

Vocational Teacher Training in Germany

Marianne Friese

*Justus Liebig University Giessen, Germany
marianne.friese@erziehung.uni-giessen.de*

Abstract

The international developments of globalization and demographic changes of an aging society have led to new concepts of teacher education since the beginning of the 21st century. Currently, the debate pertaining vocational teacher training focuses on two issues: 1) Firstly, reform is necessary because of structural and curricular changes, further professionalization and quality development of vocational teacher training as part of the measures imposed by the Bologna. 2) Secondly, given the scope of a profound socio-demographic transformation process, the focus of attention is shifting onto the acute needs for teachers in scarce subjects of personal care services as well as MINT professions within the professional vocational disciplines of teacher training. The following article outlines key reforms and developments in vocational teacher education in Germany and Europe on the following points: 1) Structures and university centers of teacher education in Germany 2) Curriculum development and didactic approaches in teacher training 3) Requirements on competencies and professionalization in teacher training.

Keywords: vocational teacher training, professionalization, lifelong learning, quality development, curriculum development, competencies.

Профессиональная подготовка учителей в Германии

Марианна Фризе

*Гиссенский университет имени Юстуса Либиха
marianne.friese@erziehung.uni-giessen.de*

Аннотация

Изменения, происходящие в глобальном мире стимулируют появление новых концепций подготовки учителей с начала 21 века. На сегодняшний день обсуждаются следующие аспекты: 1) Реформа необходима по причине изменения учебных планов и структуры обучения, а также в связи с необходимостью развития профессиональной подготовки учителей как части Болонского процесса; 2) во-вторых, значительный объем социально-демографических трансформаций сдвигает фокус внимания на собственные нужды и потребности учителя в изменяющемся в мире в контексте нехватки всех видов ресурсов. В статье рассматриваются основные изменения и этапы развития профессионального образования учителей в Германии и Европе согласно следующим критериям: 1) университетские и другие образовательные центры подготовки учителей в Германии; 2) усовершенствование учебного плана и дидактических подходов в образовании учителей; 3) требования к компетенциям в процессе подготовки учителей.

Ключевые слова: профессиональная подготовка учителей, обучение на протяжении всей жизни, профессионализация, усовершенствование учебных планов, компетенции.

1. Empirical Points of Reference: Structural Change in the Economy and in Vocational Schools

Over the last decades a fundamental structural change of the economy and society has occurred in Germany, having a vital impact on the direction of vocational training and vocational teacher training (Faßhauer & Rützel, 2013; Friese, 2014). In this context, three points of reference have to be mentioned: Firstly, the so-called megatrends like globalization, internationalization and mechanization have led to a change in qualification and competence requirements. What is currently demanded is not only expert knowledge, but also an increasing extent of social, methodological and interdisciplinary competences. Apprentices are supposed to develop skills enabling them to solve problems of tomorrow's

professional world in an independent, forward-looking and activity-oriented way. Thus, coping with uncertain and unpredictable situations has become an essential professional competence.

These requirements apply firstly to the dual system of vocational education and training in Germany, in which mostly commercial and technical apprentices are trained and which has a high proportion (70%) of male students. The dual system with its two learning venues, school and company, is currently considered the *via regia* (royal highway) of vocational training. Reasons for this can be seen in the good combination of theoretical and practical training and good prospects of a secure job in the industry. Professions profiting from this system are mostly the so-called MINT professions (Mathematics, Computer Sciences, Natural Sciences, Technology). In commercial-technological professions and in skilled crafts and trades, there is a considerable demand for skilled personnel. The administration of the dual system of vocational education and training is regulated by the German Government according to the Federal Education and Training Act, which means that there is a uniform, nationwide regulation having a positive impact on the development of vocational training structures.

