Chapter 14
Conclusion

Antje Barabasch and Felix Rauner

Harold Garfinkel (1986) postulated that in the end every occupation has to be learned practically. This finding is grounded in the principle of duality, the acquisition of occupational knowledge and skills in conjunction with theoretical knowledge taught at schools and colleges on the one side and reflective work experience on the other. The duality between theory and practice also created and still causes a tension among educationalists, policy makers, philosophers and scholars, who either support the idea of an academic education or favour an early career orientation and career and technical education. A number of prominent US scholars have actually developed foundational theories and concepts for occupational learning that have been influential around the world.

The institutionalization of the principle that work and learning need to interplay in order to prepare one for the requirements in a specific occupation was at all times until now confronted with this tension and has rarely been transformed productively into vocational systems and processes. The pole of this tension is represented by *Bildung*, which on the one hand targets the development of an autonomous personality and on the other hand, serves the qualification of the workforce and follows the rules of economic calculus. All attempts to dissolve this tension – the organization of vocational education as a training or as an educational endeavour – entail either economic risks, in which the qualification aspect is disregarded or corrupt the development of the personality and therefore ultimately the democratic development, if *Bildung* as education is constricted to 'human resource development' and qualified personnel are reduced to exchangeable providers of qualifications and skills for the labour market.

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Around the turn of the nineteenth century John Dewey contended that the establishment of vocational education structures in the United States significantly contributed to the development of vocational education as an integral part of the democratic educational system of the United States. From the perspective of European educationalists, such as Georg Kerschensteiner, Dewey, with his work 'Democracy and Education', introduced a 'Copernican turn' for vocational education and training (VET) far beyond the borders of the United States (Gonon, 2009, p. 17). He phrased the philosophical and pedagogical guidelines for vocational education, in which work is always a means or – as Herwig Blankertz (1985) put it – a medium for education and not its purpose. Not least because of these insights and Dewey's work, vocational education was introduced in the emerging high schools at the beginning of the twentieth century and has since then remained a part of the world of education. The high school as a horizontally structured school became a role model for modern democratic school systems. Training in the sense of qualifying the workforce in contrast became part of the world of work and all attempts to combine both worlds in the form of a dual vocational education have either failed or remained exceptions in American schools.

The characterization of vocational education in the United States with the dichotomy 'education versus work' and the attribution of education and work to separate societal spheres have contributed to the leading idea 'Democracy and Education', how John Dewey formulated it, and is deeply embedded in American culture. The idea of establishing work-related education in high schools likely prevented it from becoming the purview of American industry and the economy. At the same time the inclusion of VET in schools paved the way for its stigmatization as a 'second-chance system'.

Economists have pointed out the shortcomings of the American system of vocational education. Michael Porter, for example, in his writings about the 'Competitive Advantage of Nations' outlined the structural weaknesses of the American educational system: 'While education should remain a state and local responsibility a federal role in education is not only legitimate but vital at a time when state and local efforts are incomplete' (Porter, 1989, p. 725). Porter advocated for national standards and resources as well as a stronger participation of enterprises in the qualification of skilled workers. At the same time in 1989 the MIT Commission on Industrial Productivity published the study 'Made in America', an analysis in which the path of deindustrialization and structural change towards a service society were characterized as an erroneous trend. In addition to the lack of industry involvement and research politics, the commission identified the weaknesses in the system of VET education and training as a central reason for the loss of a competitive advantage along the whole spectrum of the industry: 'The American system of "on-the-job" training is called "following Joe around", and it does not work. [...] Although everyone sees the need for a better-skilled workforce, no one is willing to act alone to improve education. [...] Firms fear that they cannot educate their workers, because they would go off to other employers who could pay

higher wages, because they did not have to incur training costs' (Dertouzos et al., 1989, p. 21).[1]

A central cause for the weakness of vocational education in the United States, according to the MIT study and Michael Porter, is the lack of a national governance system: 'Meanwhile the federal government has come to see education more and more as an individual or local responsibility' (Dertouzos et al., 1989, p. 22). This is criticized as a fundamental flaw in the American educational system.

