment in those programmes.

Table 4 shows that enrolment in TDCS programmes grew from 77,015 to 92,486 students between 2007 and 2016. Of that, over 13,400 (of the total increase of 15,000) were absorbed by *cégeps*.

As Table 5 shows, ACS programmes did not see a major increase in enrolment between 2007 and 2016. In some institutions, the total population even slightly decreased. ACS programmes gained only about 1300 new net students out of the approximate 31,000 additional college students.

In Table 6, we tabulate the increase by type of programme. The increase in TDCS programmes accounts for nearly half of the positive variation, while DCS programmes account for 21.5 per cent and ACS for 4.2 per cent.

Recent studies about student motivations at the college level have highlighted a fundamental, binary model of higher education attendance

(Ménard and Semblat 2006). In Quebec, students tend to enrol in a college programme for one of three reasons: to obtain the necessary training/credentials to be admitted at the university level; to obtain the necessary training/credentials to enter the job market; or to pursue an intellectual journey without a predetermined goal (Deniger and Beaupré-Lavallée 2015). The question of entry in the labour force is a major component of the design and marketing of both vocational programmes (TDCS and ACS).

Table 7 highlights a crucial difference between TDCS and ACS labour market integration. Both tracks see about half of their graduates find full-time employment in their field of study within a year of graduating. In contrast, nearly two and a half times as many ACS graduates are employed full-time outside of their field of study as TDCS graduates (16.9 per cent compared with 7.60 per cent).

TDCS graduates increasingly continue their studies at the university level. Data from the 2010 survey shows that the main occupation of almost 30 per cent of TDCS graduates was full-time student, mostly at the university level (Ministère de l'Éducation, du Loisir et du Sport [MELS] 2010). While this is a departure from the original purpose of TDCS, it also presents a problem for the labour market. Indeed, the number of annual graduates in a specific field does not translate into an equal number of new members of the workforce. Yet TDCS admission capacities and sizes continue to be determined by the demand, both local and national, for graduates in certain industries.

Finally, Table 7 shows that while ACS programmes have excellent placement rates immediately after graduation (which confirms the idea that the primary function of ACS is to train qualified members of the workforce), the proportion of ACS graduates who were not employed at all a year after graduating was significantly higher than that of TDCS graduates (14.3 per cent compared to 5.5 per cent). This is not to say that TDCS programmes do a better job at preventing unemployment; rather, some aspect of TDCS design seems to make pursuing further studies more likely for TDCS graduates than for ACS graduates.

Observations of student academic pathways show that the postulates formulated by the Parent Commission have evolved. The Parent Report (1964) had stated that technical programmes were designed to prepare students for entry in a specific industry. However, data from the TDCS class of 2008 clearly shows that a significant proportion of these graduates continue their studies after obtaining their TDCS and do so as full-time

students. The TDCS not only attracts students who aspire to a vocational employment, but also those for whom the pre-university diploma (DCS) was originally designed. Finally, the emergence of the short, specialized programme known as the ACS was not foreseen by the Parent Commission.

INTERNAL TENSIONS: COMPREHENSIVENESS UNDER FIRE

Cégeps' comprehensiveness is affected by two levels of tensions: internal and external. In this chapter, horizontal tensions refer to mismatches between the origins, structures, and purposes of the two streams coexisting at the college level, namely, the DCS and the TDCS. Both traditional streams include the equivalent of a one-year advanced general education, which the Parent Commission (1964) wished to be the final opportunity for a shared comprehensive learning experience for students from both streams. Furthermore, colleges as institutions were to be heavily discouraged from offering only one of the two streams. Thus, comprehensiveness was built upon curricular design and forced cohabitation within institutions. The two streams, however, did not mesh well and coexisted as two distinct entities, which could be the origin of the two main criticisms.

Canada's economy is both knowledge-based and resource-based and this particular mix seems to correlate to industries' needs for employees who have vocational training (Lyons et al. 1991). Some sources (e.g. Le Soleil 2019) report that 60 per cent of the highest demand jobs required a vocational or technical training. In the Quebec Youth Action Strategy (Québec 2016), 'Axis 2' aims at promoting vocational and technical programmes. The increased importance of vocational training became a source of concern for teachers' unions, the Quebec advisory board for education and the Federation of *cégeps*.

The stakeholders' discourse refers to the importance of a strong fundamental education at the college level (FNEEQ-CSN 2011; Fédération des Cégeps 2016, 2018) for both students and institutions, since this education is perceived to be essential for the development of the former and is presented as the original mission of college education. Stakeholders' concerns are to the effect that market forces would increase in the proportion of vocational and elective courses rather than mandatory general education courses (Di Croce 2016). The crux of the argument is based on a fundamental dichotomy between a general education designed to develop critical thinking and foster a sense of citizenship and a vocational

education designed to train the workforce (FNEEQ-CSN 2011, 2019; Di Croce 2016).

Karsenti (2015), in a literature review, noted a relative consensus around the importance of the general education common core and the high satisfaction of employers towards *cégep* graduates who had followed general education courses. The Quebec Superior Council on Education (CSÉ) has held a similar positive view of the general education common core for the last 20 years (CSÉ 2001; 2004; 2014). The CSÉ builds upon the original premise of the Parent Commission regarding how comprehensiveness can foster citizenship while providing qualifications for employment (CSÉ 2004, 2014).

On the opposite side, proponents of vocational training question the net benefit of a common core for all *cégep* students, even those who do not pursue university education upon graduation. Some reports suggest that some students who would otherwise obtain their diploma fail to do so because they do not have the capacities to meet the standards of general education courses. The Quebec Federation of *Cégeps* (Fédération des Cégeps 1999) revealed that students from the technical/vocational stream had lower grades in general education courses than their counterparts from the pre-university stream. The Quebec Ministry of Education (Ministère de l'Éducation du Québec [MEQ] 2003) has also acknowledged that the general education common core lacked consistency with the vocational streams, did not offer enough course options, and, while the expectation for all students to master both French and English was welcomed by many, it could lower students' motivation. Further studies need to be conducted on this matter, but the question remains: is the comprehensive character intended as promoting equality and social mobility driving some students out of programmes that would have led to better job opportunities?

Like other institutions that bring together general, pre-university, and technical training under one roof, such as university colleges in British Columbia (Hall 2017), *cégeps* have put in place various strategies to respond to societal demands while preserving this cohabitation upon which comprehensiveness is built. While colleges that develop DCS and TDCS programmes must follow the same Ministry's competencies framework because the diploma is awarded by the province, they have substantially more autonomy in developing ACS, as these programmes are not recognized by the Ministry. Stakeholders who are concerned about the marketization of college programmes thus worry about the enabling effect

such decentralization has on institutional competition over student recruitment (Di Croce 2016). By offering shorter, vocational programmes that allow quicker access to the job market, stakeholders and observers also worry that ACS would devalue the non-specialized portion of the existing vocational programmes: the general education common core (FNEEQ-CSN 2011, 2019).

The Demers Report (2014) noted that, since ACS training cannot be turned into a formal certification (a college diploma), it puts students at a disadvantage. It therefore recommended that colleges be allowed to segment TDCS into three distinct ACS programmes, increasing ACS students' value in the labour market (Demers 2014). The Demers Report insisted not as much on the value of general education per se, but on the value of the skills developed through the general education common core of courses. Therefore, the same recommendation stated that each college would be responsible for guaranteeing that such a segmented TDCS would still allow the acquisition of the skills normally developed through general education courses. For some stakeholders, this recommendation devalues the general education core to the point where its traditional, humanistic, teaching could be reduced to a set of competencies (FNEEQ-CSN 2014). The increase of college autonomy would also weaken state coordination (Di Croce 2016), often perceived as the lone Cerberus keeping at bay the full marketization of the college system (CSÉ 2004).

EXTERNAL TENSIONS: THE TUG OF WAR FOR ADVANCED PROFESSIONAL TRAINING

The comprehensive design of *cégeps* also generated external tensions through the integration of college education with the antecedent and subsequent sectors, namely, high schools, and universities. In the hope of promoting a coherent system, the Parent Commission envisioned all educational sectors to be connected closely to one another. First, for instance, the commission proposed the creation of the CSÉ. This would include one committee per education sector, but representatives from the other sectors would also sit on each of these committees. Second, the *General and Vocational Colleges Act* provides for a representative of the university sector to sit on every *cégep*'s board, and the *Act Respecting the Université*

du Québec provides for a college representative to sit on the network of the Université du Québec Governors' Assembly. Third, following the recommendation of the Parent Commission, the Quebec government designs all pre-university and technical programmes for all *cégeps*, thus ensuring geographic equity and mobility, but also consistency with high-school programmes and university programmes.

The external tensions therefore do not emerge from inconsistencies, but from the transformation of society and the world of work since the 1960s. Two of these transforming factors are relevant to explaining how some vocational education programmes, originally assigned to the college level, are now pressured to expand at the university level. First, the natural evolution of trades and professions is to become more complex as practice evolves and scientific advancement increases the knowledge necessary for practice (Office des professions 2005; Ordre des infirmières et infirmiers du Québec [OIIQ] 2012). Second, with the increased complexity of required knowledge and know-how comes a corporate demand for commensurate social recognition (Marsh 1971) and, in parallel, a shift in the minimal training required to enter a profession (high-school trade diploma, college technical degree, bachelor's, master's, or doctorate). One of the hallmarks of the social status of a profession is the level of the minimal training required (Brown 2001; Klein 2016). As such, what were skilled trades (computer programming) or technical professions (nursing) when *cégeps* were created now require more advanced initial training. However, as colleges are neither able nor authorized to offer longer, more specialized training than the traditional three-year technical college programmes, nor to grant degrees, any expansion in duration will necessarily exceed the jurisdiction of colleges (Bégin-Caouette 2017).

Colleges, consequently, came up with a unique solution: they partnered with universities who offered undergraduate programmes in the same discipline and created a programme continuum called a DEC-BAC, short for DEC-*Baccalauréat* [TDCS-bachelor's degree] (Demers 2014). The continuum is designed from two existing vocational programmes and is the result of a bilateral agreement between a university and a college. The resulting economy often means a whole year of courses is removed in the continuum, when compared to the duration of the two original programmes attended sequentially and separately (Demers 2014; Bégin-Caouette 2017; Métiers Québec 2019).

Like the ACS discussed above, the DEC-BAC however represents a departure from the original design of the system. While *cégeps*' curriculum is regulated at the provincial level, the DEC-BAC depends upon the goodwill of specific institutions, which may raise concerns regarding accessibility and equity. For instance, universities from the Université du Québec network concluded many agreements with their local *cégep*, while charter universities have fewer of those agreements, and Quebec Anglophone institutions, like McGill University and Concordia University, do not offer any DEC-BAC (CSÉ 2015). The DEC-BAC thus constitutes an interesting response to the increased specialization of professions, but the response appears, at this point, unsystematic and partial.

CONCLUSION

This chapter explored how the creation of college institutions embodying the idea of comprehensiveness has fostered educational equity and social mobility in Quebec (Eckert 2010). *Cégeps* have increased access to higher education as the vast majority of high-school graduates in Quebec now participate in a DCS, a TDCS, or an ACS (Skolnik 2020). The society that gave birth to the Parent Report in the 1960s has however evolved. *Cégeps* have innovated (with the ACS and the DEC-BAC) to ease internal and external tensions. They have responded to socio-economic transformations, while preserving their unique features and their role as social pillars in promoting equal opportunities and social mobility (Dassylva 2004; Héon and Ébaneth 2006; Doray et al. 2009).

In most societies, technical and vocational education institutions face the challenges of academic drift and the pressure of the knowledge economy (Schmidt 1999). What the case of *cégeps* suggests is that vocational training, whether it coexists with general education or not, must continually reaffirm its status and redefine its link with other types of higher education training. Similarly, the contribution of technical and vocational education institutions to social mobility will depend on curricular adaptations favouring both horizontal and vertical mobility. Academic drift is paralleled by a fear of a market drift, which places economic needs as paramount to the original missions assigned to higher education institutions.

In Quebec, however, general education was never the single mission of colleges and college education and was never meant to operate at the exclusion of vocational education (Dassylva 2004; Demers 2014). Students were to have a choice between two streams of equal value (in the eyes of the Parent Commission): one that would prepare for the labour market by means of a vocational, trade-specific or industry-specific programme (the TDCS) and the other that would prepare for university studies by means of a preparatory, disciplinary-specific specialized programme (the DCS). One of the founding principles of Quebec college education is that both streams were to share a common year of advanced general education before they entered their respective specialization streams (Parent Commission 1964).

This comprehensiveness explains why distinction and status play out differently in Quebec than in other contexts in North America. In many Canadian provinces and US states, vocational and academic training are offered in different institutions and do not carry the same prestige (Gallagher and Dennison 1995). There are other jurisdictions (found mostly in Europe) where the vocational and academic streams are also offered in different institutions, but of an equal status (Kyvik 2004). In Quebec, the same institution is responsible for the two streams designed as equally prestigious. Minimizing distinction and status differentials facilitated transfer between programmes and institutions and, today, Quebec stands out as the province with the highest proportion of vocational college graduates obtaining university degrees (Skolnik 2020).

As higher education is placed in uneasy social situations all over the world, as its humanist mission seems to be under siege, it is important to remember that variations in educational cultures and social aspirations should not lead to seeing postsecondary education streams as monolithic or hierarchical. The debate should be less about the relevance of vocational programmes in higher education and more about the common core of education a society wishes all its citizens to share. In that sense, the case of Quebec *cégeps* tells a revealing tale of the opportunities—and the pitfalls.

APPENDIX

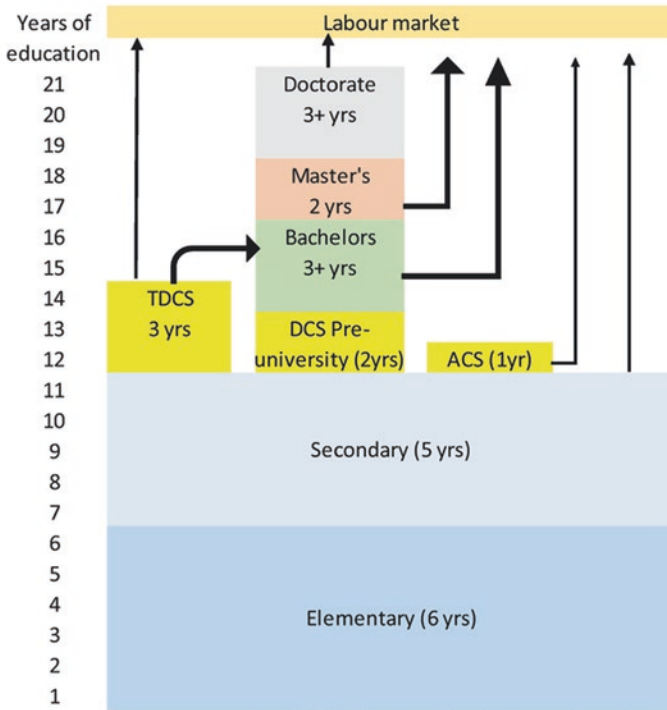


Fig. 1 Education system in Quebec. (Source: Adapted from MEQ 2003 and MELS 2010)

Table 1 College programme design, in units (1 unit = 45 hours of learning activities)

	<i>DCS</i>	<i>TDCS</i>	<i>ACS</i>
Common core courses	16.66	9.33	0
Programme-specific general courses	6	4	0
Complementary courses	4	6.33	0
Field-specific specialized courses	28 to 38	45 to 65	16 to 62.33

TDCS technical diploma of college studies, *DCS* diploma of college studies, *ACS* attestation of college studies

Source: Adapted from MEES 2017

Table 2 Total enrolment in college programmes from 2006–2007 to 2015–2016

<i>College-level institutions</i>	2006–2007	2009–2010	2013–2014	2015–2016
<i>Cégeps</i>	171,433	191,498	200,571	199,130
State-funded private colleges	14,737	16,037	18,464	18,227
Private colleges without state funding	3817	4588	3901	3643
State-operated college institutions	1747	1818	1887	1737
Total	191,734	213,941	224,823	222,737

Source: Adapted from MEES 2017

Table 3 Enrolment in DCS programmes from 2006–2007 to 2015–2016

<i>College-level institutions</i>	2006–2007	2009–2010	2013–2014	2015–2016
<i>Cégeps</i>	76,448	85,848	85,966	82,809
State-funded private colleges	6516	6570	7419	6874
Private colleges without state funding	–	–	–	–
State-operated college institutions	125	128	110	74
Total	83,089	92,546	93,495	89,757

Source: Adapted from MEES 2017

Table 4 Enrolment in TDCS programmes from 2006–2007 to 2015–2016

<i>College-level institutions</i>	2006–2007	2009–2010	2013–2014	2015–2016
<i>Cégeps</i>	70,232	75,297	83,326	83,657
State-funded private colleges	5275	6471	7324	7278
Private colleges without state funding	–	–	–	46
State-operated college institutions	1508	1505	1550	1505
Total	77,015	83,273	92,200	92,486

Source: Adapted from MEES 2017

Table 5 Enrolment in ACS programmes from 2006–2007 to 2015–2016

<i>College-level institutions</i>	2006–2007	2009–2010	2013–2014	2015–2016
<i>Cégeps</i>	14,686	17,136	16,121	15,310
State-funded private colleges	2824	2775	3392	3731
Private colleges without state funding	3817	4588	3901	3597
State-operated college institutions	68	75	133	63
Total	21,395	24,574	23,547	22,701

Source: Adapted from MEES 2017

Table 6 Variation of college enrolment between 2006–2007 and 2015–2016, by type of programme

	2006–2007	2015–2016	Variation	Variation (%)	% of variation
Total	191,734	222,737	31,003	16.17%	100.00%
DCS	83,089	89,757	6668	8.03%	21.51%
TDCS	77,015	92,486	15,471	20.09%	49.90%
ACS	21,395	22,701	1306	6.10%	4.21%
Other	10,285	17,793	7508	73.00%	24.22%

Source: Adapted from MEES 2017

Table 7 Occupation of 2008 TDCS and ACS graduates, as of 31 March 2009

<i>Occupation</i>	TDCS	ACS
<i>Employed >30 h/w in field</i>	48.00%	51.00%
<i>Employed >30 h/w not in field</i>	7.60%	16.90%
Employed >30 h/w	55.60%	67.90%
Employed <30 h/w	9.20%	9.90%
Sub-total (employed)	64.80%	77.80%
Full-time student	29.80%	8.00%
Inactive/seeking	5.40%	14.20%
Total	100.00%	100.00%

Source: Adapted from MEES 2017 and MELS 2010

NOTE

1. New France was conquered in 1760 and occupied by the British army until 1763, when, in the Paris Treaty of 1763, France officially ceded the colony to Great Britain.