A second sector in which an increasing demand for skilled personnel and an increasing demand of professionalism can be observed are the fields of health, nursing, nutrition and home economics, social work and education. The reasons for this development are the demographic change in an aging society, an increasing number of working mothers and in the increasing importance of early childhood education and nutritional education intended to provide incentives for a healthy and sustainable life style. For vocational teacher training it is important that these professions are mostly trained within the system of vocational colleges, which are characterized by a high proportion (more than 70%) of women. A criticism from a gender perspective is that, in spite of their high professional level, professions studied in vocational colleges are characterized by semi-professional structures, low regulative standards, low social prestige and low pay, on top of offering insecure career options and insufficient academization.

Thirdly, an empirical point of reference in vocational teacher training is the so-called transition system. This system is located at the intersection of school and professional career and offers measures of vocational orientation and preparation for young people with special educational needs. These young people form a very heterogeneous group and have serious disadvantages when starting vocational training in the dual system or in vocational colleges, because they are often affected by social and sexual discrimination, the effects of migration and flight or by learning disabilities. Currently, vocational teacher training in Germany is strongly influenced by the concepts of inclusion and integration of refugees in vocational training and qualification. The institutions in the domain of the transition system are vocational schools and general schools offering Business and Employment Studies. With regard to vocational teacher training in this field, it is relevant to establish intensive cooperation of the teaching staff of the individual types of school and of the individual vocational programs. Moreover, appropriate offers for further qualification and training of the teaching staff need to be made.

At the school level, the heterogeneity of the educational systems corresponds to a highly differentiated field of a number of different schools types and vocational programs. This field ranges from vocational training preparation over initial vocational education and training in the dual system or at vocational colleges with a considerable number of different degrees, to continuing education and vocational training. The curricula and educational standards of the individual vocational programs are equally intricate. They follow different objectives and address different target groups of different age brackets with different degrees and different socio-cultural backgrounds. Since currently a

considerable number of young people qualified for university entrance has started to enter the dual vocational education and training system, a polarization of target groups into high-performing and low-performing students can be observed. Moreover, in cooperation with Universities of Applied Sciences a new form of vocational education is taking place: vocational schools are taking over parts of Bachelor's Programs within the framework of a dual vocational education and training. In this context, vocational schools have been assigned a number of new functions, in addition those they already have in the fields of teaching, development of curricula and cooperation. Among these new functions are quality control, quality management, evaluation and development of school profiles for Independent Schools and regional Educational Centers.

2. Change of general concepts in teacher training: corner stones of educational policy and quality control

The pronounced heterogeneity of school types, vocational programs, learners and the wide range of educational and organizational functions place high demands on the competence development of the educational staff, quality development and on the professionalization of teacher training. New concepts of teacher training in Germany have been mainly influenced by reforms carried out since the 1990's by the European Union and by professional objectives of educational policy and educational research in the field of teacher training (Kultusministerkonferenz, 2004, 2015; Terhart, 2014). Essential concepts of vocational teacher training have been influenced by the following initiatives and by research in educational policies:

The concept of life-long learning developed at the end of the 1990's has focused discussion on further education and professionalization of career biography.

The tiered and polyvalent Bachelor's and Master's Programs established in the course of the Bologna Reform have replaced the First State Examination, which means that the responsibility in this area has been shifted from the state to the universities.

The report of the Standing Committee of the German Ministers of Education and Cultural Affairs on the perspectives of vocational teacher training in Germany (Terhart, 2000) introduced a fundamental change of concepts.

Since the beginning of the year 2000, a number of general agreements and resolutions adopted by the Standing Committee of the German Ministers of Education and Cultural Affairs have determined essential concepts for vocational training and examinations, standards, scope of the individual departments and didactic-methodological approaches in vocational teacher training, as well as in special academic fields and technical didactics.