The study further criticizes the flexibilization of the workforce through the development and introduction of 'anybody workplaces' in the economy as a continuation of Taylorist work structures: 'By defining jobs narrowly and making each job relatively easy to learn, American industry pursued flexibility through the interchangeability of workers with limited skills and experience rather than the cultivation of multi-skilled workers' (Dertouzos et al., 1989, p. 83). Twenty years later Paul Volcker, ex-chief executive of the national bank of the United States, in an interview referring to the pathway that the United States has taken in terms of deindustrialization and negligence of the qualification of skilled workers, especially in industry and trades, pointed out, "I wish, we would have less financial engineers and instead more real engineers, for example in manufacturing systems engineering' (Volcker, 2009). He referred to the aftermath of this development and views them as resulting in a dramatic decrease of the export ability of the US industry, the large foreign trade deficit, as well as the resulting high economic and political risks. His explanation for this development aligns with the MIT study in explaining that the dequalification of workers comes with deindustrialization. This analysis refers to protagonists of socio-scientific and economic provenance, e.g. Daniel Bell (1975) composed the model of the postindustrial society. Here, the scientific knowledge becomes the new axial system, where everything else is circling around: the development of technology, the economy, and even culture. Bell's argument, as well as others is the foundation for the 'college for all' policy, which has contributed to the stigmatization of VET education and training.

The thesis of a progressive tertialization of the economy (i.e. the idea that employment shifts from the primary and secondary sectors to the tertiary or service sector) became a mainstream conviction of economists and scientists specialized in social history. They had disregarded the fact that the development of a service sector depends mainly on the development of a prosperous production sector. The corporate- and industry-oriented service sector builds the competitive structure in the service sector. To put it differently, a distinction must be drawn between personal services on the one hand and corporate- and industry (or production)-oriented services on the other. If the employees in the production sector and the production-oriented service sector are viewed together, it turns out that the overall share of production in the employment system is relatively stable, which refutes Fourasier's

[1] This phenomenon characterized workforce markets in which demand exceeds the availability of qualified personnel. For companies that train the opportunity costs of the training cannot be regenerated. Therefore, they opt out of such training provisions. This finally leads to the collapse of vocational education systems.

hypothesis of the shift to the tertiary sector. If the distinction between the different types of services is neglected, as is often the case, this leads to the false impression that the economic relevance of the production sector is declining. In fact, however, the growth in personal services (care, education etc.,) can be financed only if there is a competitive production sector. This is also the message of the MIT study. The economic theory of undocking the service industry from the production sector is based on a blatant misjudgement of technological and economical development (Kalmbach et al., 2003).

The discussion and research about American VET and its historical genesis needs to be embedded in the analysis of the technological and economical development in the United States under the conditions of an international competition about quality. Then requirements concerning a structural change of the qualification system would appear.

(1) There is no way that the dialectical tension between education and qualification can be productively and creatively shaped in order to overcome the impasse of 'Learning by doing' and to conquer the stigmatization of VET education and training. The community colleges could play a central role in this regard, because they are embedded in local innovation structures and at the same time they are part of a system of vocational learning and higher education.
(2) If local innovation structures are more embedded in the educational system this can contribute to strengthening VET education and training if the antipole – a developed national governance structure – has been established. The examples of other federal states, such as Switzerland or Germany, indicate that a national governance system for VET can strengthen its operation at a regional and local level. Effective national and local governance competence are mutually constitutive. For the United States this means that the divided responsibility for VET at the government level between the departments of labour and education needs to be united in one body with a cumulative responsibility for VET. This step had been recommended by economists, such as Porter and Volcker, the MIT commission on 'industrial productivity' and also by experts participating in the debate on the reform of the National Apprenticeship Training Act. At the 'Oversight Hearings on the National Apprenticeship Training Act' on November 15–17, 1983, virtually all of the experts warned of a weakening of the national responsibilities in the field of vocational education. Instead, they advocated a strengthening of the governance and support structures at the national level.

> Additionally, there exists an urgent need to clarify our public apprenticeship policy. This involves the redefinition of federal and state roles so that duplication of efforts is eliminated and programs become stronger and more balanced; federal support to state apprenticeship agencies; [. . .] apprenticeship research; [. . .] increased development and distribution of national standards; revitalization of the Federal Committee on Apprenticeship [. . .] (Hunter, 1984, p. 381).

> The planned action of the Employment and Training Administration to decentralize the National Apprenticeship Program to the States will not provide the quality of skills training requires (Griggs, 1984, p. 382).
>
> My concern of this tie is the diminishing role the Department of Labor is taking in the National Apprenticeship System, therefore weakening the skilled work force in our country (Sowers, 1984, p. 383).