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PART III

Reflections on Systems and Higher
Vocational Education



A Typology of Tertiary Education Systems

Gavin Moodie

INTRODUCTION

This chapter opens by elaborating on the question it addresses: Where is higher vocational education in relation to vocational education and higher education? It then notes that the answer to this question is likely to have different implications in economies with different proportions of skilled work, levels of skills formation, levels of skills formation outside educational institutions, levels of informal employment, levels of inequality, and state capacity. The chapter then describes the parts of the typology it proposes. It then analyses into idealized types the arrangement of tertiary education and the location of higher vocational education in each of the countries considered in this collection: Australia, Austria, Canada, Chile, Germany, South Africa, the United Kingdom (UK), and the United States of America (USA), and for China in view of its growing importance.

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The chapter concludes by identifying some patterns in the location of responsibility for long-cycle and short-cycle knowledge acquisition and occupational preparation. It observes considerable diversity in responsibility for higher vocational education, which is one of the justifications for this collection.

WHAT IS HIGHER VOCATIONAL EDUCATION?

Ulicna et al. (2016) considered at length what to include in their extensive study for the European Union (EU) on higher vocational education and training. They conducted detailed studies and interviews on higher vocational education in the then 28 EU member states. The authors identified higher vocational education and training by two dimensions: level and orientation. Much vocational education in the EU and elsewhere is at upper secondary level, so for Ulicna et al. (2016: 32–35), higher vocational education and training is above this level. Included in their narrow definition are certificates and diplomas at level 4 postsecondary non-tertiary education in the International Standard Classification of Education (ISCED) (UNESCO Institute for Statistics 2012: 46). Their broad definition also includes associate, bachelor, master, and doctorate degrees at ISCED levels 5 to 8.

Higher vocational education is understood differently in the different contexts included in this book. While England and Australia would align with Ulicna et al.'s (2016) inclusion of ISCED level 4 postsecondary non-tertiary education (e.g. certificates and diplomas) and ISCED level 5 short-cycle tertiary education (e.g. an associate or foundation degree of two years after completing high school), these programmes are considered standard vocational education in the USA. This reflects jurisdictions' different understandings of vocational and academic education and their different allocations of responsibility for different levels of programmes. This, in turn, is related to allocations of responsibility for higher academic education and research training, which also differs between jurisdictions.

Ulicna et al.'s (2016: 31–32) second dimension of higher vocational education and training is orientation to preparing graduates for an occupation. However, they note that programmes have different levels of orientation to an occupation and different combinations of occupational and academic orientation. Programmes also have different emphases on different purposes, preparing graduates for direct entry to an occupation, for employment in several occupations or for employment generally, or for

entry to a subsequent programme which prepares graduates for an occupation.

A programme's extent of orientation to an occupation often overlaps with the extent of integration with employment in curriculum, pedagogy, and assessment. This is indicated, for example, by industry's involvement in designing the curriculum, in the extent of work-based learning, and in industry's involvement in evaluating and perhaps approving programmes or institutions (Ulicna et al. 2016: 32).

These dimensions of level, orientation, and extent of integration with industry overlap in ISCED 2011 and in many understandings of vocational education discussed by Ulicna et al. (2016). Thus, ISCED 2011 calls occupational preparation 'vocational' up to level 5 and 'professional' for level 5 and above (UNESCO Institute for Statistics 2012: paragraph 53). These dimensions also overlap with types of institutions: those which offer mostly lower level occupational preparation are called colleges in many jurisdictions and institutions which offer higher level occupational preparation are often called universities.

Some institutions which offer mainly occupational programmes also offer academic programmes, and some institutions which offer mainly academic programmes also offer occupational programmes. Some institutions which offer higher vocational education also offer lower vocational education. Therefore, higher vocational education is not often identified with a specific institution (Ulicna et al. 2016: 2, 140).

Formal education in educational institutions is only part of jurisdictions' formation of skills. The exclusion of apprenticeships from the Organisation for Economic Cooperation and Development's (OECD) educational statistics understates the development of skills in jurisdictions in which a relatively high proportion of those skills are formed by apprenticeships (Deißinger 2015). Some occupations develop expertise outside formal educational institutions and apprenticeships but with a sequence of various combinations of explicit teaching and informal learning. These are recognized after satisfactory evaluation and usually after completion of formal assessment. Examples are evident in Austria's and Germany's master craftsperson examination (*MeisterInnenprüfung*) and in several medical specializations.

Importantly, skills are also developed informally, by friends, family, community groups, and at work. Therefore, one may conceive of skills at a range of levels being developed informally, in apprenticeships and in formal educational institutions (Fig. 1).

Skill level	Informal	Apprenticeship	Institution
Very high			
High			
Medium			
Semi			
Low			
None			



	Higher vocational education
	Context of higher vocational education

Fig. 1 A continuum of skills levels developed in different levels of formality

The chapters in this book do not consider occupational preparation at an advanced level, which was the core role of universities at their foundation in the middle ages (Cobban 1975: 165). Neither do the chapters consider the formation of skills outside educational institutions, such as in apprenticeships or informally. Rather, the chapters are concerned with educational institutions' preparation for occupations; preparations that are relatively recent and transgress conventions. A prominent development considered in several chapters is the offering of longer and higher level occupational preparation, such as applied baccalaureates, by colleges that have conventionally offered shorter and lower level programmes.

Another transgression is institutions such as universities, which are most strongly identified with academic education, offering education modes strongly identified with vocational education. An example is provided in Lukas Graf's and Justin J W Powell's chapter on German universities' hybrid 'dual study' programmes, which have many of the characteristics of Germany's regulated apprenticeships. Graf (2017) finds similarities between dual study programmes in Germany and cooperative study programmes (co-ops) offered by some universities in the USA and apprenticeship programmes offered by USA community colleges.

Another example is the UK's higher and degree apprenticeships (UK Government 2020) which are more strongly integrated with work than the work integrated learning now common in universities (Trigwell and Reid 1998). In their chapter in this collection, Reeve and Gallacher analyse higher and degree apprenticeships in England and graduate

apprenticeships in Scotland, while Bathmaker and Orr refer to English higher and degree apprenticeships.

A third transgression is universities which are most strongly identified with longer and higher level programmes offering shorter and lower level programmes strongly identified with colleges or vocational education.

In this chapter, higher vocational education refers to occupational preparation which is transgressive in one of these ways: vocational institutions offering higher level occupational qualifications or higher education institutions offering forms of education strongly associated with vocational education. The focus is on higher vocational education developed in institutions, as shaded darker in Fig. 1. This is put in the context of other tertiary education, as shaded lighter in the figure.

CONTEXT

The level and amount of formal skills formation depends partly on the structure of the economy. An economy with a relatively high proportion of manufacturing is likely to need a relatively high proportion of medium- and high-skilled workers (Thelen 2014: 23). Manufacturing's value add, as a share of gross domestic study for each country included in this study is shown in column 1 of Table 1. The source of these data, the World Bank (2019), states that 'Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs'. Manufacturing is a relatively high proportion of China's economy at 29 per cent, the equal fourth highest in the world.

The relative size of the formal tertiary education sector is indicated by enrolments as a proportion of the country's relevant age group, which is shown in column 2 of Table 1. The source of the data, the World Bank (2019), explains the statistic thus:

Gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Tertiary education, whether or not to an advanced research qualification, normally requires, as a minimum condition of admission, the successful completion of education at the secondary level.

Australia's gross tertiary enrolment ratio is >100 per cent because it has a high proportion of mature age students participating in tertiary education and because it has a very high proportion of international students

Table 1 Countries included in the study by indicators of skills need

<i>Country</i>	<i>Manufacturing % of GDP^a</i>	<i>% tertiary enrolment^b</i>	<i>% high score for problem solving^c</i>	<i>% informal employment^d</i>	<i>Tax as % of GDP^e</i>	<i>Gini index^f</i>
Australia	6	113	38		27.8	35.8
Austria	17	85	32	10.0	41.8	30.5
Canada	10	69	37		32.2	34.0
Chile	11	88	15	40.5	20.2	46.6
China	29	51		54.4		38.6
Germany	20	70	36	10.2	37.5	31.7
South Africa	12	22		34.0	28.6	63.0
UK	9	60	35	13.6	33.3	33.2
USA	11	88	31	18.6	27.1	41.5

^aManufacturing, value added (percentage of GDP), World Bank Group (2019) indicators. Data extracted February 2020 from <https://data.worldbank.org/indicator/NV.IND.MANF.ZS?view=chart>

^bSchool enrolment, tertiary (percentage gross), World Bank Group (2019) indicators. Data extracted February 2020 from <https://data.worldbank.org/indicator/SE.TER.ENRR?view=chart>

^cPercentage of 16- to 65-year-olds scoring level 2 or 3 in problem solving in technology-rich environments (OECD 2019: 23)

^dShare of informal employment in total employment (percentage) Table B.1—Share of informal employment in total employment and in non-agricultural employment by sex (International Labour Office 2018: 85)

^eTotal tax revenues, percentage of GDP. OECD (2019) Global revenue statistics database. Data extracted February 2020 from <http://www.oecd.org/tax/tax-policy/global-revenue-statistics-database.htm>

^fThe 'Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution ... a Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality'. World Bank Group (2019) indicators. Data extracted February 2020 from <https://data.worldbank.org/indicator/SI.POV.GINI?view=chart>

enrolled in higher education. South Africa has a very low tertiary enrolment ratio, at 22 per cent.

A rough indicator of the level of adults' skills developed both informally and in formal education is the proportion of those with the top two highest scores in problem solving in technology-rich environments (OECD 2019: 23). This is shown in column 3 of Table 1. Chile has a relatively low 15 per cent of its adults achieving the top two scores, half the OECD average of 30 per cent.

Presumably, the need for formal tertiary education is related also to the proportion of workers employed informally, which is shown in column 4. China (54.4 per cent) and Chile (40.5 per cent) have relatively high levels

of informal employment among the countries in this study, although informal employment is also relatively high in some other south-east Asian countries, such as Vietnam (76.2 per cent) and South Korea (31.5 per cent). Informal employment is also relatively high in some other South American countries, such as Argentina (47.2 per cent) and Brazil (46.0 per cent).

Total taxes as a percentage of gross domestic product, as shown in column 5 of Table 1, indicates the capacity of the state to support tertiary education and other collective provision. The Gini index shown in column 6 indicates the level of income inequality in the countries included in this study. South Africa has the highest level of income inequality of the countries included in the World Bank's (2019) database. Rather more equal countries than the ones included in our studies are Finland (27.1) and Norway (27.5).

PARTS OF THE TYPOLOGY

The complexity of jurisdictions' arrangements of tertiary education is illustrated by the diagrams of their systems, for example, in Cedefop's (2020) *VET-in-Europe* country reports. The typology presented here is not seeking to reflect that complexity. It is therefore very different from Pilz's (2016) multi-perspective typology, which is shown on the Universität zu Köln's (2019) website. Rather, this typology seeks to represent idealized models of different types of tertiary education systems to compare them and to highlight their basic similarities and differences in characterizing and locating higher vocational education. It does so by identifying three basic levels and three basic objects of tertiary education. The typology is illustrated in Fig. 2.

	Knowledge acquisition	Occupational preparation	Training
Advanced			
Long cycle			
Short cycle			

Fig. 2 Three objects and three levels of tertiary education

I adopt the term tertiary education to mean education at a higher level than primary and secondary education, with the same meaning as the ISCED 2011 (UNESCO Institute for Statistics 2012: 46). This is commonly called higher education in the USA and some Canadian provinces and postsecondary education in other Canadian provinces and elsewhere. I adopt the term short-cycle tertiary education, as introduced by the OECD (1971; Furth 1973), but depart from ISCED 2011 in expecting its typical duration to be from one to two years. ISCED 2011 specifies that short-cycle tertiary education ‘has a minimum duration of two years and is typically but not always shorter than three years’ (UNESCO Institute for Statistics 2012: 48), but I believe this excludes too many tertiary programmes of one year’s duration which develop substantial skills. Short-cycle tertiary education leads to qualifications called variously the diploma, associate degree, and foundation degree.

What is called long-cycle higher education here is consistent with ISCED 2011’s ‘Bachelor’s or equivalent first degree’, typically of three to four years’ duration (UNESCO Institute for Statistics 2012: 46). In this typology, there is one higher level of advanced tertiary education, which combines master and doctoral levels of a standard duration of one to four years, although doctoral programmes often take up to seven years. While there are substantial qualitative differences between master and doctoral programmes institutionalized by universities and recognized by ISCED 2011, the numbers of enrolments in doctoral programmes are too modest and removed from higher vocational education to warrant adding further complexity to this typology.

The objects of tertiary education are categorized by three ideal types, which are rarely found in idealized form in real systems: the acquisition of knowledge, preparation for an occupation, and training. Tertiary education that seeks to acquire knowledge is similar to ISCED 2011’s ‘general education’ (UNESCO Institute for Statistics 2012: paragraph 55). Its fields are of disciplinary knowledge and the aim is to develop expertise in such knowledge. Tertiary education that seeks to prepare graduates for an occupation is similar to ISCED 2011’s ‘vocational education’ (UNESCO Institute for Statistics 2012: paragraph 54). Its fields are of practice and the aim is to develop expertise in practice. I find gratuitous ISCED 2011’s distinction between ‘general’ and ‘vocational’ education up to tertiary level and ‘academic’ and ‘professional’ education for tertiary levels (UNESCO Institute for Statistics 2012: paragraph 53).

Table 2 Distinctions between occupational preparation and training

<i>Characteristic</i>	<i>Occupational preparation</i>	<i>Training</i>
Scope	Broad: Occupation	Narrow: Task
Horizon	Medium and longer term: Career	Short term: Immediate need
Typical duration	Short to long: 1 to 7 years	Brief: 1 to 150 days

The distinction between occupational preparation and training is not always made explicit in classification systems but is often implicit in policy and practice. While occupational preparation develops graduates for an occupation, training is narrower in scope, developing participants' capacity to undertake a specific task. While occupational preparation develops graduates for a medium- to long-term career, training develops participants' capacity for the short term to meet an immediate need. And while occupational preparation is typically from short to long duration, training is brief, from 1 to 150 days.

Examples of training are continuing vocational education, which is sharply distinguished from initial vocational education in policy and practice in much of Europe. Other examples of training are programmes offered by vendors to develop users' skills in working their equipment or software. Many colleges, universities, and occupational associations offer training in the form of short courses at various levels, from introductory to advanced. The distinctions between occupational preparation are between broad and narrow focus, and longer and short duration, as tabulated in Table 2.

This typology establishes nine types of tertiary education, illustrated in Fig. 2.

COMBINATIONS OF TYPES OF TERTIARY EDUCATION

In principle, it would be possible to establish one type of institution responsible for offering all nine ideal types of tertiary education. It would be equally possible in principle to establish nine different types of institution which were responsible for offering only one ideal type of tertiary education. Of course, with some limited exceptions, no jurisdiction adopts either of these policies in practice. Rather, jurisdictions establish different types of institutions responsible for different combinations of different types of tertiary education. The main purpose of this chapter is to describe and identify patterns in jurisdictions' different combinations of different

ideal types of tertiary education in different ideal types of institutions. Groups of institutions which have similar combinations of types of tertiary education are often grouped as sectors for the purposes of policy and analysis.