In the course of this change of concepts, the focus has shifted (Friese, 2014a): One aim is the improvement of the supply of the institutions with teaching staff in the under-resourced subjects of the technical disciplines electronic and mechanical engineering. The increasing demand for teaching staff in the sector of care professions was hesitantly acknowledged not before the second step. Secondly, the development of quality in vocational teacher training on a structural, curricular and didactic-methodological level is an additional aim. A crucial impetus in the development of instructional quality emanates from studies (e.g. Hattie, 2008), which attribute teachers with a central influence on the learning success of the students. Additionally, attempts of professionalization in teacher training are closely connected with the striving for instructional quality. This quality is intended to be achieved by early practical training during the Bachelor's Program and by further professional training during all stages of teacher training, starting during academic education, to be continued at the second stage of practical teacher training, and during the third stage of learning on the job.

3. Structural key points: venues and concepts of vocational teacher training

3.1 The three stages of (vocational) teacher training

Teacher training in Germany is carried out in three stages (Kultusministerkonferenz 2012, 2013). The first stage contains the tiered and polyvalent education at a university in modularized structures over a period of ten semesters: The Bachelor's Program comprises six semesters, whereas the Master's Program comprises four semesters, which amount to 300 Credit Points. The academic programs are appraised and accredited by members of the government and the academia in an accreditation procedure with a re-accreditation taking place after six years. The universities are the institutions competent to deal with the establishing and conducting of academic programs. The Bachelor facilitates the entry into occupational areas in the field of vocational education and company-based training at companies, organizations and institutions working in vocational education and training. Furthermore, it opens career opportunities in continuing education and training. The Master permits entry to the stage of teaching practice and to PhD-programs.

The first stage is intended to lay the conceptual foundation for subsequent professional life. It focuses mainly on conceptual-analytical contents of professional relevance, knowledge of the conceptual frameworks and pedagogical, methodological-didactical and occupational field-related employability skills. Relation to occupational fields in this context does not exclusively refer to the teaching of application-oriented skills, but also to providing a foundation for reflection on theory and technical teaching skills and developing general occupational competence. The Bachelor programs impart academic basics, methodological competence and occupational field-related qualifications according to the profile of the academic institution, in order to guarantee a diversified academic qualification. Master programs attend to professional and academic specialization and can either be practice-oriented or research-oriented.

The second stage of the teacher education contains 12–24 months of modularized training, depending on the German Federal States in which it is served. During this period, students attend seminars on two days a week; on three days a week they work at the training schools. During the second stage, the National Education Authority for Didactics and Teacher Education supervises teacher training. The stage of teacher traineeship is terminated with the Second State Examination and permits entry to teaching professions. The second stage of teacher training is intended to impart practical experience, supplemented by theoretical reflection and the development of positive coping patterns for a daily teaching routine. One central function of the second stage is the processing of specialist and technical knowledge in such a didactic-methodological way that it can be applied under realistic conditions in daily teaching practice.

Finally, the third stage comprises entry to professional life and professionalization. It is characterized by continuous extension of competences obtained during training, and it is intended to develop new competences, which are required due to constant change of society, work and the educational system. Currently, this concerns mainly of dealing with heterogeneity, consideration of different cultural and linguistic origins of students and the requirements of inclusive vocational education and training.

3.2 Structure of the academic programs in vocational teacher training

Vocational teacher training programs at German universities are characterized by a variety of different models of academic programs and curricula, which on the one hand, are aligned to the Bologna standards. On the other hand, there are binding legal requirements based on the framework agreement concerning the training and examinations for teaching degrees of the Standing Committee of the German Ministers of Education and Cultural Affairs (Kultusministerkonferenz, 2015). The classification based on these

framework agreements defines 16 professional disciplines within the occupational fields Economics and Administration, Commercial-Technical professions and individual-related Care professions. In Germany there are approximately 45 academic venues for teacher education in the field of economics, administration and commercial-technical professions; additionally, there are 15 venues for the occupational field of the Care professions. In view of the increasing demand for skilled personnel and teachers within the field of Care, further extension of this area is necessary.

