

---

# Education, Skills and Social Justice in a Polarising World

---

## Between Technical Elites and Welfare Vocationalism

Bill Esmond and Liz Atkins

First published 2022

ISBN: 978-0-367-50333-8 (hbk)

ISBN: 978-0-367-50334-5 (pbk)

ISBN: 978-1-003-04952-4 (ebk)

## Chapter 2

### **Lessons of European VET? National systems and international prescriptions**

(CC BY-NC-ND 4.0)

DOI: 10.4324/9781003049524-2

The funder for this chapter is the University of Derby



# Lessons of European VET? National systems and international prescriptions

---

The hourglass thesis described in the opening chapter finds its strongest supporters in liberal Anglophone countries and their echoes in international policy discourse; that thesis is constructed largely around idealisations of European education and training. When the UK's post-Brexit Industrial Strategy proposes to 'establish a technical education system that rivals the best in the world', (DBEIS 2017, 11; see also Boles 2016; Williamson 2020) it points, if imprecisely, to international exemplars in Europe. Its proponents' requirement for educational practices articulated more closely with the labour market is supposedly exemplified by the dual training of Germany and, in kindred but distinctive forms, its immediate neighbours (DBIS/DfE 2016; Casey 2013). Yet European VET (in this chapter, we use the shorter description more common in Europe) is 'differently embedded within the education and labour market systems of any individual country' (Pilz 2016, 295) in quite distinctive ways from those in Anglophone countries; meanwhile, each of these relationships has problematic dimensions, as VET itself experiences tensions between its traditional role of preparing young people for skilled (usually manual) employment, and mounting pressure to prepare them for progression to higher education (Cedefop 2018; OECD 2020). In this chapter we examine the problematic relationship between VET's educational role and the employment sphere; in the following chapter our focus moves to its students' troubled relationships with higher education.

In addition to (or by contrast with) such approbation of European VET's industry links, these systems have provided support for claims of more educative and socially just possibilities within vocational routes. Many researchers note the distinctive basis of European practice, including the breadth of its notions of skill and the role of social partnership in skill formation (e.g., Brockmann et al. 2011; Deissinger 2015). For others, the inclusion of general education subjects taught in school advances claims to social justice by disrupting the reproductive tendencies of narrower vocational pathways: Nordic scholars argue that VET developed within a commitment to social justice and inclusion, associated with universalist welfare states and, at least in Finland and Sweden, comprehensive schooling (Michelsen and Stenström 2018; Nylund and Rosvall 2016, 2019). Such

foundations have, to various degrees, been undermined by marketisation and globalising forces, although path-dependent features have survived from earlier struggles and social settlements (Tomasson 1965; Gougoulakis and Christie 2012; Korpi and Palme 2003). International bodies, promoting reform agendas based on the hourglass thesis, focus increasingly on tertiary transitions at one pole and narrower work-based routes at the other: these ‘soft policies’ wash over national VET systems already suffering neoliberal erosion. With less meaningful progressions now offered to diminishing numbers of working-class young people, European exemplars not only hold out prospects of what VET in other countries might become; they also suggest possibilities for new divides.

Thus, VET in Europe suggests both the integration with work that the hourglass thesis demands, albeit in distinctive national frameworks, and also its converse: the proposition that VET can provide meaningful access to knowledge and an awareness of its broader purposes alongside, or even in contradiction of, its articulation to the employment sphere. In evaluating the validity of these claims, our primary concerns remain educational; but we extend our foundational discussions of social justice, reproduction and social change into further theoretical domains, including the relationship between educational policy and broader considerations of economic and welfare policy. This chapter reflects, in turn, on the connections of VET to employment; the extent to which these forms of VET provide access to broader curricula and ‘powerful’ knowledge (Young and Muller 2013); and the significance of wider changes in the economic and policy spheres that brought such arrangements into being and now threaten their erasure. Our purpose is primarily to discover what lessons Europe holds for the ambitions supported by the hourglass thesis; however, we also ask whether Europe itself shows emerging signs of the vocational education rift we identified in the opening chapter.

### **The hourglass conceptualisation of European VET: learning for work**

The international acclaim of VET’s successes in recent years has been predicated largely on its perceived successes in reducing youth unemployment and supporting transitions to work. The European Union’s ‘New Skills Agenda’ (European Commission 2016), reflecting increased international interest in workplace learning, builds on its associations with positive transitions into stable employment (ESDE 2015, see also Mühlemann 2016, Nilsson 2010). At first sight, these developments appear favourable to the development of VET. The EU’s VET agency, Cedefop (2018), notes its spread across the continent, its increasing coherence and recognition as part of the education system: in this, the attractions of systems that overlap the employment sphere and offer ‘a smoother transition to the labour market than countries with school-based VET’ (Jørgensen 2015) are held to be self-evident. Unsurprisingly, the distinctions among national VET systems have long been described in terms of their relationships with the productive economy:

comparisons of VET systems repeatedly designate this as an essential dimension (e.g., Bosch 2017; Rageth and Renold 2017; Green et al. 2009). Earlier accounts contrasted the location, rationale or governance of school-based vocational pathways in France and the UK's market-based post-school training to German dual training spanning industry and school settings (OECD 1985; Allmendinger 1989; Greinert 2005, Rauner and Wittig 2010). These comparisons assumed that national systems primarily prepare young people for work, albeit in different kinds of productive system (Maurice et al. 1986; Gallie 2007), and subject in turn to a range of social, cultural and political factors. Closer arrangements have a growing appeal to international policymakers, both because they imply lower costs to the state and because of their assumed contribution to economic competitiveness. This appeal has been strengthened by the economic crisis, with the OECD's (2020) release of educational statistics in September 2020 recognising VET's 'central role in ensuring the alignment between education and work, the successful transition into the labour market, and for employment and the economic recovery more generally' (9). This approbation is granted despite the greater disruption that VET suffered during the pandemic, acknowledging that 'many of the professions that formed the backbone of economic and social life during the lockdown hinge on vocational qualifications' (ibid., see also Avis et al. 2021).

Such interest has ever been strong in times of crisis: the OECD's thematic review of *Transition from Initial Education to Working Life*, launched in 1995 after slow economic recovery and the advent of competitive labour markets in eastern Europe, compared countries where young people moved relatively quickly to stable employment (German apprenticeships or Japanese school–employer networks) to those where young people experienced the 'churn' of temporary jobs (Ryan 1999; OECD 1999). David Raffé and colleagues (Raffé 2003, 2008, 2014; Ianelli and Raffé 2007), over an extended analysis, described the way different countries configure schooling, labour market and related institutions as 'transition systems', reflecting:

different institutional and structural arrangements, for example, in education and the labour market, which create different national 'logics' and result in different patterns of transition.

(Raffé 2008, 277)

This mapping of school–work linkages contrasted DACH (Germany, Austria, Switzerland) countries, with high educational standardisation and strong linkages to labour markets, to the USA's non-standardised system with 'weak market signals', whilst European nations including the UK offered 'strong market signals' through standardisation (Hannan et al. 1996). Later, Ianelli and Raffé (2007) contrasted 'education-based' Anglophone systems to European countries whose 'employment-based' transitions allowed employers or unions a greater role in the design, provision and assessment of learning programmes, providing 'strong and clear' labour-market signals to education (Raffé 2008, 285).

These distinctions retain some validity but in other respects have been undermined by societal change. VET retains associations with industrial sectors that have been diminished in favour of services employment. The OECD (2020) notes that 33% of its students are still engaged in engineering, manufacturing and construction, with only 17% in 'services' and 4% on the information and communication technologies at the heart of 'Industry 4.0' (26, Infographic 1). With its former certainties of transitions into skilled manual occupations undermined over recent decades, Cedefop (2018) attributes declining numbers in its strongholds to birth rates and the growing attractions of higher education. These have resulted not only in numerical decline relative to higher education numbers but also pressures inside VET, with rising demand for progression opportunities to higher education. Whilst the number of upper-secondary VET students in the EU27 with access to tertiary education declined from 1,477,289 to 1,424,586 (3.57%) between 2013 and 2018, those without direct access to tertiary education fell from 961,749 to 842,991 (12.35%) (Eurostat 2020). This shift in demand also leads to pressures on the VET curriculum, with demands for educational programmes to meet the requirements of higher education entry, a subject we return to below.

