

 Open access • Journal Article • DOI:10.1080/03075070903295829

Analyzing the nexus of higher education and vocational training in Europe: a comparative-institutional framework — [Source link](#)

Justin J W Powell, Heike Solga

Published on: 18 Aug 2010 - Studies in Higher Education (Routledge)

Topics: Vocational education, Higher education, Apprenticeship, Bologna Process and Internationalization

Related papers:

- [How Institutions Evolve: The Political Economy of Skills in Germany, Britain, the United States, and Japan](#)
- [The Political Economy of Collective Skill Formation](#)
- [Applying the Varieties of Capitalism Approach to Higher Education: comparing the internationalisation of German and British universities](#)
- [The iron cage revisited institutional isomorphism and collective rationality in organizational fields](#)
- [The Hybridization of Vocational Training and Higher Education in Austria, Germany, and Switzerland](#)

Share this paper:    

View more about this paper here: <https://typeset.io/papers/analyzing-the-nexus-of-higher-education-and-vocational-2ey2ib4ed7>

This article was downloaded by: [Powell, Justin JW]

On: 19 August 2010

Access details: Access Details: [subscription number 925990769]

Publisher Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Studies in Higher Education

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713445574>

Analyzing the nexus of higher education and vocational training in Europe: a comparative-institutional framework

Justin J. W. Powell^a; Heike Solga^a

^a Research Unit: Skill Formation & Labor Markets, Social Science Research Centre Berlin (WZB), 10785 Berlin, Germany

Online publication date: 18 August 2010

To cite this Article Powell, Justin J. W. and Solga, Heike(2010) 'Analyzing the nexus of higher education and vocational training in Europe: a comparative-institutional framework', *Studies in Higher Education*, 35: 6, 705 — 721

To link to this Article: DOI: 10.1080/03075070903295829

URL: <http://dx.doi.org/10.1080/03075070903295829>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Analyzing the nexus of higher education and vocational training in Europe: a comparative-institutional framework

Justin J.W. Powell* and Heike Solga

Research Unit: Skill Formation & Labor Markets, Social Science Research Centre Berlin (WZB), Reichpietschufer 50, 10785 Berlin, Germany

Given ongoing economic, political and social transformation, skill formation systems are under pressure to change. This is acknowledged in European declarations – Bologna for higher education and Copenhagen for vocational training – and various national reform processes. The omnipresent convergence hypothesis is that these international pressures will result in national skill formation systems becoming more similar. However, if these systems throughout Europe are to match the dominant anglophone models, which value general higher education more than specific vocational training, those countries with strong apprenticeship traditions are especially challenged. Due to countries' differential starting points, the convergence hypothesis needs to be tested, taking the shifting complementary and competitive relationship between the two organizational fields of higher education and vocational training into account. Ideational internationalization, and normative and regulative Europeanization, as manifest in the Bologna and Copenhagen processes, require analysis as factors driving institutional change in post-secondary higher and vocational educational systems. Key questions are: will common trends and challenges lead to cross-national convergence of skill formation systems? Or do national responses instead indicate that adaptations are mainly consistent with specific cultural and structural characteristics? This article discusses why, in order to answer such questions adequately, in-depth comparative research should overcome the persistent division in research on these two sectors by examining the nexus of higher education and vocational training.

Keywords: vocational education; european higher education area; internationalisation; institutional theory; Bologna process; Copenhagen process; institutional change

Introduction

Recognition of the importance of skill formation for a host of societal, organizational, and individual goals has spread around the globe (see Mayer and Solga 2008). This is also acknowledged in European declarations – Bologna for higher education (see Reinalda and Kulesza 2005) and Copenhagen for vocational education and training (see Tessaring and Wannan 2004) – and by national reform processes. Clearly, national skill formation systems are under pressure to change. One of the crucial challenges is the question of whether to invest in general post-secondary education or in specific vocational training. Are such common trends and declarations leading to convergence in national skill formation systems, as world polity theorists (e.g. Meyer 2005) suggest? Or do national responses instead indicate that adaptations are mainly

*Corresponding author. Email: powell@wzb.eu

consistent with specific cultural and structural characteristics, as historical institutionalists (Thelen 2004) and political economists (Hall and Soskice 2001) have pointed out?

The fallacy of most research on these questions is that it *either* investigates higher education, such as change in universities, *or* vocational education and training, often one country or aspect, such as the ‘dual system’ in Germany. Consequently, such research misconstrues the diversity of organizational forms in skill formation and the myriad ways that these two organizational fields are linked in each country by hybrid organizational forms that span boundaries. We argue that change – or persistence – in the two fields can only be adequately understood by taking into account the nexus between higher and vocational education. To guide needed research, we provide ideas for an institutional framework to analyze the shifting complementary and competitive relationship between these two organizational fields. We contrast two main drivers of institutional change in post-secondary higher and vocational educational systems: internationalization, based largely on the diffusion of dominant anglophone models, and normative and regulative Europeanization, due to the specific guidelines of the Bologna and Copenhagen processes. The two European processes exemplify the ‘open method of coordination’ (OMC), the broader framework for intergovernmental cooperation among European Union (EU) member states based on mechanisms such as indicators, benchmarking and best practices.

The goal of this contribution is to overcome the too often reified division in research on higher education or vocational education and training. While most analyses, conducted on one of the two organizational fields, can rely on the wealth of historical detail and data that exists (more so for higher education than for vocational education and training), they mostly overlook the complementary and competitive relationship between higher education and vocational education and training. However, we argue that precisely this relationship is important to understand contemporary dynamics of institutional change in national skill formation systems. One key reason why these sectors are researched separately is due to the lack of a conceptual framework. We will facilitate the development of such a framework by presenting ideas on how to study the changing nexus of higher education and vocational education and training.

To do so, in the first section, we discuss skill formation systems, seeking to deepen our understanding of internationalization patterns. We sketch Europeanization processes that directly affect national educational reforms. In order to investigate the varying impacts of global and European trends on national and local institutionalization in Europe, the levels of analysis should span educational institutions, organizational fields and organizations (see DiMaggio and Powell 1983) We then review contributions from educational research, political science, and sociology to questions of: (1) the diffusion of educational ideals, standards, and policies; and (2) the national dynamics of institutional change. Thirdly, we discuss challenges to research on vocational education and training and higher education. The main goal here is to provide concepts for comparative-institutional research that take into account growing pressures, due to the rapid spread of ideas internationally, and increasingly formalized agreements to harmonize skill formation across national borders. Below, we apply these ideas to the shifting relationship between higher education and vocational education and training. Finally, we sketch a comparative-institutional approach that facilitates our understanding of the significance of current changes in these systems’ complementary models as well as competition between ideals, norms and policies.