AUSTRALIA

The major idealized types of tertiary education institutions in Australia are illustrated in Fig. 3. Universities and other approved higher education institutions, such as private educational institutions which have not gained designation as a university, are responsible for long-cycle and advanced knowledge acquisition and for advanced and long-cycle occupational preparation. These institutions also provide some training, but most training is provided by specialized training providers, employers, vendors, and others. Universities and other approved higher education institutions are treated as part of the higher education sector for some purposes; for other purposes, public universities are treated as a sector separate from other approved higher education institutions.

Vocational education and training providers' responsibilities include both short-cycle occupational preparation and lower level training. Indeed, federal and state governments make a virtue of not distinguishing between short-cycle occupational preparation and lower level training in policy, governance, accreditation, quality assurance, or financing. Vocational education and training is treated as an integrated sector and few distinctions are made between public and private providers or any other type of provider (e.g. community providers).

Level	Knowledge acquisition	Occupational preparation	Training
Advanced	Universities Other approved higher education institutions		Unis & others
Long cycle			
Short cycle	Vocational education and training		

Fig. 3 Major idealized types of tertiary education institutions in Australia

Higher education and vocational education and training are treated as markedly different sectors by governments, institutions, and students.

Australia has no institution specifically responsible for short-cycle knowledge acquisition, which is not strongly developed in the country. While Australia also has no institution specifically responsible for long-cycle occupational preparation, this role is fulfilled by universities and other approved higher education institutions which, for long-standing historical reasons, are rather more applied or utilitarian than their analogues in otherwise similar countries. There are six so-called dual sector universities which have more than 20 per cent of their provision as vocational education (Moodie 2008). Many colleges of technical and further education (TAFE) offer baccalaureates, as Wheelahan discusses in the next chapter.

AUSTRIA

This typology's concentration on tertiary education provided by educational institutions does not show the substantial formal development of skills, including higher vocational skills, in the Germanic apprenticeship systems (DACHL—Germany, Austria, Switzerland, and Luxembourg). Austria has 200 legally recognized *Duale Ausbildung* (dual apprenticeship training) programmes at the upper secondary vocational level (ISCED 354). Some 42 per cent of *Duale Ausbildung* are in crafts and trades, 14 per cent in commerce, and 14 per cent in industry (Tritscher-Archan 2016: 20).

Neither does this typology include higher level vocational skills developed mostly in companies but also for around two per cent of candidates in specialized continuing vocational education and training institutions. Examples include *Meisterschule* (school for master craftspeople), *Werkmeisterschule* (school for industrial master), and *Bauhandwerkerschule* (building craftsperson school) (Musset et al. 2013: 24; Tritscher-Archan 2016: 24).

Much training that is particularly important in the labour market does not lead to qualifications regulated by government and is not included in official statistics. Such training is offered by around 1800 bodies that are the social partners of chambers of commerce and unions, such as the *Wirtschaftsförderungsinstitut* (WIFI—Institute for Economic Promotion of the Austrian Economic Chambers) and *Bildung Freude Inklusiv*

(Chamber of Labour and the Austrian Trade Union Federation Vocational Training Institute) (Tritscher-Archan 2016: 26–27).

Continuing vocational education and training was also offered by 87 per cent of companies to 33 per cent of their employees in 2010. Each participant spent an average of 30 hours of paid work time attending courses during the year (Tritscher-Archan 2016: 28).

Austria's tertiary education is constructed by its federal government and its 16 *Bundesländer* (Austrian states). *Universitäten* (universities) offer not only academic programmes but also programmes in architecture, business, engineering, information technology, and law. Often, medicine is offered by specialized medical universities and teacher education programmes by *Pädagogische Hochschule* (university colleges). Austria's *Fachhochschulen* (universities of applied science) offer mostly long-cycle and advanced occupational preparation up to master's degree but not the doctoral level. They offer programmes in business, computing, design, engineering, and social work. Higher vocational education is one of their core roles.

Berufsbildende höhere Schulen (literally: vocational higher schools) are specifically Austrian in their overlap of upper secondary and postsecondary levels (Musset et al. 2013: 22). They offer programmes of five years' duration at upper secondary level (ISCED 354) and short-cycle vocational education (ISCED 554) (Tritscher-Archan 2016: 17). Musset et al. (2013: 22) call these 'VET colleges' in English, while Tritscher-Archan (2016: 17) renders them 'colleges for higher vocational education'. Graf et al. (2012) describe the historical development and hybrid status of *Berufsbildende höhere Schulen* (Fig. 4).

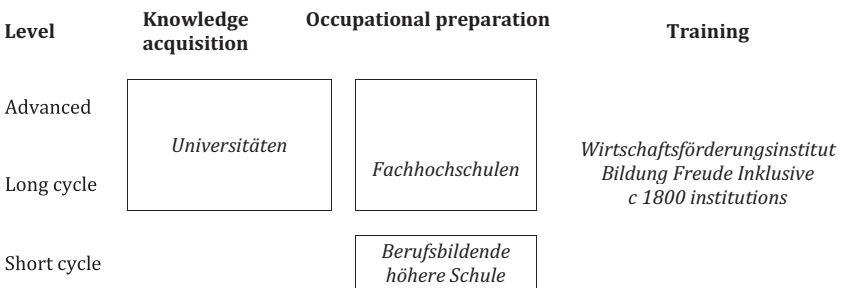


Fig. 4 Major idealized types of tertiary education institutions in Austria

CANADA

None of the idealized types for Canada described below include a type specifically responsible for long-cycle occupational preparation.

Tertiary education’s ideal types in British Columbia and other western provinces are similar to those in the USA, but with different labels. These are illustrated later in Fig. 12. The institutions responsible for long-cycle and advanced knowledge acquisition and occupational preparation are universities, which are not as strongly differentiated nor highly vertically stratified as USA universities and four-year colleges. What in the USA is known as career and technical education is known by various names in Canada, commonly career colleges.

Colleges in Ontario and other mainly Anglophone eastern provinces do not offer substantial short-cycle knowledge acquisition but are confined to short-cycle occupational preparation. This is illustrated in Fig. 5. While universities and colleges are formally part of the same postsecondary education sector, they are often considered separately for the purposes of policy, financing, accreditation, quality assurance, and student admissions.

Québec’s tertiary education and the roles of its distinctive *collèges d’enseignement général et professionnels (cégeps)* are described well in Beaupre-Lavellee and Bégin-Caouette’s chapter of this book as models of social and curricular adaptation. Upon *cégeps*’ establishment in the 1960s, it would have been appropriate to segment their short-cycle knowledge acquisition from their short-cycle occupational preparation, and these remain distinct roles filled by rather different programmes. But in view of

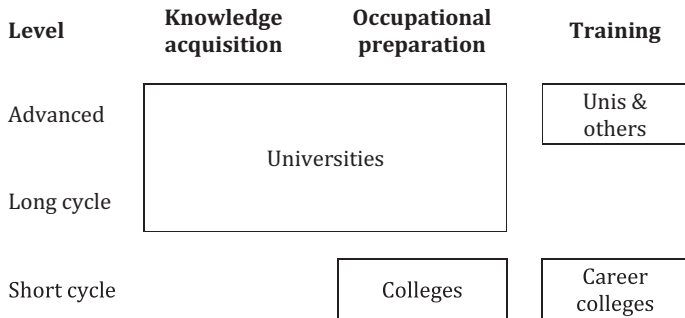


Fig. 5 Major idealized types of tertiary education institutions in mainly Anglophone Eastern Canada

Level	Knowledge acquisition	Occupational preparation	Training
Advanced	Universities		Unis & others
Long cycle			
Short cycle	Collèges d'enseignement général et professionnels		Cégeps & career colleges

Fig. 6 Major idealized types of tertiary education institutions in Québec

the permeability between these programmes, as described by Beaupré-Lavallée and Bégin-Caouette, they are shown as one sector in Fig. 6. *Cégeps*' more recent introduction of attestation of college studies (ACS), described by Beaupré-Lavallée and Bégin-Caouette, gives them a role in short-cycle training.

CHILE

Chile's military rulers from 1973 to 1990 introduced extreme neoliberal policies which transformed its skills formation into one of the most marketized systems of the world. Tertiary education has expanded considerably to over 40 per cent of 18- to 24-year-olds and is mainly funded by fees backed by loans (Zancajo and Valiente 2019: 583, 584). But economic and social inequality is very high, which structures access to highly stratified institutions (i.e. high status universities are dominated by students of wealthy backgrounds, while those of poorer backgrounds generally gain entry to lower status institutions).

Long-cycle and advanced knowledge acquisition and preparation for many occupations is the responsibility of *universidades* (universities), which offer around 70 per cent of all tertiary education (Zancajo and Valiente 2019: 583). Some *universidades* also offer short-cycle occupational preparation, which was 12 per cent of all short-cycle occupational preparation in 2007 (OECD and the World Bank 2009: 39). *Institutos Profesionales* (professional institutes) offer long- and short-cycle

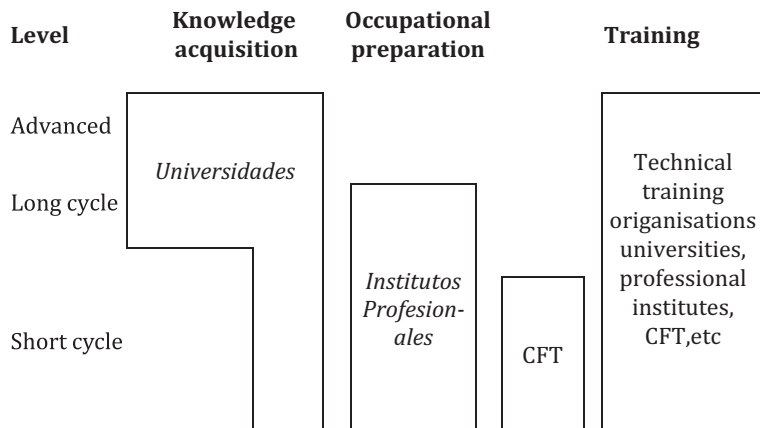


Fig. 7 Major idealized types of tertiary education institutions in Chile

preparation of occupations not prepared by *universidades*. The *Centros de Formación Técnica* (CFT, technical training centres) offer short-cycle occupational preparation, which was 57 per cent of all short-cycle occupational preparation in 2007 (OECD and the World Bank 2009: 39). Higher vocational education is mostly offered by *Institutos Profesionales*.

Training is offered by technical training organizations authorized by the *Servicio Nacional de Capacitación y Empleo* (National Service for Training and Employment), such as tertiary education institutions (Fig. 7).

CHINA

China's higher education system is historically complex. It can be traced back to the Eastern Zhou dynasty (771–221 BCE); it developed diverse forms by the Tang dynasty (618–907 CE) (Hayhoe, 1989: 54) and developed successive layers of different cultural, philosophical, and scholarly traditions (Hayhoe 2001: 327–331). Chinese higher education also has some of the complexities of a federation, with two levels of government responsible for different universities as well as for different types of institutions (British Council, India 2013; Jiang 2017: 7) and different levels of government responsible for different aspects of institutions' regulation. It has expanded massively (Jiang 2017: 5) if not yet to universal participation

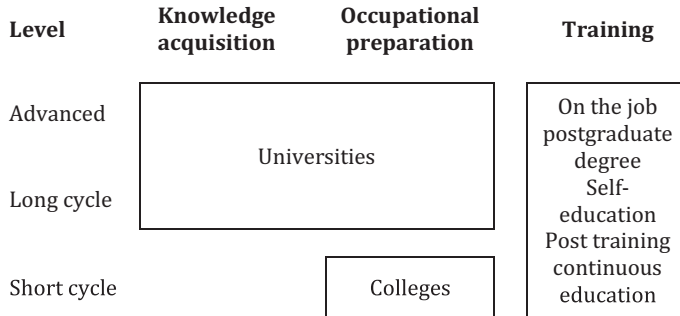


Fig. 8 Major idealized types of tertiary education institutions in China

(Trow 1973). Three successive levels of additional funding are superimposed on its structure to develop national key universities and world class universities (Jiang 2017: 8; Li 2004: 17).

Short-cycle (associate degree) higher education is usually offered by junior colleges, including higher vocational colleges (*gaozhi*) and specialized colleges (*gaozhuan*) (Jiang 2017: 5). This is described as higher vocational education by Fan (2020: 180) and was 40 per cent of all higher education enrolments in 2018. Colleges that offer a bachelor combined with varying numbers of vocational certificates, known as ‘1+X’, are being re-designated vocational universities or universities of applied science (Ross 2019; Shuo and Ruixue 2019; Fan 2020: 183). Higher vocational education is also offered by general universities, which often offer the same courses as colleges (Mi and Wu 2009: 649, 650).

Training, or what is known in English as adult education, is offered as on-the-job postgraduate degree education, self-education by examination, and post training and continuous education (Jiang 2017: 3; Liu 2008: 8) (Fig. 8).

GERMANY

Full-time vocational schooling at the upper secondary level is very important in Germany for developing occupational skills and preparing for higher level vocational education, but it is not considered higher vocational education for the purposes of this study. This typology’s concentration on tertiary education provided by educational institutions does not

show the substantial formal development of skills, including higher vocational skills, in the Germanic apprenticeship systems (DACHL—Germany, Austria, Switzerland, and Luxembourg). *Duale Ausbildung* (dual apprenticeship training) of three and three and a half years' duration is classified at the German and European qualification level 4, the same level as upper secondary education. Neither does this typology include higher level vocational skills developed mostly in companies such as *Fachkaufmann* (commercial specialist), *Fachwirt* (business management specialist), *Meister* (master craftsman), or Operative IT-Professional, which are categorized at German and European qualification level 6, the same as bachelor level (Hippach-Schneider and Huisman 2019: 60, 61).

Germany's tertiary education is constructed by its federal government and its 16 *Länder* (constituent states), which explains its different social and economic natures. Since *Länder* have distinctive arrangements, a full depiction of all arrangements would be very complex. Only the broad, mostly general outlines are considered here. Germany has a very strong tradition of developing academic knowledge at the upper secondary level and in *Universitäten* (universities). *Universitäten* also offer agriculture, business, computing, education, engineering, law, medicine, pharmacy, and veterinary medicine. There are also *Technische Universitäten* which offer engineering sciences and social sciences, *Pädagogische Hochschulen* (universities of education), *Kunsthochschulen* (universities of arts), and *Musikhochschulen* (universities of music).

Germany's *Fachhochschulen* (universities of applied science) offer mostly long-cycle and advanced occupational preparation up to master's degree but not the doctoral level. They emerged from engineering schools but now also offer art and design, business and management, communication studies, computer science, and social services. Higher vocational education is one of their core roles.

Graf and Powell's chapter in this collection is mainly about dual study programmes. These are offered most often by *Fachhochschulen*, but also by vocational academies, a few academic universities, or in the *Land* of Baden-Wuerttemberg by the Baden-Wuerttemberg Cooperative State University (Duale Hochschule Baden-Württemberg 2020).

Thelen (2014: 98) observes that in Germany, firms are responsible for initial vocational education and training, the state for training the unemployed, and individuals themselves for continuing vocational education and training. Therefore, Germany has long had very weak continuing vocational education and training (Thelen 2014: 86, 97–98). Thelen

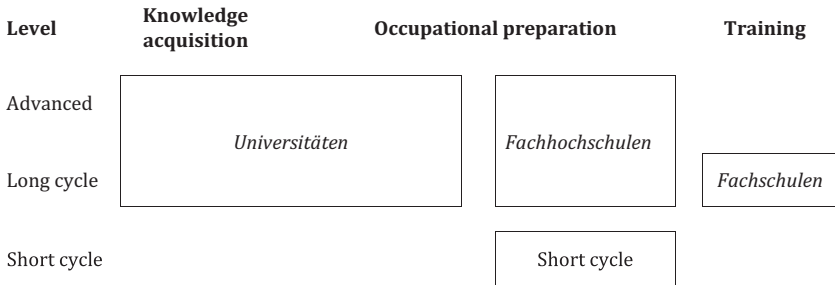


Fig. 9 Major idealized types of tertiary education institutions in Germany

(2014: 97, 111) reports that in the Netherlands and Denmark, collectively bargained branch funds support a broad provision of continuing vocational education and training, which is subsidized by the Danish state, but that ‘such funds play a very marginal role in Germany’ (Fig. 9).

SOUTH AFRICA

Traditional and comprehensive universities are responsible for long-cycle and advanced knowledge acquisition and substantial occupational preparation. Universities of technology, which are former technikons or polytechnics, concentrate on long- and short-cycle occupational preparation and also offer some advanced occupational preparation. They continue to offer undergraduate certificates and diplomas as well as now offering bachelor’s and master’s degrees.

Technical vocational education and training (TVET) colleges offer short-cycle occupational preparation at the tertiary level and occupational preparation below tertiary level.