VET's successes in relation to labour market access remain centred on a minority of European countries that have established forms of 'dual training' which include substantial elements of work-based learning (chiefly Germany, Switzerland, Austria and Denmark). They are said to contribute to lower youth unemployment and greater social equality than countries where school-to-higher-education transitions once dominated (Iannelli and Raffe 2007). Thus, as Europe emerged slowly from the twenty-first-century's first economic crisis, only countries with established dual training systems could point to youth unemployment below 10% by 2015, compared to over 40% in Italy, Spain and Greece (Eurostat 2015 in Cedefop 2018). These countries continued to record significantly lower rates of unemployment for 15–24-year-olds in 2018 (Germany 6.2%, Austria 9.4%, Denmark 10.5%) than those for countries where the state has played a stronger role (France 20.7%, Sweden 16.8%). These differences had fallen from a decade earlier, over a period when countries with school-based systems had made their own turns in the direction of work-based learning (Eurostat 2019). Countries that once organised 'initial VET' (IVET) mainly through state schools, such as France, Holland, Sweden and Norway, have now developed stronger firm-based routes (Hardy and Ménard 2009; Michelsen 2018; Wesselink et al. 2010). The inclusion of varying periods of learning in the workplace alongside general education subjects is now common to those upper-secondary routes described as IVET across continental Europe. Nevertheless, important distinctions remain across European countries, with considerably greater differences from the organisation of further education and vocational courses in most liberal, English-speaking countries (Bosch and Charest 2008). The most critical are the complex relationships that support learning across institutional and

workplace spheres: these are irreducible to the employer prerogatives central to liberal policies in the Anglosphere and are discussed in the following section.

### **‘Dual training’ and institutional mechanisms**

In the policy discourse of English-speaking countries, the desideratum of VET is increasingly reduced to time spent in a work environment, in which employers determine behaviours and outcomes. The system most frequently selected as a putative model is dual training in Germany, where apprentices learn industry practices, often in small firms with lower levels of technology (Deissinger 1997). These apprenticeships are regulated by the state, co-managed with social partners through chambers (*Handelskammern*) and include continuing schooling; Rauner and Wittig (2010) argue that such combinations are ‘no special type of vocational education, but ... its constitutive feature’ (238). Yet in US and UK government policy discourses, the involvement of other social partners is scarcely acknowledged: only an appendix to the Sainsbury Review briefly describes the *Handelskammern* and references ‘the Federal Institute for Vocational Education and Training (BiBB), a tripartite organisation that also conducts labour market research to underpin VET decision making’ (Independent Panel on Technical Education 2016, 91).

The involvement of industry (often in small firms where the employer is the sole trainer) is central in Germany: the training firm decides who starts an apprenticeship; apprentices spend two thirds of their time in the workplace; and the chambers, dominated by the social partners, decide whether the apprentice has passed their training (Gessler 2017). Even in regard to its school-based component, the ‘learning field’ concept introduced in 1996 conceptualises vocational learning as proficiency in a series of relevant work situations, rather than academic disciplines (Rauner 2007). BIBB President Esser notes the immersion of the learner in the social practices of the firm as a key strength, arguing that only Germany, ‘Austria, a few Swiss cantons, Denmark and Luxembourg’ offer:

... experiential learning leading to an occupational qualification, and socialisation in the company [providing] a strong relevance and reputation for the standardised form of initial vocational training regulated in public law.

(Esser 2019, 5)

On this interpretation, employer-led behavioural norms predominate. Emmenegger and Seitzl (2020) detail the involvement of social partners at three levels of governance across Austria, Denmark, Germany, the Netherlands and Switzerland, arguing that the greatest differences are at the operational level. Gessler (2017) questions the dual nature of training at the local level, where employers and Chambers dominate, illustrating employer resistance to regulation by citing Braun’s (national head of the Chambers),

complaint of systems ‘out of control if, for example, a company that trains a plant mechanic apprentice has to deal with 72 pages of training regulations’ (Braun 2007 in Gessler 2017, 175). Nevertheless, arrangements at national level include collective employer bodies, trade unions and educational representatives: with origins far in the past, they have been contested and negotiated over a prolonged period, and are difficult to replicate (Thelen 2004; Martin and Swank 2011). This social and historical basis has implications for notions of policy transfer (Wiemann and Fuchs 2018). Relations between schools and work organisations in other European countries are initiated by schools and mediated by training agencies (Michelsen et al. 2021).

From a broader perspective, political economists have argued that this negotiated governance is a factor in the greater social equality of these countries. For example, Streeck (1991) argues that German training of highly skilled workers enabled the ‘diversified quality production’ strategies that have led to greater wage equality, which has since been extended into the service sector (Sorge and Streeck 2018). Such findings most frequently draw on the categories of ‘collectivist’ or ‘coordinated market’ approaches to VET found in the ‘varieties of capitalism’ literature (e.g., Hall and Soskice 2001). These analyses are widely referenced in the education literature as contrasts to the ‘liberal market’ approaches of Anglo-Saxon countries (Wheelahan and Moodie 2017; Arnold et al. 2018). In all countries with ‘occupational labour markets’, which for much of the population are ‘structured around standardised occupations that require specific formal training’ (Ebner et al. 2013, 281), substantial numbers of young people have been able to access worthwhile and rewarding employment, especially when large numbers of the cohort choose these routes, as in Switzerland. Yet the hourglass portrayal of dual training is largely limited to an apprenticeship system that is itself under pressure from the growth of higher education. The political economy literature also provides evidence of this system’s erosion, aligned to an emerging labour market stratification and ‘dualisation’ of welfare benefits (Busemeyer and Iversen 2011; Thelen 2014; Simoni and Vlandas 2020).

Influential as these analyses have been across a wide field of social science, they seldom address specifically educational questions but understand skill formation as ‘largely conditioned by the decisions made on the division of labor between firms, associations, and the state in providing and financing skills’ (Busemeyer and Trampusch 2011, 5). For these authors, the economist’s problem of training, as framed by Becker, is the incentive for firms to avoid training costs by ‘poaching’ skilled employees from competitors (Becker 1965): dual training’s axial achievement has been paradoxical collective action by competing firms, with some degree of state regulation and institutional linkage. By comparison, reformers in ‘Nordic statist’ and other countries ‘aimed at fully integrating vocational training into the general education system in order to promote educational and social mobility’ (Busemeyer and Trampusch 2011, 19). Yet in Germany and among its neighbours, VET systems extend beyond the apprenticeship route to include school-based (sometimes dubbed ‘preparatory’) VET (Deissinger 2007); whilst in

times of job shortages, general education can provide more successful application routes than lower-prestige VET pathways (Graf 2020). Since our own concerns relate chiefly to educational policies and practices that advance social justice, we examine precisely those education-based perspectives that either complement or contradict employment-based rationales. Unsurprisingly, Nordic countries provide our chief examples, discussed below; although both approaches have been diminished by a liberalisation of VET in recent years.

Above all, from an educational perspective, VET is not only defined by its relations with the labour market, with its selectivity, ‘mismatches’ and exclusions, but as the track for students denoted as inferior to those on general education pathways. From this perspective, it is difficult to attribute the successes of these systems directly to the primary role of employers, or to agree entirely with Unwin (2019) that the primary challenge for VET is ‘achieving sufficient levels of employer involvement in order to protect the centrality of the workplace in the process of skill formation’. Educational questions remain essential for an understanding of European VET that pays attention to processes, outcomes and social justice. Whether these should align to learning at work or be viewed as a complementary or alternative focus, remains a matter for discussion, which we explore further in the following section.

### **Educational perspectives on European VET: between learning and work**

For many educational researchers, the merits of European VET lie not in workplace training, nor even in its primacy but in its inclusion of general education subjects taught in schools. This teaching has been described as meeting various objectives: contributing to citizenship, forming a foundation for employment expertise or supporting progression to higher levels (Aarkrog 2019). Thus, these subjects have a role to play from the employment-based perspective described above: as complementing procedural with declarative knowledge (‘knowing how’ with ‘knowing what’ in Ryle’s terms) or simplified even further into terms of theory and practice, using binaries that oversimplify the iterative nature of vocational knowledge (Young 2006). Contemporary emphasis on the need for education to be ‘relevant’ and ‘useful’ neglects the need to connect everyday experience to specialised knowledge (Gamble 2014). Thus, ‘school subjects’ that support or have interactive relationships with learning at work can be seen as important to raising occupational expertise to higher levels. The combination of this work experience with school subjects opens up rich possibilities for complex, iterative and interpenetrating learning between school and workplace (Winch 2000; Guile and Young 2003). Attempts to connect academic and vocational spheres recall demands for a ‘linked’ curriculum that identifies connections between general and vocational knowledge, as opposed to separate tracks or a unified curriculum (Young et al. 1997). The specificity of European credentials and labour market links has been



contrasted with Anglophone countries' 'looser ties between vocational learning and specific occupations ... often associated with lower parity of esteem' (Thompson 2019, 74; see also Wheelahan and Moodie 2017). Yet, at the local level, teachers may have little involvement with these linkages, so that students are left to navigate these boundaries for themselves (Ferm 2021; Esmond 2020). Whilst 'dual' routes provide opportunities for more critical transitions to employment, their educational possibilities and limitations are under-theorised in the literature.