'Internationalization' and 'Europeanization' of higher education and vocational education and training

A major current force for transformation in European skill formation is agreements by national education ministers to reform their education and training systems. The Bologna Declaration, originally signed in 1999 by 29 education ministers, had the aim to establish a Europe-wide higher education area to facilitate individual mobility, qualificational transparency and recognition, coordinated national quality assurance systems, as well as mutual recognition of duration and degrees of study courses, by 2010. The Copenhagen Declaration, signed in 2002 by 31 ministers, similarly aims to enhance European cooperation in vocational education and training, concluding its first phase by 2012. Goals include a unitary framework of qualifications and competencies, a system of credit transfer for vocational qualifications, common quality criteria and principles, as well as improvements in citizens' access to lifelong learning. We see the joint relevance of these two processes for both higher education and vocational education and training in that the European Commission (EC) has launched initiatives to increase the permeability between these sectors, such as in the transparency of qualifications (EUROPASS), credit transfer (ECTS, ECVET) and the European Qualifications Framework (EQF).

Significantly, throughout Europe, nations voluntarily supported the goals set out in the Bologna Declaration without needing direct coercive intervention by European Union supra-national governance (Witte 2006). Both the Bologna and Copenhagen processes led and lead to the cross-national transfer and internationalization of norms and regulations. Beyond an 'ideational impetus' on skill formation, these ideas and standards must be interpreted within national vocational and higher education systems (Balzer and Rusconi 2007). The heightened awareness and competition, brought by increasing global communication, indirectly affects educational ideals and cultural models. For example, if higher education in the USA has undergone restructuring due to a shift in its 'legitimizing idea' from a social institution to an industry (Gumport 2000), then to what extent are anglophone market-oriented models – which have long devalued vocational education and training in favor of vocationalized higher education – driving European reforms? Are European educational systems also changing their cognitive, cultural models of higher education and vocational education and training, emulating this path?

Since the end of the Second World War, the massive expansion and differentiation of higher education has been driven by science, democratic participation and national development (Schofer and Meyer 2005), as well as international economic competition. Indeed, at the cutting edge of university-based research there is an 'emerging global model' manifest in a handful of world-class research-intensive universities that compete globally for talent and funds (Mohrman, Ma, and Baker 2008). With Oxford and Cambridge and Harvard in mind, the bureaucratic architects of Europeanization processes – from ministers of education to local administrators – directly affect educational systems. Yet some changes, especially through the introduction and development of bachelor's and master's courses of study, new standards in evaluating learning progress, and certificates, require significant restructuring at organizational level. In some countries, such as Germany, standardized courses of study have enabled lower-tier organizations to compete in the market for post-secondary students. Due to such conflicts, reforms have not been implemented unchallenged; their (un)intended consequences are not yet (fully) visible.

In any case, changes in higher education, due to internationalization generally and Bologna specifically, already affect vocational education and training, because these organizational fields are increasingly competing directly for students, funding and status. Indeed, this process of ‘blurring boundaries’ has already advanced in more academic (universities, *grandes écoles* in France) and more applied higher education (*Fachhochschulen* in Germany, *hogescholen* in the Netherlands) (Witte, van der Wende, and Huisman 2008). If such hybridization is under way throughout European higher education, how will it affect the relationship between higher education and vocational education and training?

With the Copenhagen process, vocational education and training systems are under direct pressure to adjust as well. Such developments as the vocationalization of higher education in France or the rise of the vocational academies (*Berufsakademien*) and dual study programs (*duale Studiengänge*) at praxis-oriented universities in Germany, which offer both a mixture of general higher education and in-firm vocational education and training, suggest that organizational hybrids are becoming more significant (Powell et al. 2009). Undeniably, the position of higher education has been strengthened worldwide; however, some argue that this is due to its very embrace of *vocationalism* (Grubb and Lazerson 2004), reducing the division between academic general and specific vocational training through differentiation and the emphasis on economic benefits of formal education. Analyses of higher education and vocational education and training should pay attention to shifting tensions between organizational forms in these fields, as these are embedded in a diversity of educational and economic environments that have co-evolved over time. This requires a comparative framework that builds on literatures that have remained largely isolated, and thus reify an increasingly obsolete distinction.

Additionally, a historical perspective is necessary to adequately understand current developments in skill formation. The global pressures that encourage nations to become structurally more similar and emulate ‘best’ or good practices (isomorphism), codified in European policies, seem to have become stronger. We, nevertheless, find variance in acceptance or resistance to these international ideals within nations. Institutions offer stability and exhibit durability, even as contemporary reforms are accompanied by fears of unintended consequences and hesitance to give up comparative advantages or national traditions. Cross-sectional analyses cannot capture the developments needed to confirm or falsify the convergence hypothesis, which itself implies cross-national and historical approaches.

Comparative studies of higher education and vocational education and training systems across and within countries should, therefore, be aware of specific national origins, unique developmental trajectories, and the relationship between the two as these react to internationalization and Europeanization. To do so, we will next review relevant contributions from comparative education research, political science and sociology to the study of national dynamics of institutional change.

Contemporary comparative research on skill formation

From the beginning, researchers in comparative and international education have focused on issues of importing and exporting educational concepts beyond national borders. The core questions relate to the potential of improving an educational system or even implementing foreign elements. Comparative education research has developed concepts of transfer to investigate the processes in which local problems, and

solutions to similar challenges found in other countries, are identified, and to study the processes of import that (more or less) adapt these 'solutions' in national or local contexts (Beech 2006). Recent works have examined these processes as 'policy attraction in education' (Phillips and Ertl 2003; Phillips 2004), 'the global politics of educational borrowing and lending' (Steiner-Khamsi 2004), and 'markets in education and training reform' (Finegold, McFarland, and Richardson 1993). Comparative education research is 'unified around the objectives of understanding better the traditions of one's own system of education by studying those of others and assessing educational issues from a global perspective' (Cook, Hite, and Epstein 2004, 130). One of the most visible aspects of cross-national educational research is the study of benchmarking. League tables, diverse (un)official ratings, and increasingly influential global university rankings (e.g. Times Higher Education) emphasize the rise of benchmarking over the past several decades (see Jackson and Lund 2000). The reason is that the continuous monitoring of higher education and vocational education and training manifests a broadened, indeed global, reference group for organizations and decision makers.

