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**Research on VET in Germany –
present topics and results**

Editors:
Marianne Friese,
Dietmar Frommberger
and Karin Rebmann

Welcome

We're proud to present the first English edition of *berufsbildung. A journal for practice and theory in the company and at school. berufsbildung* re-emerged after German reunification at the beginning of the 1990s, and features perspectives that are both rich in tradition while remaining in a process of continual modernization. This tradition involves today's most important trends and theoretical innovations in VET and vocational continued education in Germany, while keeping an eye on international developments such as innovative vocational education practices and research in this field. *berufsbildung* is a forum where everybody in the world of vocational education and company training can get involved in the discussion and participate in a productive transfer between theory and practice. You'll find the latest reports on the state of research, see "practice to practice" discourses initiated, and experience the many different sides of the issues regarding current and future-oriented results from model tests; educational policy programs; regulatory reforms; educational and learning contexts from/in the company, school, and even outside of the school; different areas of vocational education action; continued education; and consultation.

Modernization emerges as a result of continual change in VET and continued education theory and practice. Developments such as the fundamental structural economic and societal changes occurring for (at least) the past decade; the emergence of new professional and competency profiles; demographic shifts; and an increasing need for skilled labor, not to mention changes in family and living structures, have generated new challenges for both conceptual creation and curricular development in VET and continued education. Keywords such as *lifelong* and *biographical learning*; the necessity of permeability and flexibility in both the educational system and

professional qualification; new challenges for competence and quality development in vocational education; the urgent need for the professionalization of educational personnel; and the orientation towards subjective theoretical aspects and didactic arrangements are all on the horizon of the vocational education debate, not only in Germany, but when it comes to European and international reforms as well. A key element of a modernized vocational education theory and practice will without question be the implementation of issues including gender, diversity, sustainability, and social inclusion. These will need to be foundationally established and developed to achieve structural and didactic innovations in VET and continued education.

berufsbildung takes a continual, reflective, critical look at these issues and aspects of vocational and economic education theory and practice with the aim of offering findings for researchers, students, and teachers in schools and companies. Useful fields of action for continued education, consultation, and training outside of school also emerge.

This first English edition will present selected articles on current issues, providing a glimpse of *berufbildung*'s excellent spectrum of all kinds of issues and methodical variety. You'll enjoy articles on theoretical discourse; educational and policy changes; how VET systems and skilled labor are changing; the educational formation of German's transitional system; professionalization and didactic-curricular changes; issues of socially inclusive vocational education; and the effectiveness of gender in educational structures.

In the article *Subjective Theories of Knowledge and Learning*, Karin Rebmann, Tobias Schlömer, Florian Berding and Manuela Paechter take a look at the question of to what degree subjective knowledge and learning theories (epistemological beliefs) impact the formation of teaching and learning processes. Key

issues here include teachers' own perspectives and their individual understandings of knowledge and its acquisition, as well as the different perspectives, assumed beliefs, and anthropogenic requirements of learners.

Jürgen Seifried's article *Business Teachers' Beliefs about Teaching and Learning* takes a specific look at this subjective teaching action using an empirical study on accounting training and the views of teachers at vocational schools. Seifried investigates constructivist- and instructionalist-based orientations and teacher role models as he compares and contrasts these two kinds of teachers (and even manages to identify a third).

Sandra Bohlinger and Dietmar Frommberger examine a classic, albeit very current item in vocational education with their article *VET Equality*, reflecting on the question of equality between vocational and general education. Is there in fact equality at/among the interfaces in Germany's educational system, particularly when it comes to the commensurability of the degrees and learning outcomes found within it? The authors discuss in their article some of the more "heated" issues such as the (lack of) equality between vocational and academic education; the importance of non-formal and informal learning; and transnational equality.

Skilled Labor Changes by Tim Unger and Martin Frenz looks at central factors of societal and economic change. Key vocational discussions emerge as a result: the development of modern occupation as a new form of socially organized employment; process orientation as an aspect of modern employment and orientation factor of curricular work; and increased dynamics and diversification of professional profiles.