Higher vocational education consists of undergraduate certificates and diplomas offered by universities of technology. Undergraduate certificates and diplomas were 27 per cent of higher education enrolments in 2017 (Republic of South Africa Department of Higher Education and Training 2019: 14). TVET colleges offer national higher education certificates, but as Papier and Needham report in their chapter on South Africa, universities do not recognize these qualifications as higher education despite them being classified and accredited as such.

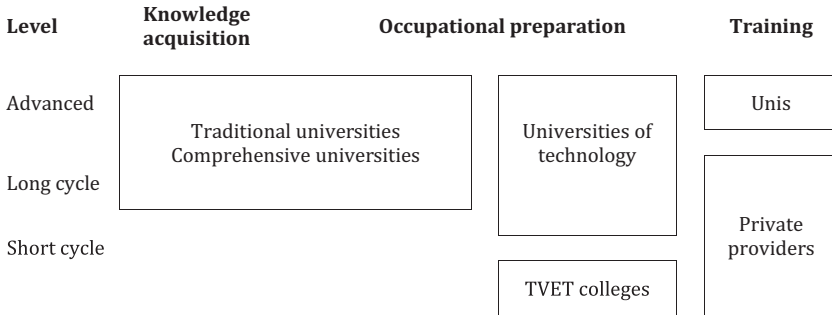


Fig. 10 Major idealized types of tertiary education institutions in South Africa

Advanced training is provided by universities and training is provided across a range of levels by private for-profit providers (Akoojee 2003, 2008) (Fig. 10).

UK

Universities and other higher education providers are responsible for long-cycle and advanced knowledge acquisition, as well as long-cycle and advanced occupational preparation. Universities and other higher education providers also offer some training, but most training is offered by specialized training providers, employers, vendors, and others.

Higher national diplomas, diplomas of higher education, and foundation degrees are short-cycle programmes, mostly for occupational preparation. These are the responsibility of universities and other higher education providers, sometimes shared with further education colleges. However, in 2018/2019 these were only 2.2 per cent of all higher education qualifications awarded (Higher Education Statistics Agency 2019) and so are considered too small a number to be shown in this broad idealized typology of UK tertiary education. Nonetheless, they would likely be considered part of higher vocational education.

Further education is shown as the main provider of short-cycle tertiary education, both for knowledge acquisition and for occupational preparation. Short-cycle tertiary education programmes have rather different financing, accreditation, and quality assurance processes, depending on their orientation and source of funding (Moodie et al. 2018: 7–9). This

Level	Knowledge acquisition	Occupational preparation	Training
Advanced	Universities and other higher education providers		Unis & others
Long cycle			
Short cycle	Further education colleges		Colleges & providers

Fig. 11 Major idealized types of tertiary education institutions in the UK

might have suggested that short-cycle tertiary education be shown in separate boxes for knowledge acquisition and occupational preparation. However, colleges seek to offer seamless options to their students, despite the obstacles caused by different sources of funding and coordination, and so they are shown as part of one provision in Fig. 11.

Higher education and further education are treated as markedly different sectors by governments, institutions, and students.

Short-cycle training is offered by further education colleges, training providers, and local education authorities ([National Careers Service n.d.](#)).

While the UK has no institution specifically responsible for long-cycle occupational preparation, this role is fulfilled by universities and other higher education providers. These have been rather more applied or utilitarian than their analogues in otherwise similar countries since polytechnics were incorporated into this sector from 1992. Some universities offer what are variously called higher and degree apprenticeships in England, and graduate apprenticeships in Scotland, analysed for England and Scotland by Reeve and Gallacher and for England by Bathmaker and Orr in their chapters in this collection.

USA

The USA led the world in introducing mass higher education from around World War II and universal higher education from around the 1960s (Trow 1973, 2007). While it no longer leads the world in universal higher education, it still has huge higher education enrolments and numbers of institutions (Geiger 2019: 6, 59, 314–315). The USA's higher education

is very diverse because, as Skolnik added in comments on a previous draft of this chapter, it has ‘a strong policy commitment to having a system that is diverse, though subject to isomorphic tendencies toward reduction in diversity’. The USA’s higher education has also developed over a long period in response to different influences, and many arrangements are the responsibility of diverse states. The idealized types of tertiary education institutions in the USA, illustrated in Fig. 12, are therefore very much a simplification and generalization of considerable diversity.

The idealized types of USA tertiary education institutions include universities and other four-year institutions typically responsible for long-cycle and advanced knowledge acquisition and long-cycle and advanced occupational preparation. Four-year institutions are very diverse and in a steep vertical hierarchy structured by research intensity, status, and selectivity in student admissions. Big universities are typically segmented internally into an undergraduate college responsible for long-cycle knowledge acquisition, a graduate school responsible for advanced knowledge acquisition, and schools responsible for occupational preparation in their field. Universities and other four-year institutions also provide some training, but most training is offered by specialized training providers, employers, vendors, and other institutions.

Another major idealized type of USA tertiary education is the so-called two-year institution (their main highest credential is of two years’ duration). These are often known as community colleges. Community colleges offer short-cycle knowledge acquisition designed to lead to long-cycle programmes offered by four-year institutions, short-cycle occupational preparation, or to stand alone. Recently, many community colleges have

Level	Knowledge acquisition	Occupational preparation	Training
Advanced	Universities and other 4-year institutions		Unis & 4 year
Long cycle			
Short cycle	Community colleges		Career & technical ed

Fig. 12 Major idealized types of tertiary education institutions in the USA

started offering long-cycle occupational preparation in fields such as nursing and business, but this remains sufficiently recent, small, and exceptional to be omitted from the idealized model. Nonetheless, Fig. 12 shows higher vocational education spanning the upper level of community college and the lower level of four-year college occupational preparation.

For some purposes, four-year and two-year institutions are treated as separate sectors and for other purposes they are treated as a single higher education sector.

Short-cycle career and technical education is mainly the responsibility of a sector of career and technical education. This is financed and organized quite separately from higher education.

SOME PATTERNS

Both the construction of an idealized form of each jurisdiction's tertiary education and the location of higher vocational education within each system required exercises of judgement. Generalizations from those constructions reflect those judgements.

Of the 11 jurisdictions reviewed, all had long-cycle knowledge acquisition and occupational preparation conducted in one type of institution, most commonly known as a university (Table 3). Likewise, all jurisdictions had short-cycle occupational preparation offered by one type of institution, most commonly called a college. Only five jurisdictions typically offered short-cycle knowledge acquisition and occupational preparation in one type of institution, which might be called comprehensive colleges: South Africa, the UK, the USA, western Canada (modelled on the USA), and the distinctive Québec. The other jurisdictions offered short-cycle occupational preparation in institutions that do not have a major role in knowledge acquisition, which might be called vocational colleges: Australia, Austria, Canada East, Chile, China, and Germany. Only four of the jurisdictions reviewed here had an institutional type focused on long-cycle occupational preparation, which are called variously *Fachhochschulen*, universities of applied science, universities of technology, *Institutos Profesionales*, and formerly, polytechnics: Austria, Chile, Germany, and South Africa.

There was considerable variation in the location of responsibility for higher vocational education: in universities alone in Australia and Québec; in universities and comprehensive colleges in the UK and USA; in universities and vocational colleges in Canada East and China; and in

Table 3 Patterns of long-cycle and short-cycle knowledge acquisition (KA) and occupational preparation (OP) in 11 jurisdictions

<i>Jurisdiction</i>	<i>Unified long KA & OP</i>	<i>Unified short KA & OP</i>	<i>Separate long OP</i>	<i>Separate short OP</i>
Australia	✓	x	x	✓
Austria	✓	x	✓	✓
Canada West	✓	✓	x	✓
Canada East	✓	x	x	✓
Canada	✓	✓	x	✓
Québec				
Chile	✓	x	✓	✓
China	✓	x	x	✓
Germany	✓	x	✓	✓
South Africa	✓	✓	✓	✓
UK	✓	✓	x	✓
USA	✓	✓	x	✓

Table 4 Location of responsibility for higher vocational education in 11 jurisdictions

<i>Jurisdiction</i>	<i>Universities alone</i>	<i>Universities and comprehensive colleges</i>	<i>Universities and vocational colleges</i>	<i>FHS alone</i>	<i>FHS and vocational colleges</i>
Australia	✓				
Austria					✓
Canada West		✓			
Canada East			✓		
Canada QC	✓				
Chile				✓	
China			✓		
Germany				✓	
South Africa				✓	
UK		✓			
USA		✓			

Fachhochschulen (FHS) and similar institutions alone in Chile, Germany, and South Africa. Austria was the only jurisdiction reviewed which located higher vocational education in *Fachhochschulen* and vocational colleges (Table 4).

This great diversity in the location of responsibility for higher vocational education is one of the justifications for this collection of studies in the different jurisdictions. Another justification, not apparent from this survey but one which becomes apparent when reviewing the chapters, is that there have been considerable changes recently and increasing dynamism in higher vocational education. In particular, colleges have newly become responsible for higher vocational education in Canada, the UK, USA; and South Africa's universities of technology are a relatively recent development from their former technikons. These and related issues are explored more fully in the book's chapters.

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Why Isn't There More Higher Education in Colleges in Liberal Market Countries?

Leesa Wheelahan

INTRODUCTION

In many countries, public colleges now offer provision that is traditionally offered by universities, although it may take a different form in different countries.¹ This chapter focuses on countries with liberal market economies, in particular, Australia, Canada, the United States of America (USA), and the United Kingdom (UK). Community colleges in the USA offer bachelor degrees, as do colleges in several provinces of Canada, and technical and further education (TAFE) institutes in Australia. Further education colleges in the UK offer foundation degrees, which are two-year vocationally oriented programmes that articulate to a full degree, and higher national certificates and higher national diplomas which are also considered higher education provision.² In all countries, colleges may

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offer this provision in their own name because they have been authorized to do so, or through franchised arrangements where they deliver the qualification on behalf of the university, and the university awards the qualification.

At first glance, it makes sense for colleges to offer higher education. The rationale for this provision is that it is student-centred and more accessible to students than is university, often cheaper for governments and students, and often has a more applied focus to support students' transitions to the labour market. It has a strong 'access' mandate and it supports social inclusion and strong and resilient communities (Widdowson and King 2017).

Many of us researching this topic thought that higher education in colleges in these countries would grow dramatically and quickly. But it didn't. All of us writing about this topic are champions for colleges and for higher education in colleges.³ All want it to do well. All think it matters because it can change students' lives and can support their families and communities. But if we are to understand why this provision has not grown more quickly, it is necessary to understand the dynamics of the hierarchical structuring of higher education systems in liberal market economies such as those discussed here, and how and where higher education in colleges fits within their tertiary education system.

The key argument in this chapter is that the growth of higher education in colleges in countries with liberal market economies is limited by the increasingly marketized and hierarchical structure of tertiary education in each country and that colleges can never win in this competition. In all countries discussed in this chapter, government policies have resulted in a more marketized and competitive higher education system which intrinsically disadvantages colleges. In addition to the intrinsic disadvantages that accrue to colleges in higher education markets, there are three additional mechanisms that limit the growth of higher education in colleges: the first is intermittent government enthusiasm for policies that seek differentiation in their higher education systems; the second is funding policies that disadvantage colleges; and the third is 'managed markets' where government rhetoric supports competitive markets, but funding policies advantage some types of institutions (universities) over others (colleges).

This chapter considers the reasons why higher education in colleges has not grown as we thought it would. The first section theorizes the expansion of higher education using Martin Trow's (1974) famous analysis of elite, mass, and universal higher education systems. The second section

examines three periods of rapid expansion of higher education since World War II in Australia, Canada, the UK, and the USA. The third section discusses the rationale for higher education in colleges, while the fourth discusses the scale and scope of higher education in colleges in these countries. The fifth section explores the nature of the higher education market in these countries, while the following section examines three mechanisms that have contributed to limiting this growth. Finally, the chapter concludes with a brief discussion of the obstacles that colleges face in offering higher education, the new tertiary education sector that is emerging through the blurring of the sectoral divide, and the types of opportunities it offers students.

ELITE, MASS, AND UNIVERSAL HIGHER EDUCATION SYSTEMS

Writing in 1974, Martin Trow theorized the emergence of universal higher education systems. This proved to be a remarkable and prescient analysis of the growth from elite to mass and then universal systems of higher education and the types of institutions that emerged at each stage. We use the gross tertiary enrolment rate (GTER) to discuss Trow's framework. This is the percentage of the relevant age cohort that participates in some form of tertiary education. Tertiary education is usually defined as qualifications that are two years or more and include diplomas, associate degrees, foundation degrees, bachelor degrees, and postgraduate qualifications. Countries vary in the extent to which diplomas and associate degrees are offered by colleges or universities. In Trow's case, writing in the USA, higher education includes all these qualifications and so he uses this term. In contrast, this is not the case in other countries which instead use the term tertiary education to encompass qualifications offered by colleges and universities. Both these terms are used in this chapter.

Trow's analysis was extraordinary and prescient because even though when he was writing in 1974 with a GTER in the USA of 48.98 per cent, the world GTER was only 10.72 per cent.⁴ The rate in Australia in 1974 was 21.72 per cent and 16.75 per cent in the UK, while it was 47.91 per cent in Canada (in 1976) (Our World in Data 2020).

Trow argues that an elite system of higher education is one in which 15 per cent or less of the relevant age cohort in the population participates in higher education, and the purpose of higher education is to train future leaders in elite roles in government and the learned professions. Higher education curriculum in elite systems is designed to shape the 'mind and

character' of society's elite. Most people do not expect to access higher education, and most occupations do not require higher education qualifications.

A mass system is one in which between 15 and 50 per cent of the relevant age cohort participates in higher education, and the purpose of higher education is to train experts for a broader range of elite occupations in new and emerging technical and economic roles. For the first time, participation in higher education offers the opportunity of real social mobility for a substantial component of the population and, as a consequence, the technical and vocational purposes of higher education begin to become more important. More skilled occupations now require higher education qualifications, but there are still many occupations that do not require them. Whereas participation in elite systems of higher education is a privilege, participation in mass higher education confers an advantage on a broader segment of the population.

In contrast, a universal system of higher education is one where 50 per cent or more of the relevant age cohort participates in higher education, and the purpose of higher education is to prepare the whole population for rapid social and technological change in advanced industrial society. Participation in higher education now mediates access to jobs, culture, and opportunity, and it distributes access to various positions in the social hierarchy. Participation in tertiary education is now expected, and a tertiary education qualification is now needed to access a good job and to participate as a citizen in society. Whereas higher education participation is an advantage in a mass system, not participating is a disadvantage in a universal system (Trow 1974: 7).

Trow (1974: 40) explains that increased participation is driven by social and psychological forces. Marginson (2016) explains that while the growth of universal systems of higher education is linked to economic modernization, it is not reducible to that. He argues credentialism is a follower of educational expansion rather than a leader of it and that it is also driven in part by the desire of families to ensure that their children have good opportunities. This is one reason why 'badges' or other types of 'micro-credentials' may augment degrees, but they are unlikely to replace them. In elite and mass systems, those without access to higher education still had access to a range of occupations and were not stigmatized, whereas in a universal system they are socially excluded from most jobs (particularly 'good' jobs with career opportunities) and from full participation in society.

However, in a universal system where most of the population participates in higher education, the mechanism of social reproduction of inequality is now shaped by *relative* advantage or by the type of institution to which students have access (Lucas 2001). Educational institutions are shaped by hierarchies, with institutions established in the elite period being the most prestigious, those in the mass period in the middle of the hierarchy, and those that developed or grew in the universal period, the lowest in the hierarchy.

Again, Trow's analysis provides insight into this point. In revisiting his analysis in later years, Trow (2006) explained that rather than linear phases, the growth of higher education systems resulted in the development of overlapping elite, mass, and universal institutions that coexist. Institutions generally reflect their origins as institutions that emerged in the elite, mass, and universal periods. Colleges are arguably more typical of institutions that developed (and in the case of the USA and Canada, expanded) in the universal period in the countries being examined here. These colleges are more vocationally focused and generally open access institutions. They prepare people for jobs that are at the less privileged end of the occupational spectrum, but which still require a tertiary education qualification.

THE THREE PERIODS OF EXPANSION SINCE WORLD WAR II

Trow's analysis helps us to understand the three main periods of growth in higher education since World War II. The first was in the post-war economic boom of the 1950s and 1960s, which saw the creation of many new universities to serve the numerous new occupations that emerged after the war. The USA built on its existing system of universities and community colleges (Lazerson 1998), while the UK, Australia, and Canada established a new sector of vocationally oriented tertiary education. The UK created colleges of advanced technology in 1956 and polytechnics in the 1960s (Scott 2009), while Australia created colleges of advanced education in 1964 (Wheelahan et al. 2009a), and many provinces in Canada established strong college systems in the 1960s, although they took a different form across the provinces (Gallagher and Dennison 1995).