However, while globalization and Europeanization have become favored buzzwords in politics – to legitimate this monitoring and the necessity of suggested changes – and research, comparative-institutional analyses question the ubiquity and speed of such 'changes'. As Trampusch (2009) argues, researchers studying training systems in Europe could profitably embed their studies within general analyses of institutional change, in which Europeanization due to the EU ('by reform') is contrasted with Europeanization that emerges from domestic dynamics, largely independently of the EU ('by default'). Studies have emphasized specific mechanisms and forms of change, such as evolutionary, incremental, and radical change, as well as the search for sustained national differences even among advanced industrial societies (Campbell 2004; Streeck and Thelen 2005). Such competing points of view, we argue, may be resolved by distinguishing more clearly between the three dimensions of institutions (cultural-cognitive, normative, and regulative: see Scott 2003) and by analyzing the contrasting organizational fields and range of organizational forms.

For its part, sociological institutionalism has focused on the transnational diffusion of ideas as we learn from others. Summarizing theories developed to explain global policy diffusion and institutional change, Dobbin, Simmons, and Garrett (2007) distinguish between: (1) social constructivist theories that emphasize knowledge networks and the influence of international organizations; (2) learning theories that point out experiential developmental processes within and between geographical units; (3) competition theories that attend to the costs and benefits of policy choices and global exchange; and (4) coercion theories that point to power differentials among nation-states and institutions operating internationally. If the contribution of institutional theory has been mainly to chart how organizational forms and practices have been successfully reproduced themselves (and their effects), analyses of institutionalization processes and institutional change are increasingly central (Schneiberg and Clemens 2006, 217). One goal is to show how imitation or emulation influences actions or characteristics. Another is to understand why diffusion has been limited in temporal or spatial reach: why do national models – such as the currently-dominant anglophone market-based education model – often fail to be (successfully) implemented elsewhere, despite increasing standardization pressures due to the activities of international organizations like the United Nations, the World Bank, or the Organization for Economic Cooperation and Development (OECD 2009)?

In addition to ideas about skill formation examined via *mimetic* mechanisms (imitating others), *normative* and *regulative* mechanisms that emphasize organizational aspects as well as legal and political forces are also crucial (see DiMaggio and Powell 1991), especially in highly regulated organizational fields. Historical institutionalists have accentuated the study of regulatory and governance mechanisms and regimes at state or industry levels (Scott 1995, 58–60). Given the importance of supranational framework legislation and policy coordination for the reform of national vocational and higher education systems, all three dimensions of institutions should be recognized. In analyzing higher education and vocational education and training, we are likely to find that evolving institutions do respond to meta-level discursive shifts and scientific paradigms, but in ways that are consistent with national environments, organized interests and political processes. For example, in studying the institutionalization of American community colleges, Brint and Karabel (1989, 342ff.) show how this organizational field effectively and legitimately diverted a large proportion of aspirants in the American meritocracy into terminal lower-tier courses of study without much chance of transfer to the higher tier. Such analyses of (intermediate) skill formation reveal the considerable effects of differing organizational forms and relationships among organizational fields on educational pathways, labor market opportunities, and social inequality.

The different dimensions of these complex skill formation systems, from ideas to norms to policies, matter, as do their institutionalization processes. Such an institutional approach highlights cultural-cognitive processes, like global awareness of the importance of ‘human capital’ or ‘competencies’ and continuous scientific evaluation. But it also investigates normative and regulative processes of European standardization and their effects, such as competition between ‘best practices’ and the resulting transformation of study courses, degree requirements and certificates to be attained, as well as selectivity and sorting practices.

Political science research on policy transfer has increasingly examined the educational field (e.g. Dolowitz and Marsh 2000). This approach uncovers conflicts as it explores *coercive* forces changing national institutions. It focuses on policy making and why certain decisions were made or vetoed. Information exchange within global networks has been studied to better understand how policies have been transferred cross-culturally (Stone 2002). Indeed, discursive institutionalism focuses on just such interactive processes of conveying ideas across borders (Schmidt 2008). Even if international pressures to attain standards and reform structures may sometimes be hampered by national models and institutional arrangements, these exogenous pressures are often also used to legitimate endogenous causes of reforms, as decision makers translate and fit models to particular interests and local conditions.

Comparative research analyzing the international level must not overlook endogenous reforms. While many investigations test an often hypothesized cross-national policy convergence, the causes and the extent of convergence are still unclear. The main reasons for this are disciplinary divisions and a lack of systematic theory building (Holzinger and Knill 2005, 775). Thus, to contribute to our understanding of institutional change in skill formation systems, we need synthesis across disciplines and theory that spans the vocational/higher education divide.

Political scientists have discussed the impact of politics on the evolution of skill formation institutions, focusing on such themes as collective bargaining and the relationships between unions and employers in providing training (e.g. Culpepper and Thelen 2008). As Thelen (2004) has shown, gradual changes in vocational training

over decades led to renegotiation and contestation about governance structures, while the idea of collectively managed monitoring of firm-based training of workers remained ‘incredibly stable’ – and that despite massive breakpoints in Germany’s twentieth century (see also Thelen and Busemeyer 2008). Indeed, dedication to the traditional training institutions is stalwart, despite or because of the growth of pseudo training schemes that do not lead to qualification (Baethge, Solga, and Wieck 2007). Yet the most recent European agreements demand of some countries what amounts to far more than incremental change, even as the providers of hegemonic models seem less pressed to reform their systems.

In sum, research in these disciplines has largely reproduced the boundary between vocational and higher education by studying these organizational fields singly. Moreover, many studies analyze only one country, whereas comparative analyses stress the variable impact of exogenous pressures across contexts. Thus, we here sketch a comparative-institutional approach to examine institutionalization processes in both organizational fields and their relationship.

Changing national skill formation systems: harmonic convergence?