The Bachelor and Master Programs typically comprise a highly complex, interdisciplinary and inter-university curriculum (Friese, 2010). At the Justus Liebig University (JLU) in Giessen (Friese, 2014a), for example, the curriculum cross-links modules and subjects of the occupational fields Agricultural Sciences, Nutrition and Home Economics at the university and the occupational fields Metal Technology and Electrical Engineering at the university of applied sciences (THM, Technische Hochschule Mittelhessen). One core area consists of education theory, focusing on Working, Occupational and Business Pedagogy, including subject-related didactics, school-related and company-related practical studies, basic sciences and general teaching subjects. The tiered academic programs aim at providing the students with substantial specialist and technical knowledge, pedagogical, methodological-didactic and occupational area-specific competences and interdisciplinary and communicative qualifications. The Bachelor's Programs, on the one hand, facilitate practice-oriented and knowledge-based competences for spheres of activity in schools and companies. An evaluation of the progress of academic programs and of the students' demands has shown that, with a few exceptions, students generally aim at entering vocational teaching and plan to achieve a Master's Degree. On the other hand, the Master's Programs show a research-oriented and teaching related profile. The graduates extend and deepen the competences achieved in Working, Occupational and Business Pedagogy, in the Fundamental Sciences and in their General Teaching Subject.

Owing to the importance of the theory-practice relation in vocational teacher training programs, school internships during Bachelor's and Master's Programs are considered vital at the JLU. The teaching internship comprises five weeks in the Bachelor's Program and five weeks during the Master's Program. This format of internship is currently being controversially discussed from the viewpoint of an early professionalization. At present, in some German states so-called practice semesters or extensive core internships are being tested and implemented. The practical studies in a training company are of equal importance for the students. The curriculum demands an eight-week internship in a training company. One necessary precondition for studying vocational teaching is either an apprenticeship or work experience of at least 52 weeks at a training company. Experience has shown that the majority of students (ca. 70%) have accomplished vocational training when starting the academic program, which can be partly credited against the requirements in practical studies. In addition to the basic model of vocational teacher training at German universities, there exists a number of in-service training models for direct and lateral entry to vocational teacher training. These models have been introduced because of a shortage of graduates in the technical disciplines. Likewise, the cooperation model of university and university of applied sciences, which was developed by the JLU, has been expanding.

3.3 Students and academic progress

Regarding the socio-cultural composition of the students, it can be noticed that, like other target groups of vocational education, they form a heterogeneous group. Diverging study requirements at universities or universities of applied sciences, differentiated educational

progress due to individual biographies, the co-existence of diverging institutional policies in the sciences and the humanities and in commercial-technological and individual-related disciplines as well as a great diversity of various academic models for regular students and lateral entrants are characteristics of vocational teaching programs. The professional biographies of students are strongly influenced by disruption, re-orientation and new beginnings. School degrees and previous work experience show considerable variation; their prior subject knowledge thus being of variable quality. Moreover, students show considerable differences in age, which leads to different social starting positions due to family obligations or an occupation to secure subsistence.

The heterogeneity in the professional biographies of the students entails a tremendous chance for innovation in teacher training programs with regard to the importance of work experience. At present an evaluation carried out at the JLU investigating the range of different study and knowledge requirements and completion and attrition rates with regard to previous professional experience and variable educational requirements. The results of this survey are essential for the discussion of the educational policies of permeability of occupational and academic education and training and of the acknowledging and crediting of occupational competences.

4. Professionalization: standards, concepts and didactic-curricular approaches

The extremely differentiated structure of vocational education makes great demands on the standards and competences of students and teachers (Friese, 2014; Jenewein & Henning, 2015). In vocational teacher training programs it is essential to link the complex general knowledge of the educational sciences with the specialist knowledge of the occupational area and the respective didactical and methodological knowledge and skills. Therefore, the combination of a theoretical and practical approach is the underlying principle of these programs. This principle is anchored in the curricula by teaching basic knowledge and occupation-oriented practical knowledge. Simultaneously, it is enhanced by enquiry-based learning within the framework of training research projects.