The second period of growth was in the late 1980s and early 1990s, as governments sought to expand their higher education systems to support economic development. The USA and Canada grew their existing binary systems of higher education (colleges and universities). Australia merged

its colleges of advanced education (CAEs) with its universities in 1988 (Moodie et al. 2009), and the UK merged its polytechnics and universities a little later in 1992 (Scott 2009), resulting in a ‘unified’ higher education—or university—sector in both countries. TAFE was not established as a national sector of tertiary education in Australia until 1974 (Wheelahan et al. 2009a), while further education (FE) colleges in the UK (initially in England and Wales) were removed from local government control and incorporated as a national sector in 1992 (Scott 2009). In both Australia and the UK, TAFE and FE, respectively, were not regarded as part of the higher education sector and both were designated as part of a vocationally oriented sector of *tertiary* education, although FE continued to offer short-cycle higher education qualifications (of two years’ duration or less) (Scott 2009).

In contrast, colleges in Canada and the USA were, and are, considered to be part of the higher education sector even if they have a more vocational orientation than universities. In both countries, universities tend to teach broad-based liberal arts undergraduate degrees. Arguably, this makes it relatively more straightforward for colleges to argue that the applied and work-oriented nature of their bachelor degrees differs from what universities offer. In the UK and Australia, the universities were (and are) much more vocationally oriented than in the USA or Canada, because they had merged with vocationally oriented polytechnics in the UK and colleges of advanced education in Australia. This makes it more difficult for FE colleges and TAFEs to argue for the distinctiveness of their provision, particularly in the highly marketized tertiary education sectors in those countries.⁵

The third period of expansion took off in the 2000s, with exponential growth in higher education worldwide, in high-income countries and (many) mid-income countries, leading to what Marginson (2016) describes as the worldwide tendency to ‘high participation systems’. A high participation system is one in which the GTER exceeds 50 per cent of the relevant age cohort and thus meets Trow’s threshold of a universal system. Marginson (2016) explains that the world GTER was 32 per cent by 2012, which was more than double what it was 20 years prior in 1992. He explains that in 2012, more than 54 national systems had a GTER of more than 50 per cent, while 14 had a rate that was 75 per cent. UNESCO (2019: 13) reports that the gross worldwide tertiary enrolment rate was 38 per cent in 2017, ranging from 9 per cent in low-income countries to 77 per cent in high-income countries. UNESCO (2019) expects that the

GTER will reach 52 per cent in middle-income countries by 2030. The OECD (2019) reports that in 2018, 51 per cent of Australians aged between 25 and 34 years had *attained* a tertiary education qualification, as had 62 per cent of Canadians, 51 per cent in the UK, and 49 per cent in the USA, compared to an OECD average of 44 per cent (see OECD 2019, Table A1.2).⁶ In this case, tertiary education qualifications include diplomas, foundation degrees, and associate degrees, as well as full degrees.

THE RATIONALE FOR THE GROWTH OF HIGHER EDUCATION IN COLLEGES

It was in this context of rapid growth in the late 1990s and early 2000s that we thought that colleges would become the vehicle for the expansion of higher education, particularly for degrees. For example, in research that was published in 2009, we said that:

Unlike earlier periods of expansion of higher education which occurred through the growth of university systems, this process of expansion is occurring through publicly funded non-university providers in the more vocationally oriented sectors of tertiary education and through the growth of private educational providers in Australia and in Anglophone countries with similar systems. (Wheelahan et al. 2009b: 8)

Researchers were not the only ones who thought this would occur. For example, in the UK, Parry (2015) explains that the government policies in the late 1990s and early 2000s designated a ‘special role’ for FE colleges in expanding access to higher education, particularly through the new foundation degrees as a stepping stone to a full degree and to skilled jobs.

Colleges seemed to be ideal vehicles governments could use to support this expansion. Government policies had, since the 1980s, reoriented all forms of education from their broad purpose, which was to support the development of citizens in a pluralist, democratic society, to primarily support the needs of the economy, and the production of human capital. Emy and Hughes (1988) explain that the transition in the 1980s was from a society supported by a market to a society in which the point of policy is to ensure markets. This is because markets are regarded as the most efficient mechanism for distributing access to resources, including public goods like education, and for exercising choice.

Education itself became a market, and the point of education was now to produce human capital for the market. Marginson (1997: 152) explains that since the 1980s, ‘More so than in the 1960s, the education citizen imagined in government was an *economic* citizen’. The purposes of tertiary education became more unashamedly instrumental and higher education qualifications were increasingly required as the entry-level credentials for more occupations (Wheelahan and Moodie 2018). Equity was now reinterpreted as ensuring the ‘efficient’ development of human capital and ensuring everyone had the qualifications they needed to get a job. Equity was reconceptualized as social inclusion (Hayes et al. 2008) and the most secure means of inclusion was by being in paid employment. Citizenship was now exercised through choice as consumers in markets. The price of entry was a job, and qualifications the ticket needed to get a job. Social inclusion became defined by whether one had a job or not.

Colleges have always had a more vocational purpose than universities. They are more directly linked to government policy objectives as creatures of government, compared to universities, which have institutional autonomy and academic freedom. This positions colleges more as instruments of government policies. There is scope to debate whether the mission of colleges has always been broader than the production of human capital (I think that it has), as they, like universities, have a much broader role in supporting human flourishing and broader social and cultural, as well as economic, development (see Moodie et al. 2019b).

Nonetheless, colleges seemed to be ideal for delivering to government the outcomes that it sought. Colleges promote the ‘work-readiness’ of their higher education graduates, and their programmes are more applied and relevant to occupations than are university programmes. They emphasize the links between their teaching staff and industry. And, they emphasize the more supportive pedagogy and smaller classes in their higher education programmes compared to universities that can more effectively support ‘non-traditional’ students who haven’t had the same opportunities as students from more privileged backgrounds (Bathmaker 2016; Wheelahan 2016). This provision is often more local so that students don’t have to travel long distances, which particularly supports older students with families, as well as younger students who can’t afford to, or don’t want to, move to study (Widdowson and King 2017). In some countries, higher education in colleges is cheaper for students and for governments (Bragg 2019; Soler 2019; Wheelahan 2016).

Scale and Scope of Higher Education in Colleges

Yet despite these compelling reasons, and while higher education in colleges has grown in absolute terms, it has not ‘taken off’ or become a primary vehicle for governments to expand access to degrees or higher education normally associated with universities. Ascertaining the scope of this provision is difficult because each country counts students and provision in different ways and they define what is and isn’t regarded as provision normally associated with universities in different ways. Moreover, there are few data that are comparable across all systems. Consequently, this chapter discusses definitions and data used in each country rather than attempting a universal approach.

In Australia in 2018, non-university higher education providers accounted for 6.2 per cent of bachelor degree enrolments (DESE 2019).⁷ This includes TAFE, not-for-profit and private for-profit providers, and four small private universities. In 2018, TAFE’s share of this group of providers’ enrolments in bachelor degrees was 13.3 per cent and only 0.8 per cent of *all* enrolments in bachelor degrees in Australia.⁸ Higher education student enrolments overall in TAFE have grown in absolute terms, from about 1600 in 2009 (Moodie et al. 2009) to just over 7600 in 2018 (DESE 2019).⁹ This is significant growth, but from a very small base. These numbers do not include franchise arrangements, through which TAFE teaches degrees and other higher education on behalf of universities. While we know such arrangements exist, the government does not collect data on franchising.

It is impossible to provide similar data about Canada overall as no such data exist; Canada does not have a comprehensive national postsecondary education data collection because education is a provincial responsibility. There is no federal ministry of education. As reported by Michael Skolnik in his chapter on Canada in this book, some seven of Canada’s ten provinces and three territories have authorized their colleges to offer bachelor degrees, but the great majority are in Ontario and British Columbia. Skolnik (2022) reports that in 2020, some 32 colleges across Canada offered a total of 167 bachelor degree programmes. Ontario is Canada’s biggest province with about 38 per cent of the population and it permitted its colleges to offer degrees in 2000. In 2016, some 13 of Ontario’s 24 public colleges offered 108 degree programmes (Wheelahan et al. 2017), and in 2015, Ontario’s colleges enrolled about 3.1 per cent of all bachelor’s degrees students in the province.¹⁰ Enrolments in bachelor’s degrees

in colleges in Ontario grew from 4278 in 2006 to 14,395 in 2015, and this is significant growth but, as with Australia, it is from a small base.

In the UK, higher education provision offered by FE colleges has continued to decline for reasons that are discussed later in this chapter.¹¹ This includes enrolments in foundation degrees, higher national diplomas, and higher national certificates. Overall, all higher education enrolments in sub-bachelor degree programmes in the UK (and not just England) declined by 20.1 per cent from 2014/2015 to 2018/2019. In contrast, enrolments in bachelor's degrees rose by 8.8 per cent over the same period. The number of sub-bachelor programmes offered by FE colleges in the UK declined by 6.6 per cent over that time, but it declined by 29 per cent in universities and 32 per cent in 'alternative' providers. Consequently, FE colleges' *share* of sub-bachelor programmes offered in the UK rose from 41.4 per cent to 48.4 per cent over that time. However, FE colleges' share of *all* undergraduate provision (including bachelor degrees) declined from 9.5 per cent in 2014/2015 to 8.6 per cent in 2018/2019 (Higher Education Statistics Agency [HESA] 2020b). From about 2009 in England, universities progressively reduced their franchising arrangements of foundation degrees with colleges, while colleges increased the number of students undertaking these programmes in their own right (Higher Education Funding Council of England [HECFE] 2016, Fig. 25). That is, these students are registered at the FE college as FE students undertaking a foundation degree and not as a university student being taught by a college. However, this shift did not stop the decline in enrolments in these qualifications overall. Moreover, higher education provision offered by FE colleges is only about 3 per cent of its provision overall (Azaidi et al. 2019: 39).

It is difficult to obtain data on the number of students undertaking bachelor's degrees in colleges in the USA, but there are data on the number of colleges that can offer degrees.¹² Bragg (2019: 2) explains that '24 [of 50] states have granted community and technical colleges the authority to confer baccalaureate [bachelor] degrees'. This does not mean that all colleges in these states offer degrees, and indeed, according to Bragg and Love (2019), as of 2019, colleges in six of these states had formal authority to offer degrees, but did not do so. In some states only a few colleges offer degrees, and colleges may be authorized to offer only one degree or a limited number of degrees. The two states which have the most provision of degrees by community colleges are Florida first, followed by Washington, and in both states the majority of colleges offer

degrees (Bragg and Love 2019). Here again, the provision of degrees in community colleges is limited. Bragg (2019: 2) explains that while 27 of Washington's 34 community colleges offer 75 degrees, that enrolment in these programmes is 'less than 1% of total college student enrolment in Washington state'. Soler (2019: 1) reports that in 2018, some 121 two-year colleges conferred degrees, which is nearly 13 per cent of the nation's public two-year community colleges.¹³ Soler (2019) explains that the growth from 1989 to 2019 in the number of states authorizing their colleges to offer degrees has been smooth rather than there being an accelerated expansion.

THE HIERARCHICAL STRUCTURING OF THE HIGHER EDUCATION MARKET

In all four countries discussed here, higher education is highly marketized with steep institutional hierarchies (Marginson 2016). In all four countries, governments have structured these markets and set the 'rules of the game'. Institutional position in the hierarchy is largely determined by when the institution was established and the segment of the market it serves. The higher education market is a market for positional goods (Hirsch 1976). It privileges elite universities the most, with middle ranked universities in the middle, new universities at the bottom of the university club, and colleges underneath them.

In the university market, international rankings are rankings of prestige and the outward signals of relative success in the competition for reputation. As van Vught (2008: 168) explains:

higher education institutions are first and foremost each other's competitors ... They compete among themselves for the best students, the best faculty, the largest research contracts, the higher endowments, etc. They compete for all the resources that may have an impact on their institutional reputation.

Some universities have to try harder than others in this competition. Maclennan et al. (2000) helpfully distinguish between selecting and recruiting universities. Selecting universities are high demand, elite universities that can choose the most 'qualified' students from the available pool. Students compete with each other to 'win' a place at elite universities because they distribute access to elite positions in society, particularly the

elite ‘traditional’ professions such as medicine, law, and engineering. As indicated above, Hirsch (1976) describes this as a competition for positional goods. Such goods are highly valued in society because of their limited supply and because they convey high social status. There is a tight link between elite universities, elite professions, and students who come from elite backgrounds (Social Mobility Commission 2016).

In contrast, recruiting universities compete with *each other* to recruit students, and they must draw from a wider and more diverse pool of students than elite universities. They don’t have the same resources to invest in research and in attracting academic superstars. Mid-ranking and low-ranking universities seek to emulate the elite universities because, as Labaree (2006: 6) explains, ‘rewards go to those at the top of the system’ and ‘it pays to imitate your betters’. Consequently, lower ranked universities seek to offer the same benefits to students as do the elite universities and this is why many ‘mid-ranking’ universities seek to establish law schools and medical schools so they too can provide access to the elite professions. Participating in this competition is difficult because, as Labaree (2006: 6) also explains, ‘Age trumps youth’ as the elite universities benefit from decades of public investment that undergird their institutional strength, their research prowess, and their ability to pay for highly ranked researchers. Moreover, Labaree explains that the old elite universities have institutionalized their role in training the social elites. New institutions have to start building these connections with social elites which have been institutionalized over decades and decades in elite institutions.

As the ‘newest kids on the block’, colleges cannot win in the higher education market for positional goods. The introduction of higher education in colleges including applied degrees has resulted in a ‘stretching’ of institutional hierarchies (Bathmaker 2017) so that colleges are positioned as ‘not universities’ and not members of the university club. Colleges must expend considerable effort to establish their legitimacy as degree-granting institutions in Australia, Canada, and the USA and as offering valuable and worthwhile higher education in the UK.

Moreover, in all four countries examined here, higher education in colleges is under the purview of bodies set up to regulate higher education in universities.¹⁴ These structural arrangements reinforce the dominance of universities by imposing ‘the university model’ of the degree on colleges. So, while colleges are required to demonstrate the vocational focus of their higher education provision, they must nonetheless model their higher education provision on that offered in universities. This is one

reason why colleges struggle to demonstrate the legitimacy of their provision in the hierarchical higher education market (Skolnik 2016).¹⁵

HOW MARKET POLICIES DISADVANTAGE COLLEGES

In addition to the intrinsic disadvantages colleges face in the competition for positional goods in the higher education market, they are also disadvantaged by explicit government policies in the four countries discussed here. In all four countries, despite government rhetoric about markets in higher education and exhortations to compete, three mechanisms make it difficult for colleges to expand their higher education provision.

The first mechanism is intermittent government enthusiasm for differentiation policies. Governments seek to develop a higher education system with diverse institutional types that are differentiated by their institutional focus and organizational type, the kind of provision they offer, and the students they serve. There is debate in the scholarly literature about differentiation, but generally governments want differentiation because they believe it will result in an efficient (including cost-efficient) system (van Vught 2008). According to this approach, a differentiated system would result in everyone finding their niche somewhere, while reducing duplication and allowing each type of institution to do what it does best. These policies benefit elite universities because they argue that they do research best and that they can best represent their nation in the international competition for world-class universities. However, differentiation policies combined with marketization can also result in isomorphism, with lower ranked institutions seeking to emulate higher ranked institutions for the reasons discussed in the previous section.

In the systems discussed here, colleges are usually more constrained than universities by differentiation policies. This is because colleges must be more responsive to government priorities than universities because they don't have the same level of institutional autonomy. In Canada, the Government of Ontario limits the number of degrees colleges can offer. Of Ontario's 24 colleges, 5 have been designated as 'institutes of technology and advanced learning' and are permitted to offer up to 15 per cent of their overall provision as degrees that have an applied focus. These five colleges are situated within the 'Greater Toronto Area' and, in 2016, offered 73 per cent of all college degrees in Ontario (Wheelahen et al. 2017). The remaining 19 colleges are spread over Ontario's vast territory and are limited to offering up to 5 per cent of their provision as applied

degrees (although not all colleges do so). This ‘keeps colleges in their place’ by ensuring that they cannot build the economies of scale needed to support their degree provision. Moodie et al. (2009) argue that an institution needs to be able to offer at least 20 per cent of its provision in the ‘other’ sector. This will enable it to build the economies of scale it needs to institutionalize this provision, to meet administrative, reporting, and funding requirements, and to build the culture that is needed to support it.

In the USA, even though the states differ in the rules they impose, they tend to require their colleges to offer degrees related to specific workforce requirements, often where there are perceived gaps in provision. Bragg (2019) explains that Florida requires its colleges to offer degrees in areas of higher demand as a ‘last resort’ if this gap is not met by provision in universities. Soler (2019) explains that many states restrict the fields of study in which colleges can offer degrees or the types of degrees that they can offer. Fulton (2015: 1) says that ‘States typically place limits on the type and number of bachelor’s degrees that community colleges can offer to avoid program duplication and competition with nearby four-year institutions’. Rather than having an impact on public universities, Soler (2019) explains that public colleges’ bachelor’s degrees have had an impact on private for-profit universities. Soler (2019: 3) suggests that there may be ‘a substitution effect when community colleges enrol students who may otherwise have attended four-year, for-profit institutions’ because degrees cost less at a community college than at a private for-profit university.