Recent attempts to align highly complex institutionalized skill formation systems with contemporary goals emphasize the forceful diffusion and rising relevance of international educational standards and regulations, and the persistence of established nation-state specific ideas, values, and interests. Expected degrees of change must be specified, as the Europe-wide debates about the wording of the declarations regarding ‘convergence’ and ‘harmonization’ indicate. Beyond the truism that ‘history matters’, these possibilities assist in hypothesizing institutional change in each case. Applied to the relationship between higher education and vocational education and training, for each national system, Europeanization may represent a critical juncture, at which choices are made to minimize or maximize change. Further reform steps provide further structuring of alternatives, with resultant changes measured as path ‘stabilization’, ‘departure’ or ‘switch’ (Ebbinghaus 2005).

Educational systems have repeatedly had to react to external shocks, such as technological innovation, ongoing legalization and changes in public awareness of the importance of education and training (Hanson 2001, 654ff.) Competing skill formation sectors must adjust their programs (standards, study courses, enrollment criteria, curricula), and these forces affect both the quantity and the quality of educational pathways offered. Yet organizations in higher education and vocational education and training are stabilized by deeply institutionalized rules that challenge substantive reform. These organizations adopt a variety of strategies to respond to environmental changes (Oliver 1991); often superficially, as the history of reform is one of loose-coupling (Weick 1976), in which top-down reforms are resisted or subverted within educational organizations. Thus, institutionalization trajectories depend on the types of change prevalent within each country and organizational responses.

Instead of accepting the omnipresent convergence hypothesis, we follow Campbell (2004) in understanding institutional change as ‘constrained innovation’ on the ground. Historically-evolved national educational and training systems will most likely react to exogenous pressures in ways largely consistent with their specific cultural and structural characteristics. However, a simplistic model of path dependence will not suffice. With internationalization, the *translation* of popular concepts and their organizational implementation requires more scientific attention than ever before (Czarniawska-

Joerges and Joerges 1996), as international organizations and exchanges facilitate national interpretations and implementations of global models. Key questions are: how much do international best practice models challenge specific national systems? In which nations do the goals set forth in the Bologna and Copenhagen agreements require the changing of core principles, and how do these systems respond? Often, national policy makers pick and choose elements (*bricolage*) thought to be most compatible or just easier to implement, and for most nations compliance with Bologna and Copenhagen most likely means path stabilization, not path departure. For example, in the anglophone world, there is a range of bachelor-degree models, such that policy makers and educators looking to implement such a study course may choose a model that seems to offer a good fit. For example, in Germany and the UK, a considerable minority of universities offers a four-year BA, even if the majority has a three-year duration. The ‘best practice’ in a given time and place cannot be imported one-to-one into other national educational systems, and neither the past success of one system nor the current success of another guarantees future success (Rose 1991).

Yet, skill formation institutions in Europe currently seem to be experiencing considerable and possibly fundamental changes leading to transformation, beyond the incremental changes that occur in routine institutional maintenance. Nonetheless, it remains an *empirical* question whether these reforms require path departure or path switch – or not. All are possible developmental trajectories of institutional transformation. As Pierson (2004) emphasizes, some reforms that in the moment seem to be abrupt may in the long run represent far less radical junctures. Thus, scholars evaluating the degrees of change in comparative research on European diversity must question superficial, merely rhetorical convergence. Discussing mechanisms of *import* to explain the diverse phenomena of ‘globalization’, Campbell (2004, 21) maintains that there is a consensus that regardless of preference for evolutionary or radical views of change, analyses must address three main problems: ideas, change and mechanisms. Furthermore, he finds conceptual similarities in social science approaches, as these rely on diffusion and path dependence to establish causal arguments. Thus, research on institutional change in higher education and vocational education and training should investigate the extent to which supranational agreements do or do not constitute ‘critical junctures’ and the extent to which these structure alternative developmental pathways.

Whereas national systems have been similarly affected by expansion and reformed understandings of higher education goals, comparative research must show how these factors change structures, especially as more vocationally-oriented organizational forms, such as Germany’s vocational colleges (*Berufsakademien*) respond to new opportunity structures in hierarchical, functionally differentiated systems. Indeed, the Bologna and Copenhagen processes – as predominantly voluntary but increasingly normative and regulatory forces that reach their target dates of 2010 and 2012 – demand enhanced attention to institutionalization processes in skill formation systems, sketched here.

Firstly, in higher education, research has emphasized common themes of reforms such as expansion, differentiation, structural dynamics, selection and opportunities, and efficiency and effectiveness (Brennan and Teichler 2008). Yet, cross-national convergence theses need to be tested, because the global rhetoric of both policy making and social science seems to outpace institutional and organizational change at lower levels. A range of studies – from descriptive country studies to more ambitious historical and geographical comparisons – has examined the effects of internationalization on higher education organizations, testing world polity, economic development,

democracy, and national culture and structure hypotheses (Lenhardt, Reisz, and Stock 2007; Reisz and Stock 2007). Indeed, some argue that the worldwide diffusion of expectations, values and structures in education and science have led to heterogeneous outcomes (Krücken 2003), with *transnational* agenda-setting and rule-making not limiting but rather undergirding *national* policies (Krücken, Kosmützky, and Torka 2006, 11).

Secondly, in vocational education and training this is far from clear, as this field has not benefited from the same degree of comparative inquiry testing the convergence hypothesis (but see Deissinger 1994; Thelen 2004; Greinert 2005; Hillmert 2008). Furthermore, these systems' complexity and diversity makes their relative success or failure very difficult to quantify, leading many analysts to use economic productivity as a (problematic) proxy. A rare convergence is found in overblown claims of the economic importance of *vocationalism*, under the banner of the ideal of 'progress', despite its failure to resolve the problems it was charged to address, if it does not produce new ones (see Grubb 1985; Grubb and Lazerson 2004). Increased direct competition between higher education and vocational education and training within countries, and challenges to national systems during European integration, demand that contemporary analyses test such claims.

In general, we must ask: if emphasis should be on periods of deep reform and political transformation that lend themselves to the study of 'imitation and persistence' (Jacoby 2000), how have nations responded to these ongoing exogenous challenges to their specific, evolving skill formation systems? To what extent have contemporary changes remained at the levels of discourses and labels or instead signify fundamental reforms? For example, to what extents have European credit transfer systems (ECTS for higher education; ECVET for vocational education and training) that document, validate, and recognize prior formal and informal learning outcomes, been established and led to actual standardization? Are international pressures – from ideas and standards to policies – leading to convergence, harmony, or sustained diversity across Europe? Seeking to better understand developments in post-secondary vocational educational systems, such an analysis would centre on (1) *international diffusion processes* and (2) *national emulation processes* that lead to institutional restructuring or to persistent developmental paths.