Further aspects of the school curriculum are still less directly linked to work and sometimes conceived in terms of broader citizenship. A place for civic education within vocational programmes animated early pioneers of VET, which has roots in the moral approaches of guilds and the civic mission envisaged by early reformers such as Kerschensteiner (Gonon 2009; Gessler and Howe 2015). Deissinger and Gonon suggest that an interpenetration of educational and work spheres is possible without diminishing the integrity of educational practice: they argue that the underlying principles of VET in Germany and Switzerland, the conceptualisation of occupation or profession as *Beruf* and of education as *Bildung*:

were and still are conceived as congruent, not rivalling concepts. ... These categories cannot be separated from social and economic developments, since they interact with them, but they represent a cultural sphere of their own.

(Deissinger and Gonon 2021, 2)

This analysis denotes 'school subjects' and learning at work as both external to the world of production and its demands, in a way that is unacknowledged by international policy discourses: both *Beruf* and *Bildung* represent some form of relative autonomy, with not only schooling but workplace training constituting a space for activity distinct from the requirements of production. Such autonomy is not always easy to discern in employment settings, especially in small firms where apprentices provide a low-cost production resource. Wheelahan (2007, 2015) notes that where students are required to have a knowledge of academic curricula, this is generally concealed within vocational studies that do not explicitly acknowledge or reward their learning. The relative weight of the non-vocational curriculum appears as a touchstone for many researchers, who contrast this to the narrow vocationalism preparing the learner for a defined job with a single employer, exemplified by the assessment of competences in UK NVQs (Wolf 1995).

The inclusion of general education subjects thus appears as a necessary condition for these educational forms to meet the criteria of social justice. Their exclusion is pivotal to unjust and reproductive forms of VET, constituting a central aspect of vocational tracking. Critique of this exclusion process frequently draws on the work of Bernstein and Michael Young, with the denial of access to theoretical or 'powerful' knowledge excluding working-class young people from the

understanding of the social and natural world that lies beyond personal experience, and by implication from society's conversation (Bernstein 2000; Young 2008; Guile et al. 2018). Language occupies a central role in this divide: middle-class students, whose modes of communication support the symbolic and generalised, are favoured with access to selective general education, whilst working-class youth, whose speech facilitates practical action, are assigned to vocational tracks (Gamble 2006; Tarabini and Jacovkis 2021). This implies that the explicit inclusion of general education subjects, securing greater parity between general and vocational education routes, is most disruptive of reproductive, divisive curricula, providing a key justification for European forms of VET.

Other scholars associate the development of VET with progressive educational practices, welfare states and the social forces that brought them into being. The most explicit repudiation of VET's links to productive systems has been advanced in relation to Scandinavian countries, where scholars have sought to define a common heritage in universalist models of social policy (Virolainen and Persson Thunqvist 2017; Michelsen and Stenström 2018). The identification of Scandinavian VET with Esping-Andersen's (1990) three 'worlds of welfare' (universalist Nordic, labour market-based Germanic and liberal Anglophone) also captures a historical dynamic, with welfare regimes in Scandinavia conceptualised through 'power-resource' theory as the result of successful mobilisations of the labour movement and its allies. During the 30 years after 1945, European economies overtook the productivity of the United Kingdom in the 1960s and the United States in the 1980s (Piketty 2020, 513–17). In this expansion of productive forces, trade unions and social-democratic parties grew in strength: their demands for expansion of welfare spending, including education, met little active resistance, reflecting their advantages to employers (Estevez-Abe et al. 2001). Particularly in Sweden, vocational education became a school-based phenomenon, reflecting the longstanding concern of the social democratic party (SAP) and major trade union federation (LO) to reduce the distinction between general and vocational education, providing equal access to advanced secondary (and, more recently, tertiary) education (Nylund et al. 2017). The opening up of admission to upper-secondary education in 1971 led to a huge expansion in vocational studies, with 75% of entrants choosing these options in the mid-1980s; notwithstanding the strengthening of vocational content from 2011, this remains the main VET route in Sweden (Olofsson and Thunqvist 2018). Given the very different arrangements of Norway's 2+2 and Denmark's dual training, however, Nordic claims to provide socially just VET cannot rest on identification with comprehensive schooling alone.

To identify VET with the 'universalist' welfare state is to imply that the possibilities of socially just VET lie correspondingly in its separation from earlier, employment-based inequalities. Under early welfare states, the most secure workers were incentivised to insure themselves against risk through employment-based insurance; those in most need of support received marginal benefits as incentives to work. These 'dualistic' distinctions between

labour-market-based incentives for private action and stigmatised minima for the most disadvantaged were set aside by Nordic post-war reforms, which Esping-Andersen (1985) characterised as ‘decommodification’, action by the state against the interests of markets. The experience of working-class students, especially those from disadvantaged groups, perhaps rarely lived up to idealised social-democratic notions: Grønberg’s (2015) ethnography of socialisation into industry norms with its hints of low-level racism exemplifies a stark contrast to the idealism of policy rhetoric. In any case, these historical developments, reflecting the emergence of VET during a period of relative social peace and prosperity following the Second World War when secondary and then advanced secondary schooling reached universal levels, now lie in the past: a liberalisation of VET has extended to Nordic, and especially Swedish, VET. We discuss these developments now in the broader context of the policy regimes that unfolded across the developed world from the late twentieth century.

### **VET in times of economic crisis and neoliberalism**

The period of post-war growth ended in highly visible reversals of social policy, rationalised by the international recessions from the mid-1970s onwards. The transitions to service-based economies, financialisation and the transitions to market economies in Eastern Europe all contributed to a policy shift that began in the UK and USA from the late 1970s. Privileging the objectives of private business and allocating public education the leading demand-side role, this shift is generally associated with Hayek (1944) and others concerned to reduce the role of the state in regulating business and social policy: the post-war decline in social inequality went into rapid reverse (Piketty 2014, 2020). Glynn (2007) argues that these policies responded to ‘challenges to capital’ in the post-war period and paved the way for international deregulation, yet proved unable to demonstrate improved productivity or stable labour market transitions. More specifically, ‘public interest’ theories (e.g., Mead 1992) sought to end spending on an ‘underclass’ inclined to criminality. The outcome was the substitution for welfare provision of training programmes during the mass unemployment of the 1980s and 90s: with young people affected disproportionately by unemployment, these began to overshadow educational programmes for employed young workers (Ainley and Corney 1990). However, their reframing of transitions as getting young people into work helped to drown out the broader social and educational contributions of VET.

Whilst these policies first emerged in the economies of Anglophone countries, international bodies such as the OECD and World Bank also promoted liberalising youth and education policies from this point (e.g., OECD/CERI 1975; OECD 1985, 1995). These interventions frame VET and young people’s transitions within technocratic discourses that routinely acknowledge national systems but disseminate models of ‘success’ to member states. Examples are the qualifications frameworks adopted from England and other Anglophone

countries, now reframed for European consumption (Ante 2015; Clarke and Winch 2015). Whilst these reference the role of ‘social partners’ (employers and trade unions), they conceal the conflicts over skill that were once explicit in frameworks of industrial relations (Stuart 2019). The transformation of employment relations, replacing collective bargaining by individualised, or employer-led, employee relations (Baccaro and Howell 2017), finds its echo in education and training. As notions of more participatory employment practices have been overtaken by lean practices and darker visions of automation, an accompanying transformation of training into business-focused, individuated ‘human resource development’ provides important context for the liberalisation of VET (Berggren 1993; Rausch et al. 2020). This has reinforced calls for VET to become ever more responsive to labour markets and the ‘demand, from some quarters, for VET to be tightly focused on supplying the skills for a specific, narrowly defined occupation’ (Cedefop 2018, 7). International bodies such as the OECD and EU, with their regret of skill shortages and mismatches, position education as an inadequate tool of modern economies that needs to be refashioned to generate suitable labour market entrants.

This ideological shift, enshrined in lifelong learning policies inviting young people to ‘invent’ their own adulthoods and biographies (Walther et al. 2006) steadily eroded notions of distributive justice in favour of meritocracy. Despite a rhetoric of social justice, reforms motivated by considerations of inclusivity and supporting learner-centred pedagogies were heavily invested in the perspectives of human capital theory and lifelong learning. Here the state assumes that each individual, irrespective of circumstance, is responsible for their personal educational outcomes and subsequent opportunities in the labour market. Billett et al. (2010) argue that: ‘In education, policy prescriptions have promoted lifelong learning as a means by which individuals are urged to insure themselves against the risk of unemployment and social exclusion’ (475). They echo observations that blame is attributed by the state to individuals who fail to meet their perceived civic responsibility of engaging with lifelong learning (Ainley and Corney 1990, 94–95, see also Atkins 2009). Billett et al. (2010) cite Walther, du Bois-Reymond and Biggart, whose work has drawn together threads of welfare policy and education in youth policy, noting that:

Youth as a problem implied a corrective and treatment intervention, a re-conceptualisation of youth as a resource calls for policies that aim to mobilise and activate young people.

