Li, Jun

Felix Rauner / Rupert Maclean (Hrsg.): Handbook of Technical and Vocational Education and Training Research. Berlin: Springer 2008 (1103 S.) [Rezension]

Erziehungswissenschaftliche Revue (EWR) 9 (2010) 1

Erziehungswissenschaftliche Revue (EWR)

Rezensionszeitschrift für alle Teilbereiche der Erziehungswissenschaft
ISSN 1613-0677

Die Rezensionen werden in die Zeitschrift mittels eines Peer-Review-Verfahrens aufgenommen.

Weitere Informationen: http://www.klinkhardt.de/ewr/

Kontakt: EWR@klinkhardt.de

EWR 9 (2010), Nr. 1 (Januar/Februar)

Felix Rauner / Rupert Maclean (Hrsg.)
Handbook of Technical and Vocational Education and Training Research
Berlin: Springer 2008
(1103 S.; ISBN 978-1-4020-8346-4; 341,33 EUR)

Consisting of 142 chapters, written collectively by 128 authors, as the latest and broadest international Handbook of TVET (Technical and Vocational Education and Training) Research in English, as Rauner put it in the introduction, this handbook aspires to be not just a reference book offering lexical knowledge on TVET research, but also a tool to "distinguish TVET research with other research disciplines" (9), as well as a big step "towards the internationalization of TVET research" (10).

Following the structure of the German edition that was published in 2005, the handbook consists of five sections, namely Genesis of TVET Research; VET Research in Relation to VET Policy, Planning and Practice; Areas of VET Research; Case Studies of TVET Research; and Research Methods. Among these sections, the section three "Areas of VET research", occupying page 159 to 613, is no doubt the focal point of the entire book. Many well known TVET experts from different country and research backgrounds (not only education research, but also several other areas of expertise) have contributed to make the integration of this variety of topics and questions in TVET research possible.

The handbook covers a wide range of and offers abundant information to topics concerning the TVET research as well as several countries and regions in the world. This broad coverage on different topics in TVET research makes it not only a good reference book for education researchers, but also a useful tool and source of information for policy-makers, practitioners, and students as well as anyone who is interested in the field.

Due to its scope it is impossible to comment on every part of the book within a few pages; it is therefore attempted here to stress some chapters related to three countries, namely Germany, China and the USA. Germany, with its long-standing strong tradition in TVET research, is still an important reference point in this handbook; China, with its growing economic influences as well as the increasing resources it invests on TVET research in recent years, is becoming a significant participant and partner in the TVET research internationally; as the biggest economy in the world, USA represents a different tradition in terms of TVET as well as its research and also covers several chapters in this handbook.

In section one, researchers from the corresponding three countries (Germany, China, and USA) describe and analyze the genesis and development of TVET research in each country. When put together, an interesting picture of the international TVET research development can be seen.

In their paper about the development of TVET research in China, Jiang, Yu and Yao (37-43) trace the genesis of systematic TVET research in China to the late 1970s; it was not until 1984 the first theoretical work on TVET of the new China was compiled (38). From 1980 to 2001, TVET as well as its research have gained increasing importance in China, which can be reflected in the number of TVET issues in national

planning projects of educational science, namely from 6 in 1980 to 31 in 1991, further to 69 in 2001 (39). Despite the increase in the number of researches carried out in the field, the research methods remain in a rather basic level, the sign of which can is that “a large proportion of research on TVE in China is description of experience” (42).

In the German case, the genesis of TVET research in Germany was separately discussed, namely inside universities and outside them. According to Rauner (48-56), the origin of TVET research, which is closely related to university education of TVET teachers, can be traced back to the early 19th century (49). This close connection between research and teaching at German universities led to a “distinctively pedagogical style of basic research”. Outside universities, the research in vocational education and training was activated by the activities of *Deutscher Ausschuß für technisches Schulwesen* (DATSCH) founded in 1908 and *Deutsches Institut für technische Arbeitsschulung* (DINTA) founded in 1925. The tasks of DATSCH was taken over by the Federal Institute for TVET Research in 1969 (BBF, later became BIBB, namely Federal Institute for Vocational Education and Training). The BBF, as well as later the BIBB, regards the “scientific reflection of the foundations of VET” and “preparation of training regulations and media” as its central mission (53).