None of the experts held a different view on this topic. A term that is frequently used in this context is 'fragmented governance structure', which is contrasted by the notion of a uniform national policy of apprenticeship.

(3) The innovation system of VET is based, just like any other innovation system, on three pillars: research, politics and practice (Fig. 14.1).

The full potential of an innovation system can only be realized, if

1. the three pillars are developed on a sufficient level and
2. they interact mutually with each other.

A developed VET research plan requires a research infrastructure at universities and colleges. New knowledge is based on primary research which emanates from a research process that evolves in a network of graduate colleges and institutes and their offerings of graduate programmes for the qualification of VET teachers. Educational research in various other subjects indicates that research and teaching in VET should also be differentiated according to vocational subjects.

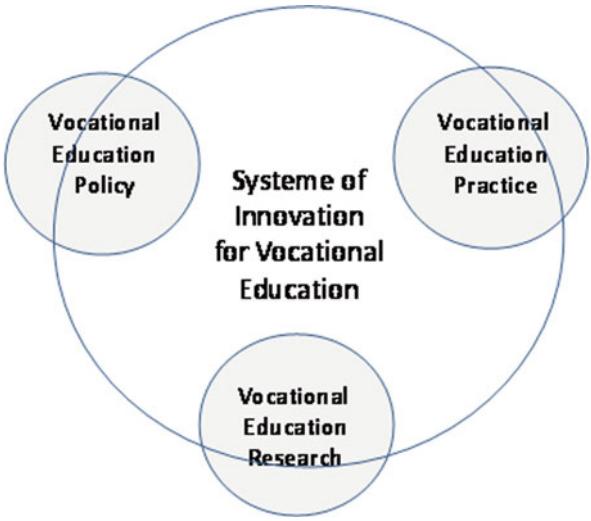

Fig. 14.1 Structure of the innovation system in vocational education and training

Research on competencies as well as 'conceptual change' research depends on a differentiated VET research according to occupational domains or career-technical career clusters. A groundbreaking example is the field of nursing as it was developed for example at the University of California at Berkeley (cf. Benner, Tanner, & Chesla, 1996; Benner, Hooper-Kyriakidis, & Stannard, 1999). At the national level the National Center for VET Education and Training could be a nucleus for the establishment of a national research centre as it exists in Germany. In order to achieve this, an expansion of research and managerial functions of all sectors of VET would be necessary.

The establishment of a VET policy would be possible, if at all, by establishing a comprehensive VET law. This legal framework would control all forms of vocational education and training that are not part of the higher educational system. If the American belief that the government should interfere less rather than more with people's lives would be reexamined, it might allow for the development of a coordinated VET policy based on a modern VET law. This notion needs to be critically examined, considering all the attempts that have been made in US history to create a national VET policy. On the other hand, the health care policy shows that the United States has a creative potential and the eagerness to change, especially when the security of the country or the competitiveness of its economy is threatened. The MIT commission had already referred to these suggestions two decades ago. The contributions in this book show again that the United States seems to have arrived at a turning point in regard to qualifying its workforce for a competitive economy.

(4) The third pillar of the innovation system, the practice of VET education, also reflects the underdeveloped structures of VET. There are some models of VET in the United States that can be regarded as best-practice examples. For instance, the training of skilled workers in the American car service sector since the 1990s is considered as an example of excellent training practice in international comparison, especially by the large manufacturers in the United States (Spöttl, Rauner, & Moritz, 1997). Examples like this point to two messages:

- These examples prove that there is a possibility to realize a groundbreaking VET practice. They challenge us to analyze their success and spread the message.
- The best-practice examples further refer to the exceptions that prove the rule which says that VET practice cannot renew itself. Therefore, examples of best practice sometimes are in the way of structural reforms.

Therefore the ostensible goal is to engage in a national dialogue about VET between politicians, researchers and practitioners in order to set the course for the establishment of an innovation system for VET. This book is our ambitious attempt to describe and critique the effectiveness of VET in the United States from an internal and external perspective by observing the field through the lens of an accentuated sociological and historical perspective. With this approach we intend to offer a rationale for realistic and at the same time necessary reform perspectives for the further development and enhancement of VET in the United States.

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