(Walther et al. 2006, 11)

Thus, interventions aimed at ‘activating’ the marginalised came to dominate policy discourses in several countries over the last 30 years (Pohl and Walther 2007). National differences of course remain: studies of youth transitions by Walther and colleagues have compared the distinctive education and training policies, concepts of disadvantage and youth, as well as the focus of policy

interventions supporting transitions in each country, adding the 'sub-protective' (Gallie and Paugam 2000) support of southern European and post-communist states to Esping-Andersson's welfare regimes (Walther et al. 2004; Walther 2006; Walther et al. 2006; Cuconato and Walther 2015). Yet educational attempts to attenuate the inherently reproductive logic of tracking have been weakened across the developed countries.

Such developments have unfolded, albeit in distinctive ways, even in Scandinavia. The divergence of Nordic VET reflects different responses to comprehensive education and welfare provision in recent years: whilst schooling in Sweden has undergone a far-reaching liberalisation since the 1990s, Finland followed its example of comprehensivisation (Virolainen and Persson Thunqvist 2017). Scandinavian researchers caution against presenting welfare regimes in a static manner, neglecting change and transformation (Jørgensen et al. 2019, 279). Persson Thunqvist et al. (2019) for example compare the different approaches that business interests in Norway and Sweden took to key reforms in the 1990s. In Norway, labour and business interests agreed a division of labour through the 2+2 programme (two years of broad-based school-based preparation followed by specialisation on a two-year apprenticeship, or a route to university via a third school year). In Sweden, the privatisation of schools presented opportunities for the profitable establishment of vocational school provision without the overheads of apprenticeship: the 2011 creation of an employment-based apprenticeship attracted little support (Andersson et al. 2015). Sweden's liberalisation has produced a demand-led market that produces half the number of upper VET students in Norway or Denmark and where, 'in a school-based context ... there is little trust that firms in the capitalist private sector will exercise responsibility for fostering democratic citizens' (Persson Thunqvist et al. 2019, 309).

This liberalising impulse, then, has taken place in distinctive ways and at different speeds across the developed world but has been characterised widely by a growing divide in youth transitions. The concept of transitions had earlier described entry to adulthood, family life, stable employment, and housing (Furlong and Cartmel 2007; Bynner 2005); however, as VET has assumed greater political significance, its mission has become correspondingly reduced to young people getting jobs. Middle-class young people became better placed to develop 'choice biographies' (Ball et al. 2000, 58) as societal changes eroded the class structures associated with industrial capitalism. Their transitions were increasingly mediated by higher education progression, which became 'one of the decencies of life' for broad layers of this class (Mandler 2020, 46). For others, transitions became 'variously extended, fractured, precarious and/or troubled in other ways' (Atkins 2017, 641) with differences across social classes intersecting with those of 'race' and gender, contributing to their increasingly non-linear and fragmented nature (Evans 2002; Furlong et al. 2003). As Furlong expresses it, 'New mechanisms of exclusion take root in the spaces opened up in protracted and individualized transitions' (Furlong 2010, 517). The focus

on ALMP and vocationalisation of school curricula became a default option for youth excluded from university routes. Yet neither route has articulated as closely with labour markets as lifelong learning rhetoric suggested: alongside general education routes organised around subject-based curricula, VET programmes in many countries struggled to retain their relationship with occupations that were themselves subject to economic and technological change. Despite their demand for education to meet the needs of employment, neoliberal policies appear to have presided over VET's de-coupling from a diversifying labour market. As new tensions have emerged, including within both Nordic and Germanic countries, we find the outline of a further divide taking shape first in the labour market and then across the territory of vocational education.

## **A dualisation of VET?**

Chapter 1 observed that polarisation between growing university study and educational dropout reflected the polarisation of economic and social structures over the last 40 years. We noted that, especially in English-speaking countries, falling manufacturing employment alongside the growth of service jobs, including both graduate and unskilled occupations, has led to a polarisation of employment (Autor et al. 2006; Goos and Manning 2007). This has led to (rather than resulted from) falling provision for the skill in engineering and construction which vocational schools and colleges traditionally taught. Insofar as European VET systems, especially in Germany and its immediate neighbours, can be held up as models for the 'missing middle', this reflects to varying degrees lower falls in manufacturing employment, and a more successful adaptation to changing economic structures. World Bank (2021) reports, for example, show 19% of manufacturing value added as a percentage of GDP in Germany, 17% in Austria, 19% in Switzerland and 13% in Denmark, as opposed to 11% in the USA, 9% in the UK, 10% in Canada and 6% in Australia. These figures also show sharp falls in the manufacturing base of the latter countries, as opposed to more gradual declines in central European countries.

Yet even in its continental European heartlands, despite lower reductions in manufacturing employment than in the US or UK, VET's role is no longer seen as reproducing the skilled manual worker or *Facharbeiter*. In Germany, Kupfer (2010) notes that middle-class youth increasingly tend to capture the most advantageous apprenticeships on the basis of general education qualifications; Baethge and Wolter (2015) describe this increase in the 'cognitive preconditions for VET' leading to aspirations to higher levels of education, whilst youth from migrant families and other disadvantaged groups are relegated to low-level service employment. This applies not only to VET routes for students seeking services employment, where more divergent roles and rewards can suggest progression to tertiary levels. Above all, the future role of manufacturing has been increasingly conceived as a process in which a smaller number of workers in developed

countries undertake more technologically advanced roles. By the early twenty-first century, the OECD was noting optimistically that manufacturing sectors had declined unevenly; that a global division of labour was increasing manufacturing trade more than production; that OECD countries dominated innovation; and the character of manufacturing work was changing, including a blurring of services and an increase in automation (Pilat et al. 2006). A decade later, the rhetoric of Industry 4.0 and its calls for automation expertise were in full swing, captured by the OECD's (2017) *The Next Production Revolution*. Irrespective of the accuracy of its predictions, craft skills learnt in small workshops, or schools with rudimentary equipment, appear ill-equipped to prepare for a revolution in manufacturing technologies and automation. As large firms are replaced by complex supply chains, and the 'de-layering' of organisations leads to the collapse of internal labour markets, opportunities for promotion are replaced by demands for entrants with high-level qualifications (Rauner 2019). Whilst this suggests that traditional VET might be displaced by higher education qualifications, the OECD rather breathlessly predicted that VET itself would experience automation:

Opportunities for skills upgrading must match the pace of technological change ... Some traditional skills sets will need to be modified. For example, engineers now presented with 3D printing may need to "unlearn" parts of their classical engineering education. Overall, imparting digital skills, and skills which complement machines, is vital. Digital technology could of course also enhance skills development, for example through massive open online courses (MOOCs). The possible use of AI to tailor-make training in real time, in response to workers' specific backgrounds and the training needs, is currently being investigated.

(Nolan 2017)

Although some of these hopes (such as those of MOOCs) have already evaporated, this discourse of technological advance has supported an international process of credentialisation: calls for both tertiary qualifications to meet industry needs and curricula at secondary levels have inevitably followed (Cedefop 2018). Half of all EU jobs are said to require higher qualifications (European Commission 2016, S3.2). However, these are assumed to be based on industry needs rather than higher education practices: Vandeplas and Thum-Thysen note in an EU report that 'graduates of a specific type ... [can be] an important reason for policy concern,' cautiously suggesting that 'upper secondary education is ... considered the minimum qualification for a successful integration in the labour market and in society' (2019, 40). As Brynin and Longhi (2009) have pointed out, actors investing in skills above the level of economic requirements pose theoretical difficulties for human capital theory, since these can only secure returns if they provide utility in the marketplace; what constitutes 'overqualification' is temporally constituted (Lauder and Mayhew 2020). However, such international discourses, promoting

more cost-effective and employer-responsive tertiary progression, echo the 'polarisation' discourses of Anglophone countries that draw directly on the experience of VET's European heartlands. In some central European countries, VET has sought to accommodate these changing conditions, such as the professional diplomas developed in Switzerland; others, including Germany, have seen the development of dual or hybrid qualifications outside VET (Graf 2013). A liberalised variant in Sweden, the Technical College scheme, operates in the private sector as well as operating within 'a so-called statist regime' (Persson and Hermelin 2018, 476). These developments have met with some concern in VET circles, with the 'academicisation' of VET or 'tertiarisation', seen as leading to possibilities of substitution, and the erosion of VET's position as the dominant educational pathway in the face of this type of higher education growth. These possibilities, discussed further in the following chapter, have been theorised as the 'layering' of an alternative system alongside VET (Conran and Thelen 2016; Esmond 2019).