A seminal aspect of vocational teacher training is the development of pedagogical interventions related to the empirical change of the economy, occupational reality and living environment. A further aspect consists of the ability to react to the developmental and educational requirements of the individual target groups. It is the task of the teaching staff to convey the educational objectives of the vocational school according to the requirements of the economy. This relation of diametrically opposed interests plays an essential role in pedagogy and emerges especially in the context of vocational education, because the requirements of the training are closely connected to the demands of the employment market.

These requirements embrace a number of occupational competences such as the ability to comprehend social transformation processes and individual stages of development, analyze socialization experience and realize appropriate pedagogical interventions, map out pedagogical work in the presence of “uncertainty structures” and during “uncertain stages of status” of young people or implement specialist, social, methodological and individual competence in an appropriate way in the process of teaching.

Specific competences regarding the theory-practice-transfer are of special significance. Theory-practice relation in vocational teacher training has always a double basis: On the one hand, it relies on professional experience obtained by way of professional biography; on the other hand, it relies on the prospective, scientifically reflected practice of pedagogical activity in school. Students in vocational teacher training having occupational experience show a considerable advantage in the development of these competences.

Against the background of the multitude of different educational systems and educational careers new competences need to be developed, especially with regard to the variety of stakeholders involved from educational institutions in the fields of school, educational politics and the economy. The creation and development of educational networks is crucial in view of the regional need for autonomous school development and international cross-linking. In terms of the increasing problems of the transition system and the increasing importance of advanced vocational training caused by demography and life-long learning, students in vocational teacher training obtain competences necessary to initiate and accompany the regional and interdisciplinary cross-linking of school, extracurricular education, further vocational education and academia.

In the transitory system, for example, cooperation of contributory schools, educational institutions, companies and regional networking is required. Moreover, special demands as to occupational orientation, pedagogical diagnostics, the development of support plans and handling of cultural variety and inclusion have to be met. Dual vocational education and training, however, requires cooperation between the learning venues, schools and companies, the realization of learning fields and development of occupational courses. In the equally differentiated full-time vocational schools in the area of Care professions, specific forms of curriculum development, cooperation and learning design are demanded.

In addition to the core tasks of teachers – teaching, educating, evaluation and innovating – schools and teaching staff are assigned further tasks such as quality control, quality management, evaluation and development of school profiles for Independent Schools and regional educational centers. The curricula of vocational teacher training support competences for development of schools and classroom teaching and more flexible organizational processes for multi-professional teams of teachers, social workers, special education teachers and teachers in adult education. The foundation of specific didactic and diagnostic knowledge and the allocation of a wide range of methods play a crucial role in vocational teacher training. The programs are intended to enable students to design complex teaching-learning arrangements, which are oriented towards a wide range of requirements and competences and towards a variety of educational levels of the learners. Therefore, vocational teacher training focuses mainly on practice-oriented methods, problem-oriented, case-related and interdisciplinary learning. Consequently, vocational teacher training aims at promoting teaching personalities who continuously reflect on their own actions, their empathy, the professional knowledge and skills, their subject matter and the learning process of their students.

5. Conclusion

The contribution has highlighted key points of the professional teacher training in Germany with regard to reforms of the European Union. It should be made clear, that vocational teacher training is currently undergoing a fast modernization process. The educational reforms, theoretical and curricular innovations of teacher education are set within in a complex set of economic and demographic changes as well as new skills and profession demands. A particular challenge for universities and vocational schools is to further develop the work begun by the Bologna reform restructuring the academic teacher training in theory and practice in order to ensure their future operability.