From one of Maldonado and Saddler’s works (57-62), it can be seen that in the US the most significant influencing factor in the development of TVET and its research is legislation (58). The Morill Acts of 1862 and 1890 provided land for establishing universities and colleges; The Smith-Hughes Act of 1917 guaranteed “federal supports for vocational education through the provisions in federal funding”; the Vocational Education Act of 1963 confirmed the vocational education’s status and importance as “an essential program for the common wealth and national defense of the country”; the Carl D. Perkins Vocational Education Act 1984 changed the emphasis for funding from expansion of programs to improvement and at-risk populations (58-59). While the legislation has strongly supported the research in vocational education, especially after the Vocational Education Act of 1963, the research has also played important role in “getting many of the legislative acts passed” (281) and in “legitimizing the vocational education” (62).

Not only the genesis and developments of TVET researches in the three countries show different tracks and traits, but also the central focus of the research as well as its methodology demonstrate differences that potentially reflect “national tradition of vocational education” (9).

The study of vocational education in China is regarded by Jiang, Yu and Yao as “still a long way away from ‘scientific research’” (43).The disciplinary framework of technical and vocational pedagogy is still basically constrained within two main formats, namely the “disciplinary system of pedagogy”, and “the practice of TVE” (43).
Compared with the major fields of focal attention in the Chinese TVET research, namely construction of the TVE system, curriculum and teaching-learning process, and disputes over the “status” of TVE etc. (40-41), the research areas carried out in the university based TVET research in Germany contain more variety: development of occupations and occupational fields, pedagogical TVET research, analysis, design and evaluation of work processes organized on the basis of occupational profiles, as well as that of the work systems, etc. (51-52).

The TVET research in Germany is very much institutionalized, at the national level, in the Federal Institute for Vocational Education and Training (BIBB); the research also takes place at the relevant institutes and departments in the universities and numerous external research institutions. Academic associations also investigate vocational education from particular points of view, for instance, the TVET section within the German Society for Educational Science (DGfE) is from a pedagogic point of view, and the working group of technical disciplines of the German society for Labour Studies (GfA) takes the technical orientation (49). TVET research in Germany is not only understood as “a discipline that acts within a framework defined by educational policy and practice”, but also a discipline “according to scientific criteria within the academic system” (54). Through “the establishment of subject-related development methods”, the TVET research in Germany formed “an independent research tradition within educational research” (56). However, this scientific orientation also “entailed a proportionately lower degree of practical relevance for developmental issues in vocational education” (54).

Another work written by Maldonado and Saddler (279-283) shows some of the characteristics and developments of the TVET and its researches in the US in the past decades. With the objectives of vocational education shifted from “prepare the students for jobs in order to meet the labor market needs of the American economy” after the Smith-Hughes Act of 1917, to “include students with disabilities, disadvantaged students, bilingual students, postsecondary students, and students in non-traditional occupations” in the 1970s, to “teach skills and competences necessary to work in a ‘technologically advanced society’” in the 21st century, the research in the field focus mostly on “studies which justified the establishment of programs and the development of the curriculum” (280-281). The majority of the research in vocational education is regarded as basic and “the sophistication of research from the early 80s to the late 80s did not change” (282).

All the three countries have established some national data collection system in vocational education, but their ways of doing it vary greatly from one another.

Althoff and Krekel’s work (292-295) offers a good overview about the German case. Published annually by the Federal Government since 1977, the Report on Vocational Education and Training provides a “comprehensive system of information on the state and anticipated future development” of TVET and contains “extensive analyses based on statistics and research projects” (292). Representatives of employers, employees, the Federal States and the Federal Government are “represented with equal voting power” on the BIBB Board, which makes recommendations and takes a position on the annual report (292). The report consists of two parts: Part I, the current situation on the job market for training positions and the government’s policy for resolving current policy issues; Part II, extensive data and detailed findings concerning the job market for training positions and the structural development of VET as well as data on the design and international aspects of VET and continuing vocational education and training (292).

Sun’s work (288-292) presents the corresponding situation in China. As the result of Sino-German technical cooperation on vocational education, the Report on Vocational Education in China was initiated in 1994 and first published in 2001. Using the data from The National Statistical Yearbook and The National Statistical

Yearbook of Education, the report remains largely an aggregation of data and a collection of documentations. Its data analysis is mainly a “short-term comparison between the same year and the previous year” (291).