The paramount difficulty for VET is the possibility that, as the most rewarding jobs are increasingly approached by higher education routes, VET itself becomes a route to low-status, low-wage occupations. The continuing development of school-based programmes and the difficulty of accessing fully qualifying VET programmes has also created difficulties for low-attaining youth, including migrants and refugees: Haasler (2020) warns that this undermines the integration function of VET, reflecting a dislocation of VET from employment already noted by Walden and Troltsch (2011) at a time when 60% of the age cohort entered the dual system. The European Economic and Social Committee's (2018) demands for 'efficient VET' and market deregulation to create the 'flexibility' to accommodate new entrants, a theme paralleled by the OECD's (2020) urging for post-COVID 'resilience', suggest a market-based dualisation of VET, with the lowest-ranked courses suffering an erosion of quality standards that can cement its decline, whilst the upper strata are drawn towards tertiary progression routes of various kinds. We discuss these possibilities in the following chapter.

## Conclusion

In this chapter we have traced the development of European VET and its later reduction to the limited aspirations of lifelong learning and activation policies; finally, we have arrived at evidence for an emerging dualisation that we identified in our first chapter as a possible consequence of the hourglass thesis. Polarising forces appear to be acting on the very models of VET that the advocates of this thesis suggest. In continental Europe, access to fulfilling work that provides opportunities for discretion and the use of capabilities appears increasingly mediated by higher education qualifications. Where working-class young people reach out in greater numbers even for tertiary education's more marginal or hybrid forms, VET becomes increasingly the domain of the most disadvantaged. Here, then, we see a division precisely in those countries that



the polarisation thesis designates as their model. In the following chapter, we examine the complex boundaries between this field and higher education, and the difficulties encountered by students attempting to cross these boundaries.

In our analysis of European VET, we noted that, apart from its role in providing transitions to work, VET has also provided access to progressively more advanced stages of education. The development of school-based VET and ‘dual training’ in Europe has provided post-war generations with access to education at higher levels than previously possible. For much of this period, these developments revolved round upper-secondary education. However, given the ‘tertiarisation’ of education, with ever greater numbers progressing into post-school education, these questions of access now increasingly revolve around higher levels of study. Questions of higher education access were of marginal interest when most school-leavers went to work, with or without training, aged 14 or 15. As vocational students have entered upper-secondary education in ever-greater numbers, questions of tertiary access have become ever more pressing. In response, an elite of higher institutions has ratcheted up both resistance and diversionary strategies; we still find plentiful evidence that a polarised world is driving educational divides, rather than the reverse. We address these divides, and the difficulty of disadvantaged students in crossing them, in the following chapter.

## References

- Aarkrog, Vibe. (2019). The interrelation of general education and VET. In *The Wiley Handbook of Vocational Education and Training*, edited by D. Guile & L. Unwin. Pp. 275–291. Hoboken, NJ: Wiley Blackwell.
- Ainley, Patrick & Corney, Martin. (1990). *Training for the Future: The rise and fall of the Manpower Services Commission*. London: Cassell.
- Allmendinger, Jutta. (1989). Educational systems and labor market outcomes. *European Sociological Review*, 5(3), 231–250.
- Andersson, Ingela, Wärvik, Gun-Britt & Thång, Per-Olof. (2015). Formation of apprenticeships in the Swedish education system: Different stakeholder perspectives. *International Journal for Research in Vocational Education and Training*, 2(1), 1–24. <https://doi.org/10.13152/IJRVET.2.1.1>.
- Ante, Christine. (2015). *The Europeanisation of Vocational Education and Training*. Cham: Springer International Publishing.
- Arnold, Christine Helen, Wheelahan, Leesa, Moodie, Gavin, Beaulieu, Jacqueline & Taylor-Cline, Jean-Claude. (2018). Mapping the typology of transition systems in a liberal market economy: The case of Canada. *Journal of Education and Work*, 31(2), 125–143. doi:10.1080/13639080.2017.1414941.
- Atkins, Liz. (2009). *Invisible Students, Impossible Dreams: Experiencing vocational education 14–19*. Stoke-on Trent: Trentham Books.
- Autor, David H., Katz, Lawrence F. & Kearney, Melissa S. (2006). The polarization of the U.S. labor market. *American Economic Review*, 96(2), 189–194.
- Avis, James., Atkins, Liz., Esmond, Bill & McGrath, Simon. (2021). Re-conceptualising VET: Responses to Covid-19. *Journal of Vocational Education & Training*, 73(1), 1–23. <https://doi.org/10.1080/13636820.2020.1861068>.

- Baccaro, Lucio & Howell, Chris. (2017). *Trajectories of Neoliberal Transformation: European industrial relations since the 1970s*. Cambridge: Cambridge University Press.
- Baethge, Martin & Wolter, Andrä. (2015). The German skill formation model in transition: From dual system of VET to higher education? *Journal of Labour Market Research*, 48, 97–112. doi:10.1007/s12651-015-0181-x.
- Ball, Stephen J., Maguire, Meg & Macrae, S. (2000) *Choice, Pathways and Transitions Post-16: New youth, new economies in the global city*. London: Routledge/Falmer.
- Becker, G. (1964). *Human Capital*. Chicago: University of Chicago Press.
- Berggren, Christian. (1993). *Alternatives to Lean Production: Work organisation in the Swedish auto industry*. New York: Cornell University Press.
- Bernstein, Basil. (2000). *Pedagogy, Symbolic Control and Identity*. Oxford: Rowman & Littlefield.
- Billett, S., S. Thomas, C. Sim, G. Johnson, S. Hay & J. Ryan. (2010). Constructing productive post-school transitions: An analysis of Australian schooling policies. *Journal of Education and Work* 23(5), 471–489. doi:10.1080/13639080.2010.526596.
- Boles, Nick. (2016). Foreword by the Minister of State for Skills. In DfE/DBEIS (Department for Education/Department for Business, Energy, Innovation and Skills), *Post-16 Skills Plan* Pp. 5–6. London: DfE/DBEIS.
- Bosch, Gerhard. (2017). Different National Skill Systems. In *The Oxford Handbook of Skills and Training*, edited by C. Warhurst, K. Mayhew, D. Finegold & J. Buchanan. Pp. 424–433. Oxford: Oxford University Press.
- Bosch, Gerhard & Charest, Jean. (2008). Vocational training and the labour market in liberal and coordinated economies. *Industrial Relations Journal*, 39(5), 428–447. doi:10.1111/j.1468-2338.2008.00497.x.
- Brockmann, Michaela, Clarke, Linda & Winch, Christopher. (2011). *Knowledge, Skills and Competence in the European Labour Market*. London: Routledge.
- Brynin, Malcolm & Longhi, Simonetta. (2009). Overqualification: Major or minor mismatch? *Economics of Education Review*, 28(1), 114–121. doi:10.1016/j.econedurev.2008.01.003.
- Busemeyer, Marius R. & Iversen, Torben. (2011). Collective skill systems, wage bargaining, and labor market stratification. In *The Political Economy of Collective Skill Formation*, edited by M. R. Busemeyer & C. Trampusch. Oxford: Oxford University Press.
- Busemeyer Marius R. & Trampusch, Christine. (2011). *The Political Economy of Collective Skill Formation*. Oxford: Oxford University Press.
- Bynner, John. (2005). Rethinking the youth phase of the life-course: The case for emerging adulthood? *Journal of Youth Studies*, 8(4), 367–384. doi:10.1080/13676260500431628.
- Casey, P. (2013). *The Vocational Education and Training System in Netherlands*. Wath-upon-Deerne: UK Commission for Employment and Skills.
- Cedefop (European Centre for the Development of Vocational Training). (2018). *The Changing Nature and Role of Vocational Education and Training in Europe, Volume 3: The responsiveness of European VET systems to external change (1995–2015)*. Cedefop research paper No. 67. Luxembourg: Publications Office of the European Union. <http://data.europa.eu/doi/10.2801/621137>.
- Clarke, Linda & Winch, Christopher. (2015). Have Anglo-Saxon concepts really influenced the development of European qualifications policy? *Research in Comparative and International Education*, 10(4), 593–606. doi:10.1177%2F1745499915613247.