References

- Faßhauer, U., & Rützel, J. (2013). Herausforderungen und Perspektiven für die Lehramtsausbildung für beruflichen Schulen (Challenges and prospects for the vocational education for vocational schools). *Berufsbildung*, 143, pp.2-5.
- Friese, M. (2010). Didaktisch-curriculare Aspekte für Fachrichtungen und Fachrichtungsbereiche personenbezogener Dienstleistungsberufe (Didactic-curricular aspects for fields of specialization

- and subject areas of personal service professions). In J.-P. Pahl & V. Herkner (eds.), *Handbuch Berufliche Fachrichtungen*. Bielefeld: W. Bertelsmann Verlag, pp.311-327.
- Friese, M. (2014). Care Work. Professionalisierung der Berufsbildung und Lehramtsausbildung (Professionalisation of vocational education and training). *Berufsbildung*, 148, pp.2-5.
- Friese, M. (2014a). Lehramtsausbildung für berufliche Schulen an der Justus-Liebig-Universität Gießen: Die Bachelor- und Master-Studiengänge «Berufliche und Betriebliche Bildung» (BBB) (Lessons learned for vocational schools at the Justus-Liebig-University of Giessen: The Bachelor's and Master's courses "Vocational and Business Education). *Insider*, 3, 27-29.
- Hattie, J. (2008). *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement*. NY: Routledge.
- Jenewein, K., & Henning, H. (2015). *Kompetenzorientierte Lehrerbildung. Neue Handlungsansätze für die Lernorte im Lehramt an berufsbildenden Schulen* (Competence-oriented teacher training. New approaches to action for the learning places in teaching at vocational schools). Bielefeld: Bertelsmann Verlag.
- Kultusministerkonferenz (2004). *Standards für die Lehrerbildung: Bildungswissenschaften* (Standards for teacher education: Educational sciences) (Beschluss der KMK vom 16.12.2004 in der jeweils geltenden Fassung). Accessed October 7, 2016, at: http://www.kmk.org/fileadmin/Dateien/veroeffentlichungen_beschluesse/2004/2004_12_16-Standards-Lehrerbildung-Bildungswissenschaften.pdf.
- Kultusministerkonferenz (2012). *Ländergemeinsame Anforderungen für die Ausgestaltung des Vorbereitungsdienstes und die abschließende Staatsprüfung* (Country-specific requirements for the preparation of the preparatory service and the final state examination) (Beschluss der KMK vom 06.12.2012). Accessed October 7, 2016 at: http://www.kmk.org/fileadmin/Dateien/veroeffentlichungen_beschluesse/2012/2012_12_06-Vorbereitungsdienst.pdf.
- Kultusministerkonferenz (2013). *Empfehlungen zur Eignungsabklärung in der ersten Phase der Lehrerbildung* (Recommendations for suitability assessment in the first phase of teacher training) (Beschluss der KMK vom 07.03.2013). Accessed October 2016 at: https://www.kmk.org/fileadmin/Dateien/veroeffentlichungen_beschluesse/2013/2013-03-07-Empfehlung-Eignungsabklaerung.pdf.
- Kultusministerkonferenz (2015). *Lehrerbildung für eine Schule der Vielfalt – Gemeinsame Empfehlung von Hochschulrektorenkonferenz und Kultusministerkonferenz* (Teacher training for a school of diversity – Joint recommendation of the German Rectors' Conference and the Conference of Ministers of Education and Cultural Affairs) (Beschluss der KMK vom 12.03.2015/Beschluss der HRK vom 18.03.2015). Accessed October 7, 2016 at: http://www.kmk.org/fileadmin/Dateien/veroeffentlichungen_beschluesse/2015/2015_03_12-Schule-der-Vielfalt.pdf.
- Terhart, E. (2000). *Perspektiven der Lehrerbildung in Deutschland. Abschlussbericht der von der Kultusministerkonferenz eingesetzten Kommission* (Perspectives of Teacher Training in Germany. Final report of the commission appointed by the Standing Conference of Ministers of Education and Cultural Affairs). Weinheim: Beltz.
- Terhart, E. (2014). Dauerbaustelle Lehrerbildung (A construction site for teacher training). *Pädagogik*, 66 (6), 43-47.