The article *Challenges and Perspectives for Vocational School Teacher Training* by Uwe Faßhauer and Josef Rützel discusses the challenges facing vocational teacher training, particularly against the

background of demographic shift and lack of teachers. The authors advocate efforts to reach new target groups via cooperative models between teaching colleges and universities of applied sciences. What are the models of study that can be done parallel to someone's job? Are there alternative, less conventional ways to enter studies to become a vocational teacher?

My article *The School-Based VET System: A Remnant, or an Innovation Opportunity for Vocational Education?* examines from an historic, educational policy, and occupationally theoretical perspective the contradictory status of German full-time, school-based VET when compared to the "greener pastures" of dual training. This article makes clear the sizeable amount of conceptual, regulatory, and curricular reforms that both vocational education and teacher professionalization will require in coming years.

The article *Ways and Bridges between VET and Higher Education in Germany* by Dietmar Frommberger talks about the academization trend of vocational education in Germany, showing the pathways and bridges between vocational and university education. Frommberger analyzes the developments of the "third educational pathway" leading from vocational education to the university, as well as ways to achieve permeability and connections for this very purpose. This article will also show the consequences of the continued structural and didactic development of vocational education, as well as ways to achieve a target group-related creation of university curricula.

With the goal of implementing *Sustainable Development as a Future Program for Quality Management at Vocational Schools*, Tobias Schlömer shows how sustainable vocational education can be connected to quality management concepts. Using the German state of Lower Saxony as an example, he establishes the right kinds of goals for sustainability-oriented quality development in schools and lessons that are guided by practical implementation, opening future-oriented pathways as a result.

Martin Fischer's focus in *VET Quality* is on in-company training as he discusses the dimensions of input and output

quality throughout the training process. Fischer also takes a look at different levels for a quality framework with in-company VET, along with the different functions of the German vocational education system when it comes to utilization, selection, allocation, qualification, retention, and integration.

With their article *Knowledge Reporting: The Development of Professional Employment Competence*, Karin Rebmann and Tobias Schlömer take up the questions of company training and competence development. How are competence and its development substantiated from both an economic and business education standpoint? These are also reflected upon in the article from the "double perspective" of the organization and individual, as well as of management and knowledge reporting.

In his article *Didactic-Curricular VET Developments in Germany*, Dietmar Frommberger presents the changes in didactic principles and regulatory concepts in the context of shifting vocational education. Together with the current, growing importance of learning results and demand orientation, today's developments will be placed in their respective contexts, and discussed in connection with the features and functions of vocational education curricular foundations.

Inclusion – A Contribution to Address the Challenges of Demographic Change is Peter Sicking's examination of this current educational science and vocational education debate, discussing the potential socially inclusive education contains for vocational education. Against the background of the UN Convention on the Rights of Persons with Disabilities, Sicking argues for a more advanced understanding of inclusive education, i.e. "education for all" regardless of gender, background, social and economic circumstances, disabilities, or any other learning needs. Here, individual competencies, potentials, and needs of children and young people are the focus.

In *Transitions in Vocational Education*, Manfred Eckert talks about structural and didactic aspects of the transition from school into employment. This article shows psychotechnical and biographically accentuated models of the

transitional system in Germany. Here, opportunities to "get a foothold" and "fit" into the vocational education system will be critically discussed in light of the tension between what the training system requires, and the individual developmental needs of young men and women. What are the process structures in transitions, and what are the different subjective needs and strategies to meet them?

I'm sure you'll agree that these articles are more than enough to get you started in the discussion on diversity and modernization in vocational education in Germany, as well as on European and international developments. *berufsbildung* also discusses additional perspectives we'll be presenting in upcoming editions.

The authors and publishers hope you enjoy their articles, and are always open to your feedback and comments. Let us know how *berufsbildung* can be effective not only now, but for the future as well. We look forward to hearing from you!

All the best,

Marianne Friese
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Subjective Theories of Knowledge and Learning

Abstract:

The following will examine the construct of subjective theories of knowledge and learning (epistemological beliefs). Epistemological beliefs are essential for teaching-learning processes: Teachers' individual beliefs regarding knowledge and its acquisition influence the way they plan and present their lessons. The individual beliefs of learners are also critical in how they (among other things) provide insight into their learning behavior.