Canada and the USA provide examples of the way in which the first mechanism, differentiation, disadvantages colleges, while Australia offers an example of the second mechanism, which is funding policies that disadvantage colleges. Australian governments robustly pursue markets and competition in all forms of social provision (Cahill and Toner 2018) and have constructed a market in higher education in which TAFE is mostly excluded from accessing public funding for its degrees. Public funding is available for undergraduate students attending public universities and for some postgraduate degrees in public universities, again, for the most part. While TAFE is regarded as the ‘public provider’ in the vocational education sector, it is categorized as a ‘private institution’ and grouped with not-for-profit and for-profit higher education institutions in the higher education sector. This means it must charge students full fees for its degrees, and TAFE students end up paying more for a degree than most students at public universities.¹⁶ All domestic students are able to access government-supported income-contingent loans to cover the cost of their

fees, regardless of whether they are in a publicly funded or privately funded place in a university or other type of higher education institution, but it is inequitable that students undertaking degrees in TAFE pay more than students in universities. As a public institution that fulfils public policy objectives, TAFE should be able to access public funding for its higher education provision. Treating TAFE as a private institution blurs the distinction between public institutions that serve the public interest and private for-profit institutions that seek to maximize profits for shareholders and owners. TAFE is thus in a different position to colleges in Canada, the UK, and the USA, where colleges can at least access public funding for their higher education provision.

The UK provides an example of the third mechanism that disadvantages colleges. This is managed markets. The situation in the UK is difficult to plot because of the many changes to policy over recent years. The *number* of colleges offering higher education has increased (Widdowson and King 2017), while overall the number of students undertaking foundation degrees and higher national certificates and higher national diplomas has declined within England, particularly among part-time students (HESA 2020a). Different government policies have contributed to this outcome, particularly austerity measures in higher education that were introduced by the new Conservative government after 2010. Fees were trebled,¹⁷ and while there were no substantive declines among young full-time students, there was a substantial decline among mature aged students and part-time students (Saraswat 2015). Students could access income-contingent loans for fees, but the government capped enrolments to control expenditures, and universities pulled back their franchised provision from colleges to consolidate their funded student numbers within the university (Higher Education Funding Council of England [HEFCE] 2013). Mechanisms were introduced that would in theory make it possible for FE colleges to increase their provision but, in practice, growth was not substantial as younger students continued to apply for university and older students dropped out of higher education in greater numbers (Parry 2015). Caps were removed in 2015, with colleges forced to compete in the market for positional goods in higher education, as explained in the previous section. Demand for degrees has outstripped demand for sub-bachelor qualifications for the reasons discussed earlier in this chapter.

CONCLUSION

College-based higher education will always be under the spotlight as it struggles to build the legitimacy of its provision and its capacity to offer this provision. It is intrinsically disadvantaged in the higher education market for positional goods. And, as the newest kids on the block, it will always be regarded with suspicion by its more privileged and established neighbours. It is under suspicion precisely because of some of the reasons that distinguish it: closer links between industry and workplaces, with colleges suspected of undermining academic freedom; the prior industrial experience of college teachers is contrasted to the research records of those in universities; the emphasis on applied learning and supportive pedagogies is suspected of lowering standards through ‘dumbing down’; and, because there isn’t the same emphasis on original research. Ironically, when universities proclaim their work-integrated learning, links to industry, and supportive pedagogies, these things are badges of honour, but when proclaimed by colleges, they are suspect and held as examples of lower standards in comparison to the academic standards in universities.

The challenge for colleges is to maintain their mission in supporting regional economic, social, and cultural development and in providing disadvantaged students with opportunities they would not otherwise have. In other words, their challenge is to respond to the demand for higher qualifications in society, while not succumbing to mission creep by seeking to become more like universities. Colleges must build the legitimacy of their higher education provision, and this will take time and partnerships with their communities. This includes advocacy to ensure that colleges’ role as public institutions that fulfil public policy objectives is recognized by government and funded accordingly. Given the nature of the market for positional goods in the countries discussed in this book, if higher education is to grow substantially in colleges, it will require a strong government mandate and dedicated funding.

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NOTES

1. As is discussed by Gavin Moodie in his chapter in this book (Moodie 2022).
2. The United Kingdom comprises four nations: England, Northern Ireland, Wales, and Scotland. The main focus in this chapter is on England,

although at times it refers to the UK when only UK-level data are available. See Parry et al. (2017) for a discussion of the organization of HE in FE in the UK and in each nation.

3. See Avis and Orr (2016); Bathmaker et al. (2008); Bragg (2019); Floyd and Skolnik (2019); Moodie et al. (2019a); Parry (2009, 2015); Reeve and Gallacher (2019); Skolnik (2009); Skolnik et al. (2018); Webb et al. (2017); and Wheelahan et al. (2009a).
4. See Our World in Data, based at the University of Oxford: <https://our-worldindata.org/tertiary-education#enrollment-in-tertiary-education-over-time>.
5. See Gavin Moodie's chapter in this book for a discussion of system design issues.
6. Attainment of qualifications will always be lower than participation in tertiary education because not all students complete their studies.
7. This is based on a headcount of all students and not equivalent full-time enrolments. It includes domestic and international students.
8. Derived from combining data with Table 2.2 and Table 13.2 (DESE 2019).
9. This includes all levels of higher education programmes offered by TAFE—such as associate degrees, HE diplomas, and other postgraduate programmes. TAFE's total enrolment in bachelor degrees in 2018 was 6394.
10. Derived from combining the total number of undergraduate students at Ontario's universities and colleges in 2015 and determining the percentage of each. See Wheelahan et al. (2017: 32) for the total number of degree students in colleges and the Council of Ontario Universities (2020), Table 3, for the total number of undergraduate students in Ontario's universities.
11. See Parry et al. (2017) for a comprehensive explanation of sub-bachelor higher education in FE colleges in the UK.
12. The data here are primarily drawn from research conducted by the Community College Research Initiatives at the University of Washington. See: <https://www.washington.edu/ccri/>.
13. Soler explains that as well as public community colleges, other two-year-type institutions that offered degrees included 4 tribal colleges, 48 not-for-profit colleges, and 83 for-profit colleges.
14. In Ontario, the Postsecondary Education Quality Assessment Board regulates bachelor degrees in colleges, private institutions and out-of-province universities, but the point being made here still stands (Wheelahan et al. 2017). In Scotland, higher education in colleges is funded separately from other higher education and colleges have a much higher proportion of this provision compared to England (see Parry et al. 2017)
15. I am grateful to Gareth Parry for reminding me of this insight.

16. For example, domestic fees for degrees at New South Wales TAFE are in two clusters, with domestic students in the lowest cluster paying \$30,720 for their degree, while students in the highest cluster pay \$50,500 (TAFE NSW 2020). In contrast, fees for domestic undergraduate students in public universities are in three bands, ranging from \$20,412 for the lowest band, \$29, 094 in the middle band, and \$34,065 in the highest band (assuming students undertake a three-year degree; professional degrees are often four years) (DESA 2020: 20). These are the fees charged to domestic students in public universities as of July 2020 and prior to proposed changes by the federal government outlined in the discussion paper cited here.
17. Except in Scotland where different fee rules prevail.

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Higher Vocational Education as a Work of Art

Trevor Gale

INTRODUCTION

In this chapter I reflect on the cultural artefact of *higher* vocational education (HVE) and the extent to which it might be regarded with distinction. My analysis draws on preceding chapters in this volume although they are not confined to or by them. By HVE I mean higher education (HE) offered by colleges or vocational institutions (sometimes in collaboration with industry) rather than *vocational* higher education, which also occurs in universities (Bathmaker and Orr 2022; Moodie 2022). By HE I primarily mean bachelor's degrees, given much of the controversy concerning HVE's introduction (at least in some jurisdictions) has been in relation to this form of HE, but I also assume the inclusion of bachelor's degrees in vocational institutions to be representative of the introduction of HVE more generally. I sometimes also use the term HE when referring to

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political systems (of institutions, within distinct jurisdictions) and, after Bourdieu, to *social* systems or fields (of struggle, over which form of HE is worthy of distinction, which species of capital defines the field). Understanding HE offered by vocational institutions necessarily requires comparisons with HE in universities and I do a lot of that, but I exclude comparisons with ‘junior colleges’ or ‘comprehensive’ institutions such as those referred to by Beaupré-Lavallée and Bégin-Caouette (2022), which offer education in the somewhat indeterminate borderlands of ‘postsecondary non-tertiary education’ (Ulicna et al. 2016).

My central proposition is that HVE’s legitimacy and status as a form of HE depend on it being seen in a similar vein as we might regard a work of art, with its own claim to importance and recognition. Much rides on this aesthetic judgement if equity agendas are to be advanced and benefit students from disadvantaged backgrounds. Throughout I rely on Bourdieu’s (1984) social critique of the judgement of taste, supplementing this with the works of Roland Barthes (1974, 1975) and Karl Maton (2005). I extend Bourdieu’s aesthetic regard for art to the stylisation of HVE, which gives primacy to form over function. As with his development of a theory of social fields (1996b), Bourdieu developed his theory of distinction in the context of the artistic field, but he makes it clear that there is ‘no area in which the stylization of life ... does not produce the same effects’ (1984: 5). Drawing on Maton (2005), I see HE’s form as a function of the HE field’s *positional* autonomy, which has remained relatively strong despite moves by government and industry for HE to function as a producer of human capital to advance national prospects in a globalised knowledge economy, even as these moves have undermined HE’s *relational* autonomy. In fact, to which I return in the conclusion, it is reference to the global that contributes to the field retaining its positional autonomy, rendering it ‘capable of imposing its own norms on both the production and the consumption of its products’ (Bourdieu 1984: 3).

From an aesthetics perspective, the status of HVE within the HE field is largely a matter of taste. This is important to understand for equity reasons because as Bourdieu notes, ‘taste classifies, and it classifies the classifier’ (1984: 6). For example, the particular degree/s I chose to undertake and which I have been awarded, and the particular institution/s that awarded it/them, do not simply distinguish me from others. That is one way in which they function. They also function to position me and my degree/s in relation to the HE field of degrees and institutions, within which some degrees and institutions are more distinguished. How these

degrees and institutions are regarded in the field, now embodied in me, betray my position relative to others. Except, it is also possible—although less likely—for me to take a position or a stance not in keeping with how others position me. Typically, that requires appealing to the interests and purposes of other fields, particularly the fields of economic and political power—for example, a bespoke Bachelor of Performance Music undertaken at a college, which catapults me into songwriting stardom!

These are not observations particular to HE but apply more generally to cultural fields and their goods or products. As Bourdieu explains:

Social subjects, classified by their classifications, distinguish themselves by the distinctions they make, between the beautiful and the ugly, the distinguished and the vulgar, in which their position in the objective classifications is expressed or betrayed. (Bourdieu 1984: 6)

Making HE distinctions ‘between the beautiful and the ugly’ is a recurring theme in the chapter. In the first section, I argue the importance of appreciating HE as a cultural good, for understanding how HE institutions are positioned and thus the positioning of their degrees and those who undertake them. This opens up theoretical and equity questions about how things could be different. The section that follows analyses the conditions under which well-positioned HE institutions produce HE degrees and consumers with a taste for the HE they offer. Distinctions are made between HE’s form and its function: between a pure taste for HE as an end in itself (i.e. the self-referencing or ‘disinterest’, characteristic of relatively autonomous fields) and a popular taste for HVE that serves economic and/or political ends (i.e. the external referencing, characteristic of more heteronomous fields). A third section takes up the notion of autonomy as ‘crucial to status within the [HE] field’ (Maton 2005: 691). It suggests that while HE has become increasingly oriented to values and purposes from beyond the field (illustrated in HVE and its deference to industry), it retains a degree of relative autonomy and thus control over its form. I conclude that given the theoretical possibility of a field with dual distinctions, there are at least two ways in which HVE might be better positioned within the HE field: (1) in time, the weakening of its *relational* autonomy (the principles that inform its ways of working) may in turn weaken its *positional* autonomy (of those who enact and/or mediate those principles)—succumbing to the effects of a compliance habitus (Rowlands and Gale 2017, 2019)—thus granting the applied and the technical greater

status, or (2) in time, through greater appreciation for the ‘practical’ as having scientific merit.¹ If I was to distinguish between the two, the latter would be the more distinguished.

HIGHER EDUCATION AS A CULTURAL GOOD: PRIVILEGING FORM OVER FUNCTION

Differences between what is distinguish-*able* and what is distinguish-*ed* about HVE have implications for its beneficiaries, specifically students. Marginson (2011) has written about HE as a public good (*à la* Germany; see Graf and Powell 2022); about the benefits that flow to *society* from HE—an observation about HE’s political function. The sentiment is compelling but what the public-benefit argument hides is that public goods do not necessarily benefit publics equally. My interest is in HE as a cultural good, in the benefits that flow to *social groups* mediated by their aesthetic preferences, which is an appreciation for HE’s ‘social function of legitimating social differences’ (Bourdieu 1984: 7). The sorting of HE beneficiaries is more individualised/decontextualised in conceptions of HE as a positional good (Marginson 2006; Hirsch 1976), which provides *individuals* with advantages within competitive markets but—like the public-good logic—with little acknowledgement of the cultural differences in individuals’ ‘archives of experience’ (Appadurai 2004). At the very least, the positional benefits of HE are contingent on its cultural value, as Tristan McCowan’s example illustrates:

In competing for a finite number of well-paid jobs, my gaining an undergraduate degree will increase my chances and decrease the chances of my competitors who only have a secondary-level leaving certificate. If a friend of mine—Alpesh—then obtains a Master’s degree, my opportunities will consequently decrease, and so on ... Even if Alpesh and I both have the same level of qualification—an undergraduate degree—if he has a high-prestige and high-quality degree from an elite university, and I have one from a little-known and poorly resourced institution [perhaps a vocational institution offering HVE], my opportunities will consequently suffer. (2016: 649)

The relative positional benefits of their HE degrees might differ again if Tristan’s is a high-status degree from a low-prestige institution and Alpesh’s is a low-status degree from a high-prestige institution. These

variations in taste, style and mode—in the aesthetic judgements that students, employers, governments and the wider public make about institutions and degrees—point to the importance of understanding HE as a cultural good, which is instrumental in securing advantage for some and disadvantage for others.

As with public and positional goods:

There is an economy of cultural goods, but it has a specific logic. Sociology endeavours to establish the conditions in which the consumers of cultural goods, and their taste for them, are produced, and at the same time to describe the different ways of appropriating such of these objects as are regarded at a particular moment as *works of art*, and the social conditions of the constitution of the mode of appropriation that is considered legitimate. (Bourdieu 1984: 1; emphasis added)

By ‘works of art’ Bourdieu means the esteem in which certain cultural goods are held. That is, cultural goods of a particular style—for example, artistic ‘modes of expression characteristic of a period, a civilisation or a school’ (Bourdieu 1984: 4)—are assigned a status well above most, to the extent that doubt is cast over whether there are even others in the same category. (The equivalent in HE might be a degree in medicine, law or, more distinctively, in the classics.²) Thus, we might ask: can art produced by the ‘naïve painter’—that is, those who are located ‘outside the field and its specific traditions’, who lack ‘a specific grasp’ of its history (Bourdieu 1984: 4)—even be considered art? We could ask the same of HVE. Where does it sit in the HE hierarchy? Should we even think of it as a legitimate form of HE? Is it even in field?

To varying degrees, these are issues raised in preceding chapters, sometimes implicitly, sometimes more directly. They are questions that arose in the context of Webb et al.’s (2019) research (see also Hodge et al. 2022), voiced by a HVE graduate (Fraser) who received his bachelor’s degree from an Australian Technical and Further Education (TAFE) college. Challenged on differences between his TAFE degree and a university degree, Fraser explained:

I have had people ask me often, ‘Is it the same as a university degree?’ Now, I keep saying to them, as far as I understand a bachelor is a bachelor. There’s not two levels. TAFE don’t have their own level. It’s just through the TAFE system, that’s the only difference. ... I try to be a high achiever and that’s something I enjoy. I would like people to understand that my TAFE degree

is as good as a university degree—that there is only one level. ... But I have had one or two people say, ‘Oh, TAFE, you got it at TAFE?’ ... [I] thought, come on, TAFE is as good as—you know. A degree is a degree. (Fraser, TAFE graduate, Australia)

Fraser’s comments here are about differences in HE’s *form*; they draw attention to what is distinguished rather than what is distinguishable. There is a differential regard for form that sits behind stratified systems. The HE system is unquestionably vertically stratified (according to the quantity of the field’s dominant capital) and, as is the case with stratified systems, it tends to deliver different outcomes for those who (‘choose’ to) engage with different parts of it. These student choices—which are differently framed by what is ‘possible’ and what is ‘desirable’ (Sellar and Gale 2011; Gale and Parker 2015; Bourdieu 1984) given certain sociocultural, political and economic processes/influences—shape life experiences in ways that are ‘strongly linked to the reproduction of socioeconomic inequalities’ (Lincovil Belmar 2022) and inequalities more generally (e.g. in relation to race, ethnicity, gender). As Graf and Powell (2022) put it, ‘higher education systems continue to produce winners (“insiders”) and losers (“outsiders”)’. Fraser is one of HE’s outsiders: a product of the field but not with ‘the status of candidates for aesthetic appreciation’ (Bourdieu 1996a: 287). Despite his best efforts ‘to be a high achiever’—one of Claudel’s ‘good pupils’, ‘modest and diligent’—the ‘laws to protect the body of acquired knowledge’ (i.e. intellectual capital) operate to ensure that distinction ‘doesn’t belong to him’ (Paul Claudel, *Le soulier de satin*, Day III, Scene ii; in Bourdieu 1984: 1).