Due to the decentralized and individualistic nature of the school system in the US, the data collection methods in vocational education are quite different from Germany and China. Hudson and Levesque’s paper (296-300) describes the changing of methods applied in collecting data in TVET in the US. In the 1960s, the shift of the federal legislation’s focus to ensuring equal access to vocational education led to an interest in collecting detailed national data to track student participation in vocational education. But before 1983 the inappropriate data collection methods made the data inconsistent and non-comparable. From 1984, the National Center for Education Statistics collects data through sample surveys, known as the Career/Technical Education Statistics (CTES) system (297). Based on the raw material offered by CTES and their analyses, the report *Vocational Education in the United States* has been periodically published (1992, 1993, 2000) (299).

Three case studies on vocational colleges are also good reference points to see the differences concerning TVET and its research in the three countries.

Shi and Xu outline in their paper (342-346) the historical development and main features of higher vocational education research in China. From 1980s to 2000, the research on higher vocational education in China mainly attempted to justify the legitimate status of higher vocational education; from 2000 to 2004, the focus of the research shifted to the talent training model and school system reform; since 2004, curriculum construction for the future higher vocational education became the main theme (342ff). The features are generalized as: closely linked to the development of higher vocational education in China; not very balanced, with a more practical approach, and less theoretical study; relatively independent research has formed (346). They point out that the further development of its research team and upgrading of the theoretical standards are crucial for the further development of higher vocational education research.

Seen as “the most significant form of professional training schools”, vocational college is actually of secondary level II (346f). Pätzold demonstrates in his paper (346-354) the characteristics of the research on this school form. According to him, before the middle of 1960s there was only “rudimental developed theoretical and empirical research” in Germany in the field of TVET and that the transfer of the training of vocational school teachers to the university changed this situation (348). He further argues that vocational school research, “as a connection between empirical pedagogical research and normative, decisive pedagogical concepts, nearly did not exist until the 1970s”. Cooperation between trainers and vocational schools, an important factor in vocational schools, according to results of research, work well “on a political and administrative level”, but is more sporadic at the didactic level (351). His ending note of the article is that TVET research shall “aim at finding and clarifying problems of compatibility between vocational school programmes and everyday practice of vocational training” (354).

Cellini discusses in his paper (354-359) separately two forms of vocational college education in the US and then analyzes the similarities and dissimilarities, namely community college in the public sector and proprietary schools in the private sector.

With state funding comprising 40 per cent of total revenues, community college offers a two-year associate's degree as their highest degree as well as an array of short-term vocational certificate programs. Close proximity together with relative inexpensive tuition makes community college affordable for low-income students; meanwhile the program can provide students with workplace-relevant skills that are valued by employers (355). Supported by limited descriptive studies, research results show that the "students in proprietary schools are more likely to come from low-income and less-educated families" (357). Although the two kinds of schools offer similar programs to a certain extent, researchers cannot achieve consensus as for whether proprietary schools pose real threat to community colleges or not (357-358). The specific pedagogy is similar at both institutions, but proprietary schools tend to make greater use of labs and practical applications and have better-developed student services, such as counseling and career services (359).

The research of Zhao and Xu (656-660) introduced in section four represents an atypical research project in the field of comparative VET research, in that the research is undertaken for more practical than theoretical purposes. The research reported, known as "Research and Experimentation of China's Vocational Education Reform Promotion through Learning from the German Dual System" (referred to as "VERDualS" hereafter), was "the largest organized action in contemporary Chinese history to learn from foreign experience and to review and reform the vocational education system". Some accomplishments have been achieved, such as the establishment of the competence-oriented vocational training, the design of a comprehensive curriculum focusing on vocational qualifications, and the reform of learning contents etc (658). Despite these achievements some deep-imbedded difficulties also took place, namely difficulties for Chinese teachers to adapt the new curriculum, the lack of enterprise support which is necessary for the improvements in practical training and so on (658). One of the main lessons drawn from this research and reform process is that the straightforward copying and borrowing of the system of one country to another simply cannot work well.

In summary, the handbook gives a comprehensive overview of the TVET research, offers abundant information about TVET research in different countries, exhibits concrete examples in the field and provides readers some important aspects of the research methodology; the inclusion of wide range of topics and researchers from a variety of backgrounds make it an excellent handbook useful for anyone who is involved and/or interested in TVET. It would be nice if the methodology part could be attached even greater emphasis and put in one of the first sections of the book: after all, it is a handbook on research, in which methodology always lies in the center.

Jun Li (Köln)

Jun Li: Rezension von: Rauner, Felix / Maclean, Rupert (Hg.): Handbook of Technical and Vocational Education and Training Research. Berlin: Springer 2008. In: EWR 9 (2010), Nr. 1 (Veröffentlicht am 05.02.2010), URL:
http://www.klinkhardt.de/ewr/978140208346.html