Based on historical analyses of institutionalization, the first area to investigate for change in higher education and vocational education and training is that of transfer processes, significant not only in the sense of concepts being made accessible across linguistic boundaries, but also in functional equivalents being found when a foreign model is emulated. Responses to the twin processes of internationalization and Europeanization have added goals of restructuring to the ongoing dynamic of expansion at post-secondary level. Global competition and homogenization in education have been dramatically furthered by such processes as international reporting, scientific evaluation and benchmarking, which spread particular models, especially anglophone ones.

Nations around the world, for example, have responded to 'education for all' initiatives and to inclusive education, committing themselves to 'innovate' schools in a sequence of reforms, but equality in access to learning opportunities is constrained by institutionalized organizational forms that continue to segregate and separate children with special educational needs (Powell 2009a). As a consequence of Bologna and Copenhagen, new standards extend beyond mere self-reinforcing expansion, as they are applied to measure not only quantity, such as credits attained or study course

duration, but also quality, such as ratings, rankings, modularization and accreditation. Yet which models are being chosen as exemplars for the transformation of educational systems toward efficiency and equality via ‘best practices’ identified in cross-national benchmarking? Regardless of how effectively such models are being implemented, the antecedent question is: why have nations historically chosen and translated particular models to guide their reforms?

Beyond the systematization of mostly quantitative indicators, such as in comparative stocktaking reports, we need analyses of which *ideas* and *norms* have been influential, why they became prominent, and where they originated. For instance, both the British college and the ‘Humboldtian’ research university as organizational models were highly influential in the USA before the First World War, and Germany’s dual system of vocational training has repeatedly been popular, if difficult to emulate (see Hamilton 1999; Powell 2009b). By contrast, today elite anglophone universities are celebrated, along with increasing recognition that initial education and training must be complemented with on-the-job training and further or continuing education, understood as lifelong learning. While such models may be interpreted through national lenses, these systems have referred to each other over centuries, exemplifying transatlantic interconnectedness and ongoing cooperation and competition. Countries such as France, Germany, Great Britain and the USA have been world champion exporters of educational models (see Marginson 2006). On the import side, the ‘international argument’ – that other countries’ systems *should* be emulated – continues its key role in educational reforms, independent of immediate relevance or even applicability (Gonon 1998).

Thus, research on institutional change in skill formation systems should address the transfer and translation of models. Increasingly popular neo-institutional approaches to diffusion and imitation offer a useful tool-kit to address such processes of change that focus especially on ideas. Which models have become dominant and been transferred across national borders? What mechanisms lead nations to translate, interpret, implement and test global models, most evident in the ‘best practices’ of top-ranked countries, as they adapt their historically evolved institutional arrangements in vocational and higher education to copy successful others? Specifically, which certificates, courses of study or types of training, and organizational forms – relying primarily on German or anglophone models – have been considered worthy of emulation?

In examining reforms in national (and regional) higher education and vocational education and training, to what extent are these choices responses shaped by international influences and European isomorphic pressure, or rather by endogenous preferences and priorities? The nation-level effects of those external pressures must be gauged as these influence national priorities in educational and training reforms (*cultural-cognitive pillar*), professional standards (*normative pillar*), and policy making (*regulative pillar*) (see Scott 2003). Not only does transnational diffusion determine the choice set of policy makers and interest groups, but national institutional arrangements also constrain available choices. Such effects are evident in the EU-based open method of coordination ‘soft law’ forces embedded in the Bologna and Copenhagen processes, and in general normative influences, such as cross-national rankings and global standardization. Varied stakeholder interests have led to innovation but also brought conflicts, resistance and differentiation – attempts to modify or subvert top-down reform efforts. Further analyses need to address gaps between global policy discourses and concrete changes leading to educational reforms (see Jakobi and

Rusconi 2009). Whether or not European countries achieve a harmonic convergence depends on adjustments made at the nexus of vocational and higher education.

Shifts in the relationship between vocational and higher education?

What can we expect in terms of institutional changes in the relationship between higher education and vocational education and training? In post-industrial societies, general and more abstract types of knowledge have gained in importance, while specific and more practical skills seem less valued (see Mayer and Solga 2008). Responses to this general trend, to be empirically investigated in each country, include shifts toward 'unification' of higher education and vocational training, in terms of institutional structure and 'academic drift' in terms of curricula. Numerous studies on globalization and education demonstrate that, while most education systems face similar challenges, and use analogous concepts and rhetoric in research and policy, important differences persist in the approaches to problems and policy responses (Raffe 2003), which produce even greater cross-national disparities in outcomes (Hillmert 2008).

Three scenarios for the future of these systems have been posited by Raffe (2003): (1) the responsibilities of separate academic and vocational tracks are solidified, with the latter possibly becoming more like the former without losing its main characteristics; (2) both sectors are affected and vocational education loses its independence and identity as qualitative differences between types of learning are reduced, making historically-evolved structural and status differences more significant; and (3) a new intermediate sector develops to offer dual qualifications. Which scenario is most likely depends on such factors as each country's institutional arrangements at the education/economics nexus, the distance and fluidity between sectors, and the respective organizations and certificates as well as their functional equivalents.

Worldwide economic changes demand responses from all institutions involved in skill formation, affecting both vocational and higher education. European reforms seem to be no longer purely rhetorical, as preferences and guidelines are imported and merged with existing institutions. Nation-specific interpretations of top-down reforms and values attributed to particular courses of study demand close attention as competition or cooperation increases among organizational fields in skill formation.

Thus, in each country, we must ask: to what degree are these top-down education reforms (Bologna in higher education, Copenhagen in vocational education and training) being joined with existing interests and actually leading to the desired outcomes? Which kinds of adjustments are being made within these diverse skill formation systems to respond to these pressures? How fundamental and comprehensive have the contemporary reforms been? Has the reality of restructuring – from unique starting conditions – matched the rhetoric of reform? In each country, how has the relationship between the organizational fields shifted? Does this imply a transformation of the system's logic? Or do we instead find path-dependent developments or even divergence despite international pressures to be more similar?