Yet things could be different if we were to entertain the possibility that different forms of HE could be equally attributed with distinction; for example, forms distinguished by the logics of science *and* of practice. The logic of science—‘a mode of thought that works by making explicit the work of thought’ (Bourdieu 1990: 91)—sets HE apart as a scientific field (Bourdieu 1988). Intellectual capital (accrued through achievement in scientific research) is what gives the field its distinction (e.g. represented in league tables; Marginson 2008) and, at the same time, its accumulation is what provides distinction for individuals within the field (Bourdieu 1988). Whereas the logic of practice—equally intentional and purposeful but ‘fuzzy’, with knowledge of it ‘grasped in action, in the temporal movement that distinguishes it’ (Bourdieu 1990: 92)—tends to define the field of vocational education and training³ and what counts as distinction in

that field. I am not suggesting here that practice is not evident in universities or in the HE field more generally (or that the vocational education and training field takes no account of the logic of science). All fields are constituted around practice, informed by their logics. So academic practices related to pedagogy, curriculum and assessment are aspects of the HE field, along with different kinds of research practices, equity practices, governance practices and so on. In drawing attention to practice as the logic that defines the vocational education and training field and—more importantly for the argument in this chapter—with potential to become a defining logic in the HE field, I am instead advancing the possibility of practice given the status of a science,⁴ if not a science. If it is a science, then practice might be conceived as a mode of thought: knowing through doing, made explicit through doing; *a la* muscle memory. While Bourdieu's earlier work (1961, 1962) 'naively' (as he describes it) sought 'reconciliation of the practical and the scientific intention' (1990: 2), later he raised the possibility of 'a habitus divided against itself, in constant negotiation with itself and with its ambivalence, and therefore doomed to a kind of duplication' (1999: 511). Rather than doom, herein lies the theoretical possibility at least, of the logics of science and of practice both attributed with distinction within the HE field, 'reconciled' in dialectic relation⁵; two different, perhaps even oppositional, knowledge claims that are equally regarded—thus leading to a different framing of life chances by a HE system internally organised, vertically *and* horizontally, into two hierarchies.⁶

Bourdieu (1983) suggests that *between-field* relations are both horizontal and vertical. The fields of economic and political power, which (horizontally) permeate all fields, work through their control over the rate of exchange between forms of capital, to (vertically) position the field of HE higher than the field of vocational education; a point illustrated in many of the chapters in this volume (e.g. Bathmaker and Orr 2022; Lincovil Belmar 2022; Graf and Powell 2022; Hodge et al. 2022; Wheelahan 2022). But when these two fields begin to produce similar cultural products (e.g. bachelor degrees), their boundaries become more porous. Their relational struggles are relocated *within-field*, not struggles over the relative amount of their capitals but over their relative values. In a vertically stratified HE system, new entrants (such as HVE) are more likely to be lowly positioned, particularly when the capital valorised within bachelor's degrees offered by vocational institutions originates from another field (a field already positioned below HE). And yet the position-takings or stances

adopted by some vocational institutions entering the field (e.g. in Australia and Germany) seem more strongly aligned with much higher positions. That is, the field of position-takings does not mirror the field of positions, as one might expect from Bourdieu's (1988) analysis of higher education in late twentieth-century France.⁷

Positioning (e.g. of a vocational institution) within a field (e.g. the field of HE) is tricky because it relies not just on an institution taking a position but on others in the field (e.g. universities) recognising that position and on recognition from others with interests in the field—in the case of HE, regulators, governments and the wider public. The difficulty for vocational institutions entering the HE field with offerings of HVE and trying to position themselves within that field is that to be accredited as HE providers they need to claim that their degrees are both the same (in quality) and yet different (in style and/or specialist area) from degrees offered by universities. In justifying this need, they often distinguish their degrees as filling a niche left by universities, as offering a more intimate and supportive experience and by highlighting their ongoing links to industry (irrespective of the fact that many universities argue that their own degrees are also closely linked to industry). Claiming a position in the HE field becomes a balancing act between emphasising HVE's form and its function.

Where HVE and their vocational institutions are positioned in the HE field thus becomes a question of whether (and where and why) HVE is regarded not simply for its distinctiveness (i.e. being sufficiently different or distinguishable) but also with distinction (i.e. valorising particular differences as distinguished). If we were to countenance HE as a 'divided self' (Pritchard 2000), we might see these differences aimed not at displacing the distinction of university HE—at least not in the *avant-garde* sense (Bourdieu 1996b) of replacing it with HVE—but duplicating it. This has some affinity with McCowan's reclaiming of 'horizontal'—the 'characteristic of even prestige across the [HE] system' (2016: 659)—although McCowan conceives of horizontal' as a dimension of equity of access to HE of 'consistently high quality and recognition' (2016: 658), rather than a condition for ascribing HVE with distinction. There is something approaching horizontal' in the HE systems of Germanic nations (see Graf and Powell 2022), where 'the status differences between academic and vocational education have been less stark' (Webb 2022). But even then, 'access as horizontal' ... [offers] no guarantee that the primary objective of the policy (the underrepresented and least-advantaged)

will benefit' (Webb 2022). Instead of an equality of institutions and of access to them—although related—I am arguing for the possibility of an equality in distinction across HE's science/practice logic divide. For that to happen, there would need to be an equivalence in the rate of exchange between the capitals that distinguish HVE degrees from more traditional HE degrees. And for that to happen, vocational institutions would need to secure greater control over HVE's production and consumption.

ACQUIRING A TASTE FOR HIGHER EDUCATION

Bourdieu's account of the conditions for the production and consumption of cultural goods can be usefully compared with how Roland Barthes distinguishes between 'readerly' and 'writerly' texts (1974) and their 'horizontal' and 'vertical' readings (1975). Barthes describes writerly texts as those that are written in a manner that allows—even requires—readers to actively invest the text with their own meanings, whereas readerly texts are those where the reader passively accepts the author's meanings, relinquishing interpretive control to the author. Thus, we might describe 'works of art'—and HE, to continue the analogy—as readerly texts, because it is the *producers* of art (and of HE of distinction) who determine how their products are to be consumed. This, then, is a first condition in conferring distinction on HE and on cultural goods more generally:

the basis of the difference between works of art and ordinary objects is none other than *an institution*, to wit, the 'art world' which confers on them the status of candidates for aesthetic appreciation. (Bourdieu 1996a: 287; emphasis added)

To the extent that HE is a work of art, we might also understand the 'art world' as that portion of the HE field dominated by universities, particularly those that began institutional life as a university and particularly those with long histories⁸; both conditions integral to their prestige and status. As with artistic perception, these traditional universities (particularly in the style of the 'ancients'⁹) have an 'historical transcendental' quality (Bourdieu 1984, 1996b). In Europe, they date back to the early eleventh century; in European colonies (e.g. Canada, Australia, South Africa) to the eighteenth and nineteenth centuries. Whereas in many countries, HE 'colleges did not exist until the twentieth century' (Skolnik 2022). Their late arrival in offering HE has largely excluded colleges from

determinations about which HE is deserving of ‘aesthetic appreciation’ and which is ‘ordinary’. A degree is not simply a degree, as Fraser (cited above) would have us believe.

Throughout this volume there is evidence of ‘non-university, providers ... offering the same qualifications as universities but under circumstances over which they have very little influence’ (Webb 2022). The norm in Chile is that only universities ‘can award every credential’ (Lincovil Belmar 2022). Similarly, England’s Further Education Colleges ‘do not usually act as awarding bodies for [degree] qualifications’ (Bathmaker and Orr 2022). And while a few vocational institutions in Canada (Skolnik 2022) and Australia (Hodge et al. 2022) have degree-awarding powers—then only in very specialist or applied areas and only with the approval of a government agency¹⁰—the vast majority of HVE programmes are effectively university franchises. So too in South Africa, where HVE degrees are offered on behalf of and awarded by universities (Paper and Needham 2022). While not of the same order of regulatory control, even Germany’s vocational academies and universities of applied sciences award bachelor degrees that are co-constructed with and approved by industry (Graf and Powell 2022). Within the HE field, self-accrediting universities that lend their imprimatur to vocational institutions evoke credibility and instil a sense of confidence in the quality of HVE degrees. And yet, for the connoisseur of HE, the very involvement of vocational institutions sets their degrees apart as different, often inferior. For example, in Chile, government recognition of vocational education and training ‘as a distinct subsystem within higher education ... did not mean parity of esteem between sectors’ (Lincovil Belmar 2022) or between students: ‘there seems to be a stronger sustained relation between socio-economic and cultural status of students and quality and prestige of the [institutions] where they enrol’ (Cabrera and Andreu 2016: 128).

Of course, distinction between degrees based solely on institutional type is a fabrication. While they might be more aesthetically pleasing, degrees are not necessarily better (e.g. more scholarly) when they are offered by self-accrediting universities simply because degrees offered by vocational institutions require external validation by universities, government and/or industry. These are distinctions perpetuated by universities that lay claim to the real HE, the original, in its untainted unadulterated form. They dominate ‘not only the works designated ... legitimate’ (Bourdieu 1984: 3) but the regulatory conditions under which other institutions are able to offer degrees. If the first condition for the

production of HE as a cultural good of distinction is that *long-standing universities* determine the ‘gold standard’, the second one is like it: the gold standard of HE is offered by *universities of long-standing*. As Bourdieu explains, this:

pure gaze is a historical invention linked to the emergence of an autonomous field of artistic production, that is, *a field capable of imposing its own norms on both the production and the consumption of its products*. (1984: 3; emphasis added)

I return to issues of HE’s autonomy in the following section. Here I want to emphasise the interconnectedness of conditions one and two. They are two sides of the same coin: ‘one cannot divide a science of [art] works into two parts, one devoted to production, the other to perception’ (Bourdieu 1996a: 287). It is a similar relation Barthes attributes to readerly texts and horizontal readings. In furthering his analysis of readerly and writerly texts, Barthes (1975) distinguishes between vertical and horizontal readings. Vertical readings are multi-dimensional. They include but are not confined by an author’s meaning. They are made more possible by writerly texts that are deliberately open to interpretation. Whereas horizontal readings are more likely when reading readerly texts. They are one-dimensional readings, limited to the apparent meaning of the text intended by the author. What the text says is what the text means.

This interplay between the production and consumption of cultural goods is evident in Fraser’s reading of the two ‘texts’ of TAFE degrees and university degrees. In Barthes terms, he vacillates between reading TAFE degrees horizontally and vertically. In one reading: ‘a bachelor is a bachelor’. And yet we sense Fraser’s frustration when what seems to him to be a readerly text becomes writerly in the eyes of others, when what seems clear in one reading (‘there is only one level’) is questioned by another (‘is it the same?’). As much as Fraser wants all degrees to be readerly texts (i.e. with no institutional distinctions: ‘a degree is a degree’), as relatively recent entrants into the HE field, vocational colleges have less control over the production of their degrees and less control over how they are perceived. Being more writerly texts, TAFE degrees allow for vertical readings that are not always favourable. Moreover, some readings carry more weight, the closer they are connected to the field of power. The more powerful reading is that it matters where a degree is from and, in the

scheme of things, Fraser's TAFE degree is not particularly well positioned in the field or indeed beyond.

HVE commentators and researchers are sometimes prone to the same frustrations, the same mixed readings of HE policy and its implications for HVE. While 'it makes sense for colleges to offer higher education' (Wheelahan 2022)—creating increased opportunities for traditionally marginalised students to access HE, offered in a style that is familiar to them—its success is complicated by the slow uptake among vocational institutions, students and industry. In this case, the 'sensible properties' (Panofsky, in Bourdieu 1984: 2) of HVE are not sufficient to secure its popularity, let alone its distinction. In the same way that an unfavourable reading of Fraser's TAFE degree appears to carry more weight, HVE is not 'naturally' attractive. As Wheelahan illustrates, referencing the authors in this volume:

Many of us researching this topic thought that higher education in colleges in these countries would grow dramatically and quickly. But it didn't. All of us writing about this topic are champions for colleges and for higher education in colleges. All want it to do well. All think it matters because it can change students' lives and can support their families and communities. (Wheelahan 2022)

Fraser's TAFE degree promises all of these life-changing possibilities, but it also works to position him in ways he senses but does not fully understand. In Bourdieu's terms, he is:

A beholder who lacks the specific code [who] feels lost in a chaos of sounds and rhythms, colours and lines, without rhyme or reason. Not having learnt to adopt the adequate *disposition*, ... he cannot move from the 'primary stratum of the meaning we can grasp on the basis of our ordinary experience' to the 'stratum of secondary meanings', i.e., the 'level of the meaning of what is signified'. (Bourdieu 1984: 2; emphasis added)

Herein lies the third condition for the production and consumption of HE as a cultural good. HE's distinction is not simply in the eye of the beholder. It is a distinct and acquired taste; an 'aesthetic disposition demanded by the products of a highly autonomous field of production' (Bourdieu 1984: 4). This pure taste for HE—which privileges form, often to the exclusion of all else—is embodied in the dispositions of graduates, themselves products of universities of distinction and who in turn

recognise distinction in the products of their *alma mater* (what Bourdieu designates *Einfühlung*—an aesthetic response, the act of empathy) and who legitimise the method of its acquisition. The mastery to recognise the subtle differences in degrees and institutions that attribute one with distinction and not another, to distinguish ‘between the beautiful and the ugly’ (Bourdieu 1984: 6), is acquired:

for the most part, simply by contact ... through an implicit learning analogous to that which makes it possible to recognize familiar faces without explicit rules or criteria—... without having to distinguish clearly, or state explicitly, the features which constitute their originality. (Bourdieu 1984: 4)

In the art world, it is this embodied sense of what is distinctive that separates the ‘naïve spectator’ (Bourdieu 1984) from the exclusive world of the connoisseur¹¹ with refined and discriminating taste (Arnold 2012: 3). In the literary world, it is what elevates readers’ appreciation of texts from *plaisir* (pleasure) to *jouissance* (beyond pleasure, ecstasy) (Barthes 1975); not a ‘facile pleasure, pleasure reduced to a pleasure of the senses ... [but] pure pleasure, pleasure purified of pleasure’ (Bourdieu 1984: 6). It is what Bourdieu denotes ‘the taste of liberty—or luxury’ (1984: 6).

FIELD AUTONOMY: THE FOUNDATION FOR THE DISTINCTION OF HE’S FORM

This idea that HE’s distinction lies in ‘purifying, refining and sublimating primary needs and impulses’ (Bourdieu 1984: 5)—‘clearing the decks’ as it were, for some *omphaloskepsis* (navel-gazing), that is, fixated on knowledge for its own sake—is not particularly palatable for those who have ‘a taste of necessity’ (Bourdieu 1984: 6), for example, a commitment to HE’s social and economic functions. Bourdieu describes this penchant for function as a *popular* aesthetic. For example, with a popular gaze on works of art, ‘every image ... explicitly performs a function’: that is, to accurately represent life, with rejection and praise equally informed by the same logic (Bourdieu 1984: 5). Similarly, in Barthes terms, objects and practices of everyday life (e.g. cooking, clothing, eating) are texts to be read horizontally, literally, appreciated for their functional purposes. Within this way of thinking, HE’s function is to prepare degree holders for employment, enabling them to make significant contributions to society and economy.

HVE is inscribed with a similar regard for ‘the subordination of form to function’ (Bourdieu 1984: 4), in the service of economic and political interests. Moodie’s ‘typology of tertiary education’ (2022) provides a useful example of how a differential regard for form and function delivers different ‘objects’ of HE and HVE: the former focused on the ‘acquisition of knowledge’, the latter on developing ‘expertise in practice’. Unlike HE offered by universities, HVE’s *raison d’être* is almost exclusive in its utility.¹² As Wheelahan (2022) explains, HVE offered by vocational institutions is:

student-centred and more accessible to students than is university, often cheaper for governments and students, and often has a more applied focus to support students’ transitions to the labour market. It has a strong ‘access’ mandate and it supports social inclusion and strong and resilient communities.