- Conran, J. & K. Thelen. (2016). Institutional change. In *The Oxford Handbook of Historical Institutionalism*, edited by O. Fioretos, T.G. Falleti & A. Sheingate. Pp. 51–70. Oxford: Oxford University Press.
- Cuconato, Morena & Walther, Andreas. (2015). ‘Doing transitions’ in education. *International Journal of Qualitative Studies in Education*, 28(3), 283–296. doi:10.1080/09518398.2014.987851.
- DBEIS (Department for Business, Energy, Industry and Science). (2017). *Industrial Strategy: Building a Britain fit for the future*. HM Government. Retrieved from [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/664563/industrial-strategy-white-paper-web-ready-version.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/664563/industrial-strategy-white-paper-web-ready-version.pdf).
- DBIS/DfE (Department for Business Innovation and Skills/Department for Education). (2016). *Post-16 Skills Plan*. Cm 9280. GOV.UK. [www.gov.uk/government/publications/post-16-skills-plan-and-independent-report-on-technical-education](http://www.gov.uk/government/publications/post-16-skills-plan-and-independent-report-on-technical-education).
- Deissinger, Thomas. (1997). The German dual system – a model for Europe? *Education + Training*, 39(8), 297–302. doi:10.1108/00400919710190090.
- Deissinger, Thomas. (2007). ‘Making schools practical.’ Practice firms and their function in the full-time vocational school system in Germany. *Education + Training*, 49(5) 364–379. doi:10.1108/00400910710762931.
- Deissinger, Thomas. (2015). International education policy: Its influence on the conception of VET and the VET system in Germany. *Research in Comparative and International Education*, 10(4), 607–621. doi:10.1177/1745499915613248.
- Deissinger, Thomas & Gonon, Philipp. (2021). The development and cultural foundations of dual apprenticeships – a comparison of Germany and Switzerland. *Journal of Vocational Education & Training*. doi:10.1080/13636820.2020.1863451.
- Ebner C, Graf L & Nikolai R. (2013). New Institutional Linkages between Dual Vocational Training and Higher Education: A comparative analysis of Germany, Austria and Switzerland. In *Integration and Inequality in Educational Institutions*, edited by M. Windzio. Dordrecht: Springer.
- Emmenegger, Patrick & Seitzl, Lina. (2020). Social partner involvement in collective skill formation governance. A comparison of Austria, Denmark, Germany, the Netherlands and Switzerland. *Transfer: European Review of Labour and Research*, 26(1), 27–42. <https://doi.org/10.1177/1024258919896897>.
- ESDE (Employment and Social Developments in Europe). (2015). *Review*. Brussels: Directorate-General for Employment, Social Affairs and Inclusion Office J-27 03/092 B-1049.
- Esmond, Bill. (2019). Continental selections? Institutional actors and market mechanisms in post-16 education in England. *Research in Post-Compulsory Education*, 24(2–3), 311–330. doi:10.1080/13596748.2019.1596434.
- Esmond, Bill. (2020). Emerging apprenticeship practitioner roles in England: Conceptualising the subaltern educator. *Vocations and Learning*, 13(2), 179–196. <https://dx.doi.org/10.1007/s12186-019-09233-0>.
- Esping-Andersen, Gösta. (1985). *The Social Foundations of Post-Industrial Economies*. Oxford: Oxford University Press.
- Esping-Andersen, Gösta. (1990). *The Three Worlds of Welfare Capitalism*. Cambridge: Polity Press.
- Esser, Friedrich Hubert. (2019). Foreword. In *Work-based Learning as a Pathway to Competence-based Education*, edited by Anke Bahl & Agnes Dietzen. Pp. 5–8. Bonn: Federal Institute for Vocational Education and Training (BIBB).

- Estevez-Abe, Margarita, Iversen, Torben & Soskice, David. (2001). Social Protection and the Formation of Skills: A reinterpretation of the welfare state. In *Varieties of capitalism: The institutional foundations of comparative advantage*, edited by Peter A. Hall & David Soskice. Pp. 145–183. Oxford: Oxford University Press.
- European Commission. (2016). *A New Skills Agenda for Europe: Working together to strengthen human capital, employability and competitiveness*. COM (2016) 381 final. Brussels: European Commission. Retrieved from <https://ec.europa.eu/transparency/regdoc/rep/1/2016/EN/1-2016-381-EN-F1-1.PDF>.
- European Economic and Social Committee. (2018). *Skills Mismatches: An impediment to the competitiveness of EU businesses*. Brussels: European Union. Retrieved from [www.eesc.europa.eu/sites/default/files/files/qe-02-18-922-en-n.pdf](http://www.eesc.europa.eu/sites/default/files/files/qe-02-18-922-en-n.pdf).
- Eurostat. (2019). *Youth Unemployment Rate by Sex [dataset]*. Brussels: European Commission. Retrieved from <https://ec.europa.eu/eurostat/databrowser/view/tesem140/default/table?lang=en>.
- Eurostat. (2020). Vocational education and training statistics. *Eurostat: Statistics explained*. Retrieved from [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Vocational\\_education\\_and\\_training\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Vocational_education_and_training_statistics).
- Evans, Karen. (2002). Taking control of their lives? Agency in young adult transitions in England and the New Germany. *Journal of Youth Studies*, 5(3), 245–269. doi:10.1080/1367626022000005965.
- Ferm, Lisa. (2021). Vocational students' ways of handling the academic/vocational divide. *International Journal for Research in Vocational Education and Training*, 8(1), 1–20. <https://doi.org/10.13152/IJR.VET.8.1.1>.
- Furlong, Andy. (2010). Transitions from education to work: New perspectives from Europe and beyond. *British Journal of Sociology of Education*, 31(4), 515–518. doi:10.1080/01425692.2010.484926.
- Furlong, A. & Cartmel, F. (2007). *Young People and Social Change: New perspectives*. Maidenhead: Open University Press.
- Furlong, A., Cartmel, F., Biggart, A., Sweeting, H. & West, P. (2003). *Youth Transitions: Patterns of vulnerability and processes of social inclusion*. Edinburgh: The Stationery Office.
- Gallie, Duncan. (2007). Production regimes and the quality of employment in Europe. *Annual Review of Sociology*, 33, 85–104. doi:10.1146/annurev.soc.33.040406.131724.
- Gallie, Duncan & Paugam, Serge. (Eds.). (2000). *Welfare Regimes and the Experience of Unemployment in Europe*. Oxford: Oxford University Press.
- Gamble, Jeanne. (2006). Theory and practice in the vocational curriculum. In *Knowledge, Curriculum and Qualifications for South African Further Education*, edited by Michael Young & Jeanne Gamble. Pp. 87–103. Cape Town: HSRC Press.
- Gamble, Jeanne. (2014). “Approaching the sacred”: Directionality in the relation between curriculum and knowledge structure. *British Journal of Sociology of Education*, 35(1), 56–72. doi:10.1080/01425692.2012.740802.
- Gessler, Michael. (2017). The lack of collaboration between companies and schools in the German Dual Apprenticeship System: Historical background and recent data. *International Journal for Research in Vocational Education and Training*, 4(2), 164–195. doi:10.13152/IJR.VET.4.2.4.
- Gessler, Michael & Howe, Falk. (2015). From the reality of work to grounded work-based learning in German vocational education and training: Background, concept and tools. *International Journal for Research in Vocational Education and Training*, 2(3), 214–238. doi:10.13152/IJR.VET.2.3.6.