From: "Subjective Theorien" (berufsbildung, 2013, 144)

**Karin Rebmann, Tobias Schömer,
Florian Berding and
Manuela Paechter**

Personal assumptions about and attitudes towards knowledge and learning are referred to as *epistemological beliefs.* These are relatively stable, cognitive structures that nevertheless can be altered by personal experience, upbringing, education, and cultural influences. Recent years have seen teaching-learning research take an intensive look at this topic. A number of studies have been able to achieve findings regarding what beliefs teachers and learners have when it comes to knowledge and learning. Here, it's seen that people have different individual attitudes towards the origin of knowledge (Rebmann & Schlömer 2010): Some believe that knowledge originates from all-knowing authorities, while others believe that each person can achieve knowledge via analytical and reflective thinking that applies evidence and rationale. Beliefs about knowledge and learning are directly related to the management of learning processes. For teachers and trainers, knowledge about learner's epistemological beliefs can play a key role in understanding their learning behavior, and designing lessons accordingly. But it's not just the epistemological beliefs of learners that can have an impact on teaching-learning processes; the beliefs of teachers are also critical. A teacher who sees knowledge as an isolated, individual building block will probably teach in a purely "just the facts" manner, instead of presenting a lesson of complex, interconnected knowledge.

The key attributes of epistemological beliefs emerge when looking at the subjective theory construct. These are relatively stable, generally unconscious mental representations that change through experience. They possess a structure that is analogous to scientific theories. Their purpose is to constitute reality, explanations, and prognoses, as well as what the right action to take is. They also contain a function that helps guide and manage action. It's this function in particular that is important for the context of teaching and learning: Subjective behavioral theories after all determine the behavior of teachers towards their learners. The following will take a closer look at the conceptual construct before the importance of epistemological beliefs for teaching-learning processes is looked at in greater detail.

The construct's dimensionality

Most epistemological theories and models assume that a person's epistemological beliefs can change over the course of time, becoming increasingly differentiated and more complex. These theoretical concepts however differ in how multifaceted they understand the construct to be. Research currently assumes a multi-dimensional structure of epistemological beliefs, which is confirmed by numerous empirical studies. This thinking originates from Schommer's (1990) multi-dimensional approach with its five dimensions: the structure, stability (security), and source of knowledge; as well as the speed of the learning process and the ability to learn. These are considered to be highly independent of one another, and allow for asynchronous developments as a result; retrogressions are even a possibility. People develop individual beliefs about each dimension, which can lie anywhere between "absolute" to "differentiated" (Schommer 1990):

- **The structure of knowledge** ranges from the absolute belief that knowledge has a simple structure and is comprised of isolated individual building blocks, all the way to a differentiated belief that knowledge is complex and interrelated.

- **The stability (security) of knowledge** has a continuum from "knowledge is absolute and stable over time" to "knowledge is subject to a constant process of development."
- **The source of knowledge** ranges from the absolute view that there is an omniscient authority who imparts knowledge, to a differentiated position that knowledge is obtained through subjective and objective experiences.
- **The speed of the learning process** ranges from the absolute view that "learning is a process that occurs either ad hoc or not at all" to the differentiated view that "learning is a gradual process."
- **The ability to learn (control)** is understood as a continuum between "the ability to learn is fixed at birth" to "the ability to learn is acquired through experience."

These model dimensions nevertheless are not able to be empirically tested in a reliable fashion. Studies typically investigate two to five factors that are however not always identical with those assumed by Schommer (1990). So although the multi-dimensionality of epistemological beliefs can be empirically proven, it still remains unclear how many dimensions comprise the construct of epistemological beliefs, and which ones they are. And the dimensions relating to the beliefs about learning/knowledge acquisition are repeatedly criticized as not belonging to the construct. In the context of learning and teaching, it seems particularly appropriate to consider both realms of knowledge *and* learning when it comes to epistemological beliefs. After all "what we see students doing in class (…) almost always involves aspects of both. Because we are ultimately interested in how students approach knowledge and learning in situations such as these, it serves us to treat knowledge and learning together as part of epistemic cognition" (Elby & Hammer 2010, p. 421).

What is the construct domain?