Institutional evolution in the 46 countries now involved in the Bologna process is compared in stocktaking reports (e.g. Rauhvargers, Deane, and Pauwels 2009), yet not comprehensively in the Copenhagen process. Nevertheless, changes in higher education due to Bologna, we argue, have begun to impact vocational education and training in this array of countries. This requires analysis of the dynamics of change at the nexus of higher education and vocational education and training. Do we find convergence,

harmony or renewed diversity in skill formation? Within Europe's differing systems – some with considerable vocational education and training, others without such a sector to speak of – how has the relative significance of these organizational fields shifted?

Regardless of the future impact of formal Europeanization via the Copenhagen process on vocational education and training systems, these will be challenged by changes in university-based education accelerated by the Bologna process. Baethge (2006) summarized the major current challenges to vocational education and training systems: (1) rising average qualification levels; (2) stronger global competition that heightens employment insecurity; (3) growing heterogeneity in institutionalized vocational and higher education systems that problematizes transitions from school to work, with the danger of exclusion for those at risk of not completing any training program especially problematic (Baethge, Solga, and Wieck 2007; Solga 2008); and (4) quick obsolescence of vocational knowledge as well as demographic developments. Contemporary cross-national studies would help to indicate the extent to which the goal of universal access to education and training has been achieved through expansion, increased differentiation or structural transformation.

Comparative-historical analyses of vocational and higher education

How can we examine the effects on diverse skill formation systems of diffusion and of recent reforms that increase cross-national standardization as well as competition between organizational forms within countries? Our strategy, briefly sketched, develops a comparative approach to explain changes in the two organizational fields of post-secondary skill formation, and their shifting relationship, by charting transnational processes designed to achieve uniform goals, but specified and modified in existing institutional arrangements. Comparing developments across and within countries provides the opportunity to highlight distinctive contexts and organizational forms that aim to reach similar goals (functional equivalents), codified in transnational agreements as well as in national and regional policies. In analyzing the reactions of higher education systems to Bologna and those of vocational education and training systems to Copenhagen – as well as interactions – the above-delineated theories of institutional change help to evaluate their significance.

Using contemporary strategies of comparative-historical analysis (Mahoney and Rueschemeyer 2003; Schriewer 2006), studies should locate mechanisms responsible for institutional change and specify for each nation: (1) the relevant transnational expectations and pressures on skill formation systems, and (2) the institutional changes carried out in response. Fortuitously, as mentioned above, research has focused on the implementation of European reforms, sometimes providing a nuanced understanding of change processes and outcomes. Yet the distance between the ideals touted in supranational declarations and the contemporary norms and policies in each country context need to be specified and more systematically analyzed. Above all, these reforms must be placed in context, with attention paid to differences in actual adjustments; especially since empirical results on the effects of higher education reforms (and on vocational education and training) thus far have been preliminary, if not contradictory (e.g. Dobischat, Fischell, and Rosendahl 2008, 97ff.)

Following recent institutional analyses that reject strong 'path dependence' but also 'path departure' theses, we concur that only attention to specific change processes (both revolutionary and incremental), to mechanisms (such as translation and *bricolage*), to sequences of events, and to interest constellations can provide

explanatory purchase on the recent challenges and ongoing evolution of these highly complex and interrelated systems (Thelen 2004; Streeck and Thelen 2005). The status of certain ideas and foreign models' relevance and reforms can thus be compared over time. A promising way to research institutional change in skill formation is to intensively investigate cases whose structurally different, historically divergent systems of higher education and vocational education and training are now affected by a common external process of 'harmonization' that seeks standardization, comparability and transparency. Convergence criteria would be most stringent, requiring path switch by some nations, whereas harmony implies path departure for some. For example, comparing France and Germany, the former implements the bachelor's/master's/doctoral sequence into its already differentiated, increasingly vocational higher education system with less fundamental transformation than Germany, where universities awarded the *Diplom* and doctorate, and now even vocationally-oriented post-secondary colleges can offer bachelor's/master's degrees (see Powell et al. 2009). By contrast, those countries providing today's models, such as the USA and the UK for higher education and school-based vocational education and training, and the 'dual system' of vocational education and training of Germany in the past, must not – or indeed seem to resist – change, given that other countries emulate their policies and practices. Yet, Bologna has begun to be a competitive factor for change even among the providers of the dominant models, such as the USA (see Adelman 2009). Analogously, acknowledged benefits or enhanced respect vis-à-vis international diversity, comparative advantages and institutional complementarities would facilitate path stabilization, leading to sustained differences.

To what extent is advancing internationalization and Europeanization strengthening hybrid organizational forms already found in a variety of anglophone educational systems (see Dougherty et al. 2008)? Despite the shift to the bachelor's/master's courses of study throughout Europe, a number of types of newer, often hybrid, organizational forms are obviously relevant. For example, flexible learning pathways, less standard programs of study (that may not lead to a degree, including part-time study, e-learning or adult education), or Germany's rapidly-growing pre-vocational 'transition support system' (*Übergangssystem*). A large group of participants in 'tertiary short cycle' courses – understood as short-duration vocational or professional education taken up after secondary schooling – cannot be ignored (Grubb 2003). Such newer courses of study and organizations – that may bridge the gaps between sectors – must be recognized. Importantly, in many countries linkages between post-secondary, tertiary short cycle and higher education are being strengthened (see Kirsch, Beernaert, and Nørgaard 2003).

While the literature spans different levels of analysis, much research refers to the organizational level. While this helps to reconstruct the influence of international ideas and interest groups regarding specific changes within national contexts and timeframes, these are limited in decisively testing the convergence hypothesis. As we have seen, a variety of newer institutional approaches serves to more fully portray the three pillars – ideas, norms and policies – of changing educational and training institutions at the education/economy nexus.

Conclusion

We have sketched how institutional change processes affect skill formation organizations that provide intermediate vocational training and general education. Both

organizational fields, higher education and vocational education and training, must react to global pressures as well as specific European standardization attempts that aim to ‘harmonize’ skill formation cross-nationally. Current reforms aim to facilitate the adoption of ‘best’ practices, but the transformation – whether hybridization or unification – of these separate sectors seems challenging, despite the rhetoric and ambitious planning by education ministers.