- Glyn, Andrew. (2007). *Capitalism Unleashed: Finance, globalization, and welfare*. Oxford: Oxford University Press.
- Gonon, Philip. (2009). *The Quest for Modern Vocational Education: Georg Kerschensteiner between Dewey, Weber and Simmel*. Bern: Peter Lang.
- Goos, Maarten & Manning, Alan. (2007). Lousy and lovely jobs: The rising polarization of work in Britain. *Review of Economics and Statistics*, 89(1), 118–133.
- Gougoulakis, Petros & Christie, Michael. (2012). Popular education in times of societal transformation: A Swedish perspective. *Australian Journal of Adult Learning*, 52(2), 237–256.
- Graf, Lukas. (2013). *The Hybridization of Vocational Training and Higher Education in Austria, Germany, and Switzerland*. Opladen: Budrich UniPress.
- Graf, Lukas. (2020). Skill Formation in Cross-border Contexts: The case of the trina-tional Upper Rhine region. In *Comparative Vocational Education Research: Enduring challenges and new ways forward*, edited by Matthias Pilz & Junmin Li. Pp. 131–148. Wiesbaden: Springer VS.
- Green, Andy, Oketch, Moses O. & Preston, John. (2009). Making global classifications of types and levels of TVET. In *International Handbook of Education for the Changing World of Work*, edited by Felix Rauner & Rupert McLean. Pp. 2067–2080. Cham: Springer.
- Greinert, W-D. (2005). *Mass Vocational Education and Training in Europe: Classical models of the 19th century and training in England, France and Germany during the first half of the 20th*. Luxembourg: Cedefop.
- Grønberg, L. (2015). ‘It’s like the Immigrants Stick Together, the Stupid Ones, and the Ones Who Want to Learn Something’: Dynamics of peer relations, social categories, and dropout in vocational educational training. *International Journal of Qualitative Studies in Education*, 28(5), 514–532. doi:10.1080/09518398.2014.933912.
- Guile, David, Lambert, David & Reiss, Michael J. (2018). *Sociology, Curriculum Studies and Professional Knowledge: New perspectives on the work of Michael Young*. London: Routledge.
- Guile, David & Young, Michael F.D. (2003). Transfer and transition in vocational educa-tion: Some theoretical considerations. In *Between School and Work: New perspectives on transfer and boundary-crossing*, edited by T. Tuomi-Gröhn & Y. Engeström. Pp. 63–81. Amsterdam, Netherlands: Pergamon.
- Haasler, Simon. R. (2020). The German system of vocational education and training: Challenges of gender, academisation and the integration of low-achieving youth. *Transfer: European Review of Labour and Research*, 26(1), 57–71. <https://doi.org/10.1177/1024258919898115>.
- Hall, Peter A. & Soskice, David. (2001). *Varieties of Capitalism: The institutional founda-tions of comparative advantage*. Oxford: Oxford University Press.
- Hannan, Damien F., Raffé, D. & Smyth, Emer (1996). *Cross-National Research on School to Work Transitions: An analytical framework*. Paris: OECD.
- Hardy M. & Ménard, L. (2009). School/workplace partnerships: A case study of four vocational studies programmes. In *International Handbook of Education for the Changing World of Work*, edited by R. Maclean & D. Wilson. Pp. 2279–2293. Dordrecht: Springer.
- Hayek, F. A. (1944). *The Road to Serfdom*. United Kingdom: Routledge.
- Ianelli, C. & Raffé, D. (2007). Vocational upper-secondary education and the transition from school. *European Sociological Review*, 23(1), 49–63. <http://dx.doi.org/10.1093/esr/jcl019>.

- Independent Panel on Technical Education. (2016). *Report of the Independent Panel on Technical Education*. London: Department for Education.
- Jørgensen, Christian Helms. (2015). Challenges for work-based learning in vocational education and training in the Nordic countries. In *Working and Learning in Times of Uncertainty: Research on the education and learning of adults*, edited by Sandra Bohlinger, Ulrika Haake, Christian Helms Jørgensen, Hanna Toiviainen & Andreas Wallo. Pp. 159–117. Rotterdam: Sense.
- Jørgensen, Christian Helms, Järvinen, Tero & Lundahl, Lisbeth. (2019). A Nordic transition regime? Policies for school-to-work transitions in Sweden, Denmark and Finland. *European Educational Research Journal*, 18(3), 278–297.
- Korpi, Walter & Palme, Joakim. (2003). New politics and class politics in the context of austerity and globalization: Welfare state regress in 18 countries, 1975–95. *The American Political Science Review*, 97, 425–446. doi:10.1017/S0003055403000789.
- Kupfer, Antonia. (2010). The socio-political significance of changes to the vocational education system in Germany. *British Journal of Sociology of Education*, 31(1), 85–97. doi:10.1080/01425690903385519.
- Lauder, Hugh & Mayhew, Ken. (2020). Higher education and the labour market: An introduction. *Oxford Review of Education*, 46(1), 1–9. doi:10.1080/03054985.2019.1699714.
- Mandler, Peter. (2020). *The Crisis of the Meritocracy: Britain's transition to mass education since the Second World War*. Oxford: Oxford University Press.
- Martin, Cathie Jo & Swank, Duane. (2011). Gonna party like it's 1899: Party systems and the origins of varieties of coordinations. *World Politics*, 63(1), 78–114. doi:10.1017/S0043887110000298.
- Maurice, Marc, Sellier, François & Silvestre, Jean-Jacques. (1986). *The Social Foundations of Industrial Power: A comparison of France and Germany*. Translated by Arthur Goldhammer. Cambridge Ma: MIT Press.
- Mead, Lawrence M. (1992). *The New Politics of Poverty*. New York, NY: Basic Books.
- Michelsen, Svein. (2018). The historical evolution of vocational education in the Nordic countries. In *Vocational Education in the Nordic Countries: The historical evolution*, edited by S. Michelsen & M.L. Stenström. Pp. 46–65. Abingdon, England: Routledge.
- Michelsen, Svein & Stenström, Marja-Leena. (Eds.). (2018). *Vocational Education in the Nordic Countries: The historical evolution*. Abingdon: Routledge.
- Michelsen, Svein, Host, Håkon, Leemann, Regula Julia & Imdorf, Christian. (2021). Training agencies as intermediary organisations in apprentice training in Norway and Switzerland: General purpose or niche production tools? *Journal of Vocational Education & Training*. doi:10.1080/13636820.2021.1904437.
- Mühlemann, S. (2016). *The Cost and Benefits of Work-based Learning*. OECD Education Working Papers, No. 143. OECD Publishing. Retrieved from <https://doi.org/10.1787/5j1pl4s6g0zv-en>.
- Nilsson, A. (2010). Vocational education and training – an engine for economic growth and a vehicle for social inclusion? *International Journal of Training and Development*, 14(4), 251–272. <https://doi.org/10.1111/j.1468-2419.2010.00357.x>.
- Nolan, Alistair. (2017). The next production revolution: Key issues and policy proposals. In *The Next Production Revolution: Implications for governments and business*, edited by OECD. Paris: OECD. doi:10.1787/9789264271036-en.
- Nylund, Mattias & Rosvall, Per-Åke. (2016). A curriculum tailored for workers? Knowledge organization and possible transitions in Swedish VET. *Journal of Curriculum Studies*, 48(5), 692–710. doi:10.1080/00220272.2016.1138325.

- Nylund, Mattias & Rosvall, Per-Åke. (2019). Vocational education, transitions, marginalisation and social justice in the Nordic countries. *European Educational Research Journal*, 18(3), 271–277. doi:10.1177/1474904119838893.
- Nylund, Mattias, Rosvall, Per-Åke & Ledman, Kristina. (2017). The vocational–academic divide in neoliberal upper secondary curricula: The Swedish case. *Journal of Education Policy*, 32(6), 788–808. doi:10.1080/02680939.2017.1318455.
- OECD. (1985). *Pathways to Learning: Education and training from 16 to 19*. Paris: OECD.
- OECD. (1995). *Education and Employment*. Paris: OECD.
- OECD. (1999). *Preparing Youth for the 21st Century: The Transition from Education to the Labour Market*. Proceedings of the Washington D.C. Conference. 23–24 February. doi:10.1787/9789264173422-en.
- OECD. (2017). *The Next Production Revolution: Implications for governments and business*. Paris: OECD Publishing. <https://doi.org/10.1787/9789264271036-en>.
- OECD. (2020). *Education at a Glance 2020: OECD indicators*. Paris: OECD Publishing. Retrieved from <https://doi.org/10.1787/69096873-en>.
- OECD (Organisation for Economic Cooperation and Development)/CERI (Centre for Educational Research and Innovation). (1975). *School and Community*. Paris: OECD/CERI.
- Olofsson, Jonas & Persson Thunqvist, Daniel. (2018). The modern evolution of VET in Sweden. In *Vocational Education in the Nordic Countries: The historical evolution*, edited by Svein Michelsen & Marja-Leena Stenström. Abingdon, England: Routledge.
- Persson, Bo & Hermelin, Brita. (2018). Mobilising for change in vocational education and training in Sweden – a case study of the ‘Technical College’ scheme. *Journal of Vocational Education & Training*, 70(3), 476–496, doi:10.1080/13636820.2018.1443971.
- Persson Thunqvist, Daniel, Hagen Tønder, Anna & Reegård, Kaja. (2019). A tale of two reforms: Institutional change in vocational education and training in Norway and Sweden in the 1990s. *European Educational Research Journal*, 18(3), 298–313. doi:10.1177/1474904118823104.
- Piketty, Thomas. (2014). *Capital in the Twenty-First Century*. Translated by Arthur Goldhammer. Cambridge, Ma: Belknap Press of Harvard University Press.
- Piketty, Thomas. (2020). *Capital and Ideology*. Translated by Arthur Goldhammer. Cambridge, Ma: Belknap Press of Harvard University Press.
- Pilat, Dirk, Cimper, Agnes, Olsen, Karsten B. & Webb, Colin. (2006). The changing nature of manufacturing in OECD economies. *OECD Science, Technology and Industry Working Papers*, 2006/09, OECD Publishing. <http://dx.doi.org/10.1787/308452426871>.
- Pilz, Matthias. (2016). Typologies in comparative vocational education: Existing models and a new approach. *Vocations and Learning*, 9(3), 295–314. doi:10.1007/s12186-016-9154-7.
- Pohl, Axel & Walther, Andreas. (2007). Activating the disadvantaged. Variations in addressing youth transitions across Europe. *International Journal of Lifelong Education*, 26(5), 533–553. doi:10.1080/02601370701559631.
- Raffe, David. (2003). Pathways linking education and work: A review of concepts, research, and policy debates, *Journal of Youth Studies*, 6(1), 3–19. doi:10.1080/1367626032000068136.
- Raffe, David. (2008). The concept of transition system. *Journal of Education and Work*, 21(4), 277–296. doi:10.1080/13639080802360952.

- Raffe, David. (2014). Explaining national differences in education-work transitions. *European Societies*, 16(2), 175–193. doi:10.1080/14616696.2013.821619.
- Rageth, Ladina & Renold, Ursula. (2017). *The Linkage between the Education and Employment Systems: Ideal types of Vocational Education and Training programs*. Working paper. Zurich: ETH. doi:10.3929/ethz-b-000171536.
- Rauner, Felix. (2007). Practical knowledge and occupational competence. *European Journal of Vocational Training*, 40(1), 52–66. Retrieved from <https://files.eric.ed.gov/fulltext/EJ776610.pdf>.
- Rauner, Felix. (2019). The international quality competition and its implications for vocational education and training. In *Handbook of Vocational Education and Training: Developments in the changing world of work*, edited by McGrath, Simon, Mulder, Martin, Papier, Joy & Suart, Rebecca. Pp. 79–101. Cham: Springer.
- Rauner, Felix & Wittig, Wolfgang. (2010). Differences in the organisation of apprenticeship in Europe: Findings of a comparative evaluation study. *Research in Comparative and International Education*, 5(3), 237–250. doi:10.2304/rcie.2010.5.3.237.
- Rausch, Erwin, Linder, Christian & Dallasega, Patrick. (2020). Anthropocentric perspective of production before and within Industry 4.0. *Computers and Industrial Engineering*, 139, art. no. 105644.
- Ryan, Paul. (1999). Rapporteur's report: The school-to-work transition twenty years on: Issues, evidence, conundrums. In *Preparing Youth for the 21st Century: The Transition from Education to the Labour Market*, edited by OECD Proceedings of the Washington D.C. Conference. 23–24 February. doi:10.1787/9789264173422-en.
- Simoni, Marco & Vlandas, Timothee. (2020). Labour market liberalization and the rise of dualism in Europe as the interplay between governments, trade unions and the economy. *Social Policy and Administration*. doi:10.1111/spol.12648.
- Sorge, A. & Streeck, W. (2018). Diversified quality production revisited: Its contribution to German socio-economic performance over time. *Socio-Economic Review*, 16(3), 587–612. <https://dx.doi.org/10.1093/ser/mwy022>.
- Streeck, W. (1991). On the institutional conditions of diversified quality production. In *Beyond Keynesianism: The socio-economics of production and full employment*, edited by E. Matzner & W. Streeck. Pp. 21–61. Aldershot, England: Edward Elgar.
- Stuart, M. (2019). The industrial relations of training and development. In *The Wiley Handbook of Vocational Education and Training*, edited by D. Guile & L. Unwin. Pp. 165–185. Hoboken, NJ: Wiley.
- Tarabini, Aina & Jacovkis, Judith. (2021). Tracking, knowledge, and the organisation of secondary schooling: Teachers' representations and explanations. *Journal of Vocational Education & Training*. doi:10.1080/13636820.2021.1894220.
- Thelen, Kathleen. (2004). *How Institutions Evolve: The political economy of skills in Germany, England, the United States and Japan*. Cambridge: Cambridge University Press.
- Thelen, Kathleen. (2014). *Varieties of Liberalization and the New Politics of Social Solidarity*. Cambridge: Cambridge University Press.
- Thompson, R. (2019). *Education, Inequality and Social Class: Expansion and stratification in educational opportunity*. Abingdon, England: Routledge.
- Tomasson, Richard F. (1965). From elitism to egalitarianism in Swedish education. *Sociology of Education*, 38(3), 203–223. doi:10.2307/2111857.
- Unwin, Lorna. (2019). *Nurturing the Critical Role of the Workplace in VET: Reflections from England, past and present*. In *Berufsbildung zwischen Tradition und Moderne: Festschrift für*



- Thomas Deißinger zum 60. Geburtstag, edited by Matthias Pilz, Kathrin Breuing & Stephan Schumann. Pp. 175–192. Wiesbaden: Springer Fachmedien.
- Vandeplas, A. & Thum-Thysen, A. (2019). *Skills Mismatch & Productivity in the EU*. Discussion Paper 100. Luxembourg: Publications Office of the European Union.
- Virolainen, M. & Persson Thunqvist, D. (2017). Varieties of universalism: Post-1990s developments in the initial school-based model of VET in Finland and Sweden and implications for transitions to the world of work and higher education. *Journal of Vocational Education & Training*, 69(1), 47–63. doi:10.1080/13636820.2016.1238836.
- Walden, Günter & Troltsch, Klaus. (2011). Apprenticeship training in Germany – still a future-oriented model for recruiting skilled workers? *Journal of Vocational Education and Training*, 63(3), 305–322. doi:10.1080/13636820.2011.570454.
- Walther, Andreas. (2006). Regimes of youth transitions: Choice, flexibility and security in young people’s experiences across different European contexts. *Young*, 14(2), 119–141.
- Walther, Andreas, du Bois-Reymond, Manuela & Biggart, Andy (Eds.). (2006). *Participation in Transition? Young People’s Motivation between Education, Welfare and Labour Market in European Perspective*. Frankfurt am Main: Peter Lang.
- Walther, Andreas, Stauber, Barbara, Pohl, Axel, Biggart, Andy et al. (2004). *Youth Policy and Participation. Potentials of Participation and Informal Learning in Young People’s Transitions to the Labour Market*. Final Report to the European Commission, IRIS.
- Wesselink, R., de Jong, C. & Biemans, H.J.A. (2010). Aspects of competence-based education as footholds to improve the connectivity between learning in school and in the workplace. *Vocations and Learning*, 3(1), 19–38. doi:10.1007/s12186-009-9027-4.
- Wheelahan, Leesa. (2007). How competency-based training locks the working class out of powerful knowledge: A modified Bernsteinian analysis. *British Journal of Sociology of Education*, 28(5): 637–651. doi:10.1080/01425690701505540.
- Wheelahan, Leesa. (2015). Not just skills: What a focus on knowledge means for vocational education. *Journal of Curriculum Studies*, 47(6), 750–762. doi:10.1080/00220272.2015.1089942.
- Wheelahan, Leesa & Moodie, Gavin. (2017). Vocational education qualifications’ roles in pathways to work in liberal market economies. *Journal of Vocational Education & Training*, 69(1), 10–27. doi:10.1080/13636820.2016.1275031.
- Wiemann, Judith & Fuchs, Martina. (2018). The export of Germany’s ‘secret of success’ dual technical VET: MNCs and multiscalar stakeholders changing the skill formation system in Mexico. *Cambridge Journal of Regions, Economy and Society*, 11(2), 373–386.
- Williamson, Gavin. (2020). *Speech to Social Market Foundation*. 9 July. Retrieved from [www.gov.uk/government/speeches/education-secretary-fe-speech-with-social-market-foundation](http://www.gov.uk/government/speeches/education-secretary-fe-speech-with-social-market-foundation).
- Winch, Christopher. (2000). *Education, Work and Social Capital: Towards a new conception of vocational education*. International Studies in the Philosophy of Education. London: Routledge.
- Wolf, Alison. (1995). *Competence-based Assessment*. Buckingham: Open University Press.
- World Bank. (2021). *Manufacturing, value added (% of GDP)*. Retrieved from <https://data.worldbank.org/indicator/NV.IND.MANF.ZS>.
- Young, Michael F.D. (2006). Conceptualising vocational knowledge: Some theoretical considerations. In *Knowledge, Curriculum and Qualifications for South African Further Education*, edited by Michael Young & Jeanne Gamble. Pp. 104–124. Cape Town: HSRC Press.

- Young, Michael F.D. (2008). *Bringing Knowledge Back In: From social constructivism to social realism in the sociology of knowledge*. London: Routledge.
- Young, Michael F.D. & Muller, Johann. (2013). On the powers of powerful knowledge. *Review of Education*, 1(3), 229–250. <https://doi.org/10.1002/rev3.3017>.
- Young, Michael F.D., Spours, Ken, Howieson, Cathy & Raffe, David. (1997). Unifying academic and vocational learning and the idea of a learning society. *Journal of Education Policy*, 12(6), 527–537.