Along with the question of which and how many dimensions belong to the construct, it is still debated to what degree epistemological beliefs are domain-specific, and to what extent both domain-specific beliefs and domain-independent ideas are formed. Of note is that there is no unified term for the domain in current research. Often, *domain* is understood simply as an academic discipline. Although this approach is more than debatable, there have so far been no real indications of the use of other, alternative theoretical approaches.

Research currently assumes the co-existence of general and domain-specific epistemological beliefs. Here it's assumed that the development of epistemological beliefs is the result of the individual construction interacting with the social environment (Muis, Bendixen & Haerle 2006). This thinking does in fact differentiate for instance between the socio-cultural context in which the general academic context is embedded, and which on the other hand contains different teaching contexts. Here, all contexts mutually impact one another. Correspondingly, authors differentiate between general; general-academic; and domain-specific beliefs, each of which are bound to their individual contexts but nevertheless mutually influence one another. What remains unclear is the synergy and/or interaction of these different personal views. As education increases, the importance of general beliefs appears to decline, while category-specific beliefs increase in relevance. Beliefs are increasingly differentiated by education and life experiences, although retrogression does in fact remain possible.

What this means for teaching-learning processes

Epistemological beliefs are essential for trainers and teachers for at least two major reasons:
(1) The individual views of teachers when it comes to knowledge and its acquisition appear to influence the way they plan and conduct their teaching (Feucht 2010). Empirical evidence exists showing the connection not only between beliefs regarding knowledge and its acquisition, but teaching concepts as well.
(2) Along with teachers' own beliefs, their knowledge about the episte-mological beliefs of their learners is also of significance, most notably in how they allow insight into their learning behavior. This has allowed connections to be proven between epistemological beliefs of learners and what motivates them to learn and perform; their self conception(s); their learning strategies; the way they prefer to learn; their average grades; their ability to solve problems; their stamina when it comes to learning; and active learning.

It therefore appears necessary for teachers to keep in mind the beliefs of their learners. After all, these influence how learners encounter teaching itself: "Teachers who become aware of their own personal epistemology and learn to assess the epistemic notions underlying their students' beliefs systems can make informed choices with regard to their instructional approaches and use of educational materials to guide students toward a more advanced and school/discipline specific epistemological understanding" (Feucht 2010, p. 82). Feucht (2010) correspondingly postulates four elements of an epistemological climate and their mutual dependency: (a) epistemological beliefs of teachers, (b) epistemological beliefs of learners, (c) epistemic content of teaching methods and instructions, and (d) epistemic content of knowledge representations (see Figure 1).

Lamping and Berding's (2014) study investigated on the one hand the epistemic content of five textbooks for sales trainees, with a particular focus on the book exercises as well as the subjective selection theories of teachers when giving assignments from the book. A content-analysis evaluation showed e.g. that on average, the exercises in all of the books make it possible to observe their knowledge elements in an isolated fashion or, in some cases, from a more correlated perspective. The exercises assumed that knowledge is secure and unchangeable. The exercises also did not allow for own constructions, and instead provided only (their own) clear instructions. Exercises that on the other hand indicate differentiated beliefs about knowledge and its acquisition could only seldom be found in the five books that were analyzed; this kind of exercise comprised only three to twelve percent of the books' exercises.
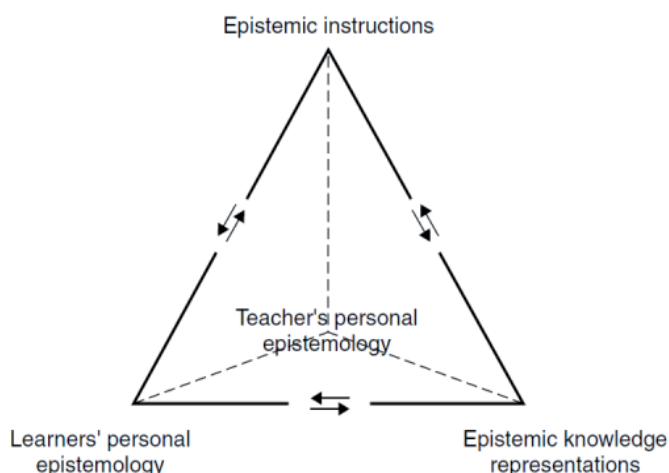
Figure 1: Model of the influence of personal epistemologies in teaching-learning processes (Feucht 2010, p. 59)