Both competition and complementarities between the diverse organizational fields involved in skill formation, and between educational systems and labor markets, remain. Here, we have argued that analyses of institutional change dynamics must also consider the vocational/higher education nexus to address whether change processes are leading to the expected convergence – and to show in which country they represent path stabilization or, alternately, sum up to path departure or even switch. Thus, we have proposed a framework that melds institutional approaches with the methods of comparative-historical analysis to measure the significance of current changes in these systems’ complementary models, as well as competition between such ideals, norms and policies. All three dimensions of skill formation institutions – cultural-cognitive, normative and regulative – require sustained attention. Because research on the ‘decoupled and separated’ fields of higher education and vocational education and training (Dunkel, Le Mouillour, and Teichler 2006) has remained similarly divided, the consequences of change in one field for the other have been ignored. Thus, the doubly-comparative examination of past and present skill formation national models and their reform – spanning the boundary between vocational and higher education and across national borders – offers a promising way forward to analyze the transnational diffusion of ideas, the growing relevance of Europe-wide standards and policies, and more or less persistent national structures and pathways. Such comparative-institutional analyses are crucial to test the ever-popular hypothesis of convergence among European skill formation systems.

References

- Adelman, C. 2009. *The Bologna process for U.S. eyes*. Washington DC: Institute for Higher Education Policy.
- Baethge, M. 2006. Das deutsche Bildungs-Schisma: Welche Probleme ein vorindustrielles Bildungssystem in einer nachindustriellen Gesellschaft hat. *SOFI Mitteilungen*. Göttingen: Soziologisches Forschungsinstitut (SOFI).
- Baethge, M., H. Solga, and M. Wieck. 2007. *Berufsbildung im Umbruch*. Berlin: Friedrich-Ebert-Stiftung.
- Balzer, C., and A. Rusconi. 2007. From the European Commission to the Member States and back? A comparison of the Bologna and Bruges–Copenhagen processes. In *New arenas of educational governance*, ed. K. Martens, A. Rusconi, and K. Leuze, 57–75. Basingstoke: Palgrave.
- Beech, J. 2006. The theme of educational transfer in comparative education. *Research in Comparative and International Education* 1, no. 1: 2–12.
- Brennan, J., and U. Teichler. 2008. The future of higher education and of higher education research. *Higher Education* 56: 259–64.
- Brint, S., and J. Karabel. 1989. *The diverted dream: Community colleges and the promise of educational opportunity in America, 1900–1985*. New York: Oxford University Press.
- Campbell, J. 2004. *Institutional change and globalization*. Princeton, NJ: Princeton University Press.
- Cook, B., S. Hite, and E. Epstein. 2004. Discerning trends, contours, and boundaries in comparative education. *Comparative Education Review* 48, no. 2: 123–49.

- Culpepper, P.D., and K. Thelen. 2008. Institutions and collective actors in the provision of training: Historical and cross-national comparisons. In *Skill formation*, ed. K.U. Mayer and H. Solga, 21–49. New York: Cambridge University Press.
- Czarniawska-Joerges, B., and B. Joerges. 1996. Travels of ideas. In *Translating organizational change*, ed. B. Czarniawska-Joerges and G. Sevón, 13–48. Berlin: de Gruyter.
- Deissinger, T. 1994. The evolution of the modern vocational training systems in England and Germany. *Compare* 24, no. 1: 17–36.
- DiMaggio, P.J., and W.W. Powell. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review* 48: 147–60.
- Dobbin, F., B. Simmons, and G. Garrett. 2007. The global diffusion of public policies. *Annual Review of Sociology* 33: 449–72.
- Dobischat, R., M. Fischell, and A. Rosendahl. 2008. *Auswirkungen der Studienreform durch die Einführung des Bachelorabschlusses auf das Berufsbildungssystem*. Düsseldorf: Hans-Böckler-Stiftung.
- Dolowitz, D., and D. Marsh. 2000. Learning from abroad: The role of policy transfer in contemporary policy-making. *Governance* 13, no. 1: 5–23.
- Dougherty, K., J. Gallacher, G. Jones, G. Moodie, P. Scott, and G. Stanton. 2008. Universal access and dual regimes of further and higher education. International and Contextual Studies Working Paper 1. Sheffield: University of Sheffield.
- Dunkel, T., and I. Le Mouillour, with U. Teichler. 2006. Vocational education and training and higher education. Typescript. Kassel: International Centre for Higher Education Research (INCHER).
- Ebbinghaus, B. 2005. *Can path dependence explain institutional change?* MPIfG Discussion Paper 05/02. Cologne: Max Planck Institute for the Study of Societies.
- Finegold, D., L. McFarland, and W. Richardson, eds. 1993. *Something borrowed, something learned? The transatlantic market in education and training reform*. Washington DC: Brookings Institution Press.
- Gonon, P. 1998. *Das internationale Argument in der Bildungsreform*. Bern: Peter Lang.
- Greinert, W. 2005. *Mass vocational education and training in Europe*. CEDEFOP Panorama, 118. Luxembourg: European Commission.
- Grubb, W.N. 1985. The convergence of educational systems and the role of vocationalism. *Comparative Education Review* 29, no. 4: 526–48.
- Grubb, W.N. 2003. *The roles of tertiary colleges and institutes: Trade-offs in restructuring postsecondary education*. Berkeley, CA: University of California Graduate School of Education.
- Grubb, W.N., and M. Lazerson. 2004. *The education gospel: The economic power of schooling*. Cambridge, MA: Harvard University Press.
- Gumport, P. 2000. Academic restructuring: Organizational change and institutional imperatives. *Higher Education* 39: 67–91.
- Hall, P., and D. Soskice, eds. 2001. *Varieties of capitalism: The institutional foundations of comparative advantage*. New York: Oxford University Press.
- Hamilton, S. 1999. Germany and the United States in comparative perspective. *International Journal of Sociology* 29: 3–20.
- Hanson, M. 2001. Institutional theory and educational change. *Educational Administration Quarterly* 37, no. 5: 637–61.
- Hillmert, S. 2008. When traditions change and virtues become obstacles: Skill formation in Britain and Germany. In *Skill formation*, ed. K.U. Mayer and H. Solga, 50–81. New York: Cambridge University Press.
- Holzinger, K., and C. Knill. 2005. Causes and conditions of cross-national policy convergence. *Journal of European Public Policy* 12, no. 5: 775–96.
- Jackson, N., and H. Lund, eds. 2000. *Benchmarking for higher education*. Buckingham: Open University Press.
- Jacoby, W. 2000. *Imitation and politics. Redesigning modern Germany*. Ithaca, NY: Cornell University Press.
- Jakobi, A., and A. Rusconi. 2009. Lifelong learning in the Bologna process: European developments in higher education. *Compare* 39, no. 1: 51–65.
- Kirsch, M., Y. Beernaert, and S. Nørgaard. 2003. *Tertiary short cycle education in Europe*. Brussels: European Association of Institutions in Higher Education.