HVE also delivers governments and industry with workers who embrace ‘labour related skills acquisition to foster economic growth’ (Lincovil Belmar 2022).¹³

These challenges to the values and purposes of traditional HE are not new, coming to the fore at the end of World War II and gathering pace from the turn of the twenty-first century. Along with social policies aimed at increasing participation in HE by marginalised groups, governments of various persuasions have introduced policies to shape HE towards utilitarian goals and towards a kind of economic nationalism, that is, that ultimately, HE ought to be part of the steering mechanism of governments to orient their economies and their populations. Yet they are policies that have had muted success, at least in terms of redefining HE distinction. As Maton explains, polytechnics in Britain—‘intended to be equal but different to universities’ (2005: 694), introduced out of ‘frustration at the failure of universities to respond to extrinsic pressures’ of economic and political interests (2005: 702)—were conceived not simply as a way of increasing access to HE but also to shift the balance of power towards the vocational and the instrumental. Their eventual transformation into the mould of traditional universities completed the field’s refraction of the threat to its autonomy. ‘Academic drift’ is a common theme among vocational and technical institutions converted into universities with degree-awarding powers. Note, for example, outcomes of the 1981 reforms of HE in Chile (Lincovil Belmar 2022). Skolnik (2022) reports a similar

more recent pattern ‘in British Columbia and Alberta [where] the colleges that were awarding the most bachelor’s degrees have been converted into universities’, although not along the lines of the OECD’s preference for a European ‘model of universities of applied sciences’ (OECD 2014: 14). Graf and Powell (2022) provide a revealing account of the evolution of these universities of applied science from technical and engineering schools. At the time of their elevation to university status, industry leaders believed that their businesses were likely to suffer ‘a loss of influence due to the greater institutional autonomy ... [and reduced] capacity of these new universities of applied science to produce “loyal employees”’ (Graf and Powell 2022).

The theme that runs through these examples is differences in the level of autonomy (from economic and political interests) of the fields of HE and of vocational education and training. By implication, HE enjoys greater field autonomy: a quality to be pursued and grasped because this is ‘crucial to status within the field’ (Maton 2005: 691). On this point, ‘it is important to note how uniquely strong that autonomy has been’ (Maton 2005: 699) among universities, especially among the more established. Even though the days are gone when ‘no one ... ought to meddle with the universities, who does not know them well and love them well’ (Moberley 1949: 7)—consider, for example, the now common influence of neoliberalism in generalizing market competition within HE—still, the relative autonomy of the field and of universities in particular ‘works to refract wider changes into its own terms’ (Maton 2005: 702). That is, the field of HE remains ‘capable of imposing its own norms on both the production and the consumption of its products’ (Bourdieu 1984: 3), retaining an appreciation for HE’s form as the basis of its distinction.

The relative autonomy of HE institutions and of the field more generally, is thus the fourth and arguably the most important condition for conferring distinction on HE. It lays the foundation for the other three conditions. It ensures that the reference point for those determinations is the field itself, including references to what has gone before. This is the way of cultural fields. Bourdieu makes a similar point about the world of art being self-referential, privileging manner over matter, mode over object:

Artistic attention which asserts the primacy of the mode of representation over the object of representation demands categorically an attention to form ... it asks to be referred not to an external referent, the represented or

designated ‘reality’, but to the universe of past and present works of art (1984: 3)

This internal preoccupation is what concerned industry leaders in Germany with the formation of universities of applied science: the interests of business side lined and the loyalties of graduates redirected. And yet it would be naïve to suggest from the above account that the field of HE is completely autonomous of economic and political power. As Bourdieu et al. (1999) have noted, the relative autonomy of cultural fields is not immutable. In the early twenty-first century, ‘belief that left to its own devices higher education will meet social and economic needs has diminished’ (Maton 2005: 695). The ‘social contract’ (Rawolle 2013) of expectations, obligations or duties of universities as a result of government funding, has been rewritten. For example, above I mention the influence of neoliberalism in normalising competition between universities e.g. for research funding. We could add the influence of corporate managerialism on university governance arrangements (Rowlands 2018). These and other heteronomous ways of working have severely weakened the relative autonomy of the HE field. And yet, despite this weakening, the field continues to be able to champion its distinctive form.

Maton (2005) explains this apparent contradiction through his elaboration or correction of Bourdieu’s notion of field autonomy, distinguishing between the ‘positional’ and the ‘relational’. Positional autonomy refers to ‘the nature of relations between specific positions in the social dimension of a context or field [in this case, the field of HE] and positions in other contexts’ or fields, e.g. industry or politics (Maton 2005: 697). Whereas relational autonomy refers to ‘relations between the principles of relation (or ways of working, practices, aims, measures of achievement, etc.) within a context or field and those emanating from other contexts’ or fields (Maton 2005: 697). In these terms, the introduction of neoliberalism and corporate managerialism are examples of a weakening of the HE field’s relational autonomy. The ways in which universities work and the principles that inform that work, are now more in line with the interests of economic and political fields. However, universities remain largely governed by agents from within the field. Indeed, management positions in most universities throughout the global north require a good measure of intellectual capital as a position requirement. Thus their managerial power (or ‘academic capital’ as Bourdieu (1988) refers to it)¹⁴ is contingent, at least in part, on their possession of intellectual capital, at least on

appointment. While it is the case that many of these academic managers then tend to operate from a position of power derived from their managerial positions, there are times when they also draw on their intellectual resources to inform their practice (Rowlands 2018). Even as these academic managers take up ways of working from beyond the field, their positional autonomy and intellectual capital enable them to mitigate the more intrusive aspects of economic and political interests—‘refracting’ them ‘according to the specific logic of the field’ (Bourdieu 1993: 164)—thus maintaining the balance of power in favour of HE’s form over its economic and political functions. Maton describes this refraction as ‘the capacity to transform extrinsic pressures into specifically intrinsic forms’ (2005: 700).

For now, ‘actors within higher education implementing policies based on principles from other fields ... refract those principles through habitus shaped by the field’ (Maton 2005: 701). But HVE’s entry into the HE field brings with it new challenges to their positional autonomy from within the field, in the form of a habitus shaped by a different field. While some vocational institutions offering HVE have been subsumed into the HE field—their institutional habitus transformed through academic drift—others continue to offer vocational education and training as well and are more in tune with the principles and ambitions of economic and political fields. It is less likely they will be susceptible to the HE field’s reshaping in the same way. There are other within-field challenges too, to positional autonomy, in what Rowlands and Gale (2017, 2019) describe as ‘the compliance-habitus effect’. In the context of research, for example, they see ‘potential for changes to the academic habitus arising from practices to comply with research assessment frameworks and/or publication output targets’ (Rowlands and Gale 2019: 156). More generally, while the HE field is currently able to hold at bay the full force of economic and political power, in time its weakened relational autonomy has potential to weaken its positional autonomy. The more you do something, the more it becomes part of you.

CONCLUSION

I have assumed in this chapter that the autonomy of the HE field remains relatively strong, at least positionally if not relationally. This is because status is very much a feature of the HE field—the stratification of HE systems is potent and has tangible effects—and goes hand in hand with

autonomy, unencumbered by outside influence, relatively speaking. More notably, the HE field is now global and ‘the autonomy of higher education is strengthened by the field’s globalization, particularly at the elite end’ (Gale 2011a: 18) where distinction is attributed. Whereas, as Ulicna, Messerer and Auzinger attest, ‘there is no [global] consensus on the definition of Higher Vocational Education and Training’ (2016: 1), which dilutes its potential for influence within HE. In a globalised HE field,¹⁵ the markers of distinction continue to be self-referential—HE engrossed with its own form—even as the borders of that referent have expanded.

Adding to the condition of autonomy, I have also drawn attention to three further conditions for conferring distinction on particular forms of HE: that it tends to be produced by long-standing universities, offered by long-standing universities, and recognised in the dispositions of and endorsed by their graduates. With references to the world of art, I have argued that these conditions emulate those of cultural fields generally. In some respects, I have accentuated the differences between ‘the beautiful and the ugly’ in order to make my point about how attributions of distinction operate and what this means for HVE in the HE field. As an example of my over-reach: while artists are relatively free to produce their artwork in the manner and form of their choosing, I have probably exaggerated HE’s freedom to do the same. HVE is not the only form of HE governed by standards and expectations set by government, industry, and professional bodies. For example, universities offer professional degrees that meet conditions set by registration bodies, industry, and associations to ensure their graduates are eligible for employment. They have also embraced government prescriptions of HE’s function as increasing social mobility, even if for elite institutions equity is often dressed up as welcoming the brightest and best ‘wherever they may be found’. Yet on balance it remains that within the field, HE’s function is subservient to its form. Its gaze might not be entirely *pure* but it is not purely *popular* either.

If vocational institutions were to aspire to HVE’s distinction, they could take the above conditions for the production and consumption of distinctive cultural goods as a blueprint for what is to be done. Of course, operationalising that would be no easy task. As observed in relation to the ‘emergent aspirations’ (Zipin et al. 2015) of marginalised communities, ‘emphasising the potential of poor communities to imagine futures different from their pasts is limited when such imagination is not shared beyond the cultural group’ (Gale and Parker 2015: 93). It is one thing for vocational institutions to regard their HVE as worthy of distinction. It is

another for that distinction to be recognised by the HE field. Universities, particularly those positioned towards the top of the hierarchy, are unlikely to want to give much ground on matters of taste, not least because often:

To impose a new producer, a new product and a new system of taste on the market at a given moment means to relegate to the past a whole set of producers, products and systems of taste, all hierarchized in relation to their degree of legitimacy. (Bourdieu 1996b: 160)

Universities are also in a position to resist reworking the balance between form and function and what currently counts as distinction, given the HE field is so heavily skewed in their favour: with the scale of their operations valued in the trillions of dollars/pounds/euros and with a stranglehold on the imaginations of governments and of the wider public. As observed above, universities produce the consumers of their products and how these products are to be perceived, as much as they produce the products themselves. At the very least, reconceiving of distinction would require the HE field to ‘move beyond the separation of practical knowledge from theoretical knowledge’ (Gale 2011a: 17) to recognise practice as a science. And, as difficult as it might seem, the initial stages of this negotiation would require more vocational institutions operating in the HE field to take a position, assume a stance, commensurate with one higher than what might be otherwise attributed to them. They would also need to recognise that there are no quick wins. Time in the field is required to increase the standing of their capital as much as time is needed for capital accumulation.

But just doing these things alone would miss the point of why HVE’s distinction is so important. Parity of esteem is fundamental to equity. Fraser ‘would like people to understand that my TAFE degree is as good as a university degree’. The prevailing aesthetic judgement is that it is not. Webb (2022) writes more generally about how HE equity has eluded many underrepresented students in countries highlighted in earlier chapters of this volume, even as HVE has entered the HE field and access to HE has increased (see also Gale 2011b; Gale and Hodge 2014). As I have argued elsewhere, access is not enough, and neither is ‘equal outcomes’ (Marginson 2018) if that is simply a calculation of degrees awarded per social group. Both miss the point that HE is a cultural good. What kind of degree you obtain, what kind of institution you obtain it from and the

aesthetic regard for these have equity consequences. To address these things, we need a new appreciation for HE that shifts:

from ‘access’ to ‘access to what’ as a way of framing up a new understanding of and approach to equity. ... [moving on] from a fixation on structural arrangements in the [HE] system (access, achievement, availability) to include and frame these within an understanding of a new structure of feeling (aspiration, mobility, voice). (Gale 2011a: 19)

This is the agenda that Australia’s National Centre for Student Equity in Higher Education adopted at its founding in 2008 (see also Sellar and Gale 2011), in response to the nation’s fourth wave of HE widening participation (WP) policy (Gale and Tranter 2011). Unlike previous government interventions that responded to increased demand for HE with increased supply, Australia’s fourth WP policy wave sought to create demand to meet ambitious (and eventually unachieved) HE participation targets (Gale 2011b). With access (restricted in part by place availability) no longer the barrier to participation it once was,¹⁶ attention turned to include ‘access to what’. What has emerged (not just in Australia) from this turn in equity strategy is advocacy for ‘powerful knowledge’ (Young 2008) and ‘epistemological equity’ (Dei 2008) in HE, that is, giving all students access to dominant *and* non-dominant forms of knowledge. Both approaches were conceived in the context of schooling but more recently brought to bear on HE. Both speak to inequalities in centre-periphery relations in the realm of knowledge (Connell 2007). Both focus on what makes HE, *higher* education, its form—the transcendence of knowledge—on which the field bestows distinction. Both are important and need to be pursued equally, simultaneously, ‘both-ways’ (Kemmis 1997). It would be of little equity benefit to students, particularly those from disadvantaged groups, if, for example, some HE institutions or degrees were characterised by one or the other and, because of this division, they simply fed into existing hierarchical or *vertical* knowledge structures (Bernstein 1999).

However, as important as the knowledge turn in HE equity is, what I am arguing here is that HVE’s entry into the HE field—particularly when offered by vocational institutions less susceptible to academic drift—highlights the need for HE’s equity strategy to take a new aesthetic turn: a heightened appreciation in the HE field for the capital that defines the field of vocational education and training. The battleground is still in the

realm of knowledge but in relation to *horizontal* knowledge structures in which different forms of knowledge have their ‘own criteria for legitimate texts, what counts as evidence and what counts as legitimate questions or a legitimate problematic’ (Bernstein 1999: 163) and with a distinctiveness that is able to be maintained because the knowledge form’s ‘discreteness’ defies incorporation. In this vein, extending the practice of science to include but not subsume the science of practice would introduce a new language into the HE field, offering:

the possibility of a fresh perspective, a new set of questions, a new set of connections, and an apparently new problematic, and most importantly, a new set of speakers. (Bernstein 1999: 163)

Bourdieu and Bernstein both see such language as not just intrusive but subversive: a potential ‘challenge [to] the hegemony and legitimacy of more senior speakers’ (Bernstein 1999: 163). Whereas I also see potential for the HE field to become bilingual, able to recognise and attribute dual distinctions, recognition within the HE field of practice as a science, as a unique way of knowing, is the first step towards appreciating higher vocational education as a work of art and the next step for equity agendas to be advanced.

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NOTES

1. The ‘practice turn’ in contemporary theory (e.g. Lynch et al. 2017, 2020) suggests this as a real possibility.
2. In Latin, *classicus*, originally used to describe Rome’s highest class of citizenship.
3. The stark difference in the capitals that define these two fields (higher and vocational) is why their naming by academics, states and supra-state organisations (e.g. Commonwealth of Australia 1964; UNESCO 2012) as ‘tertiary education’ makes little sense, other than for sequencing purposes (tertiary education follows secondary education) and/or as a form of ‘sym-

- bolic violence' (Bourdieu and Passeron 1977), denying the struggles between different capitals to define the field.
4. 'Science' is derived from the Latin for 'knowledge' and is used here in that generic sense to include the social and human sciences as well as the natural sciences and sciences of logic and of mathematics.
 5. This is similar to the thought-action dialectic characteristic of the 'deliberative professional' (Gale and Molla 2017).
 6. As I hope will become clear, my conception of dual distinctions is intended as a variation on or departure from 'horizontal differentiation' (Brennan and Naidoo 2008; Teichler 2008) rather than a replication or extension of it.
 7. This idea of position-takings mirroring positions has formed part of the critique of Bourdieu's theorising as structuralist, in which agency appears to follow or take a back seat to structure (Maton 2005).
 8. Note, for example, the number of universities that include their foundation date in their logos and advertising material. My current university was established in 1451, and this features prominently and unproblematically in much university discourse and material. The date is so ingrained in my consciousness that it serves as a reference point for comparing most other entities/events in the history of Britain and beyond.
 9. Universities in Britain and Ireland established prior to 1600.
 10. Though formally autonomous from universities, in practice these government agencies are heavily influenced by universities and populated by previous HE managers.
 11. Connoisseur is derived from the Latin *cognōscere*: 'to recognise'; with judgements based more in experience than criteria.
 12. I am not denying here that there are universities 'offering forms of education strongly associated with vocational education' (Moodie 2022); only that functional purposes, such as preparation for employment in a particular profession, do not completely dominate HE degrees and certainly not to the extent that they do in HVE.
 13. These are similar arguments for the introduction of compulsory schooling, mobilised at the time of the industrial revolution (Williams 1961).
 14. 'Academic and intellectual capital are forms of cultural capital or power that originate within the university field and that accrue in response to the managerial, scholarly and scientific (including the social sciences) practices that take place there' (Rowlands 2018).
 15. While I think the concept of a global HE field still holds value, I am indebted to Tebeje Molla for pointing out that it is potentially under threat, with the rise in populism as a counter and the COVID-19 pandemic as a disrupter.

16. Even with Australia's 'demand-driven' HE system (i.e. as many funded places as universities requested), access to HE by underrepresented groups has continued at rates below their proportional representation in the nation's population. Perhaps counter-intuitively, their representation is lower in HVE than in HE more generally (Hodge et al. 2022).

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