- Krücken, G. 2003. Learning the 'new, new thing': On the role of path dependency in university structures. *Higher Education* 46, no. 3: 315–39.
- Krücken, G., A. Kosmützky, and M. Torcka. 2006. *Towards a multiversity? Universities between global trends and national traditions*. Bielefeld: Transcript Verlag.
- Lenhardt, G., R. Reisz, and M. Stock. 2007. Internationalisierung der Hochschulen und vergleichende Hochschulforschung. *Die Hochschule* 2007, no. 1: 36–42.
- Mahoney, J., and D. Rueschemeyer, eds. 2003. *Comparative historical analysis in the social sciences*. New York: Cambridge University Press.
- Marginson, S. 2006. Dynamics of national and global competition in higher education. *Higher Education* 52, no. 1: 1–39.
- Mayer, K.U., and H. Solga, eds. 2008. *Skill formation: Interdisciplinary and cross-national perspectives*. New York: Cambridge University Press.
- Meyer, J.W. 2005. *Weltkultur. Wie die westlichen Prinzipien die Welt durchdringen*. Frankfurt am Main: Suhrkamp.
- Mohrman, K., W. Ma, and D. Baker. 2008. The research university in transition: The emerging global model. *Higher Education Policy* 21: 5–27.
- Oliver, C. 1991. Strategic responses to institutional processes. *Academy of Management Review* 16, no. 1: 145–79.
- Organization for Economic Cooperation and Development (OECD). 2009. *Higher education to 2030, Volume 2: Globalisation*. Paris: OECD.
- Phillips, D. 2004. Toward a theory of policy attraction in education. In *The global politics of educational borrowing and lending*, ed. G. Steiner-Khamsi, 54–68. New York: Teachers College Press.
- Phillips, D., and H. Ertl. 2003. *Implementing European Union education and training policy*. Dordrecht: Kluwer.
- Pierson, P. 2004. *Politics in time*. Princeton, NJ: Princeton University Press.
- Powell, J.J.W. 2009a. To segregate or to separate? The institutionalization of special education in the United States and Germany. *Comparative Education Review* 53, no. 2: 161–87.
- Powell, J.J.W. 2009b. Comparing German and American models in skill formation. *AICGS Transatlantic Perspectives*. June 2009. Washington, DC: American Institute on Contemporary German Studies.
- Powell, J.J.W., L. Coutrot, L. Graf, N. Bernhard, A. Kieffer, and H. Solga. 2009. Comparing the relationship between vocational and higher education in France and Germany. Discussion Paper SP I 2009-506. Berlin: Social Science Research Center (WZB).
- Raffe, D. 2003. Bringing academic education and vocational training closer together. In *Futures of education II*, ed. J. Oelkers, 49–65. Bern: Peter Lang.
- Rauhvargers, A., C. Deane, and W. Pauwels. 2009. *Stocktaking Report 2009*. Report for the Meeting at Leuven/Louvain-la-Neuve, 28–29 April 2009. Brussels: Bologna Process Stocktaking Working Group.
- Reinalda, B., and E. Kulesza. 2005. *The Bologna process – Harmonizing Europe's higher education*. Opladen: Barbara Budrich.
- Reisz, R., and M. Stock. 2007. *Inklusion in Hochschulen. Beteiligung an der Hochschulbildung und gesellschaftlichen Entwicklung in Europa und in den USA (1950–2000)*. Bonn: Lemmens.
- Rose, R. 1991. Prospective evaluation through comparative analysis. In *International comparisons of VET for intermediate skills*, ed. P. Ryan, 68–92. London: Falmer Press.
- Schmidt, V.A. 2008. Discursive institutionalism: The exploratory power of ideas and discourse. *Annual Review of Political Science* 11: 303–26.
- Schneiberg, M., and E. Clemens. 2006. The typical tools for the job: Research strategies in institutional analysis. *Sociological Theory* 24, no. 3: 195–227.
- Schofer, E., and J.W. Meyer. 2005. The worldwide expansion of higher education in the twentieth century. *American Sociological Review* 70, no. 6: 898–920.
- Schriewer, J. 2006. Comparative social science: Characteristic problems and changing problem solutions. *Comparative Education* 42, no. 3: 299–336.
- Scott, P. 1995. *The meanings of mass higher education*. Buckingham: Open University Press.
- Scott, W.R. 2003. *Organizations*. Upper Saddle River, NJ: Prentice-Hall.

- Solga, H. 2008. Lack of training – The employment opportunities of low-skilled persons from a sociological and micro-economic perspective. In *Skill formation*, ed. K.U. Mayer and H. Solga, 173–204. New York: Cambridge University Press.
- Steiner-Khamsi, G., ed. 2004. *The global politics of educational borrowing and lending*. New York: Teachers College Press.
- Stone, D. 2002. Global knowledge and advocacy networks. *Global Networks* 2, no. 1: 1–12.
- Streeck, W., and K. Thelen. 2005. *Beyond continuity: Institutional change in advanced political economies*. Oxford: Oxford University Press.
- Tessaring, M., and J. Wannan. 2004. *Vocational education and training – Key to the future*. Luxembourg: European Commission.
- Thelen, K. 2004. *How institutions evolve: The political economy of skills in Germany, Britain, the United States, and Japan*. New York: Cambridge University Press.
- Thelen, K., and M.R. Busemeyer. 2008. From collectivism towards segmentalism: Institutional change in German vocational training. MPIfG Discussion Paper 08/13. Cologne: Max Planck Institute for the Study of Societies.
- Trampusch, C. 2009. Europeanization and institutional change in VET in Austria and Germany. *Governance* 22, no. 3: 369–95.
- Weick, K.E. 1976. Educational organizations as loosely coupled systems. *Administrative Science Quarterly* 21, no. 1: 1–19.
- Witte, J. 2006. *Change of degrees and degrees of change. Comparing adaptations of European higher education systems in the context of the Bologna process*. Dissertation, Twente University.
- Witte, J., M. van der Wende, and J. Huisman. 2008. Blurring boundaries: How the Bologna process changes the relationship between university and non-university higher education. *Studies in Higher Education* 33, no. 3: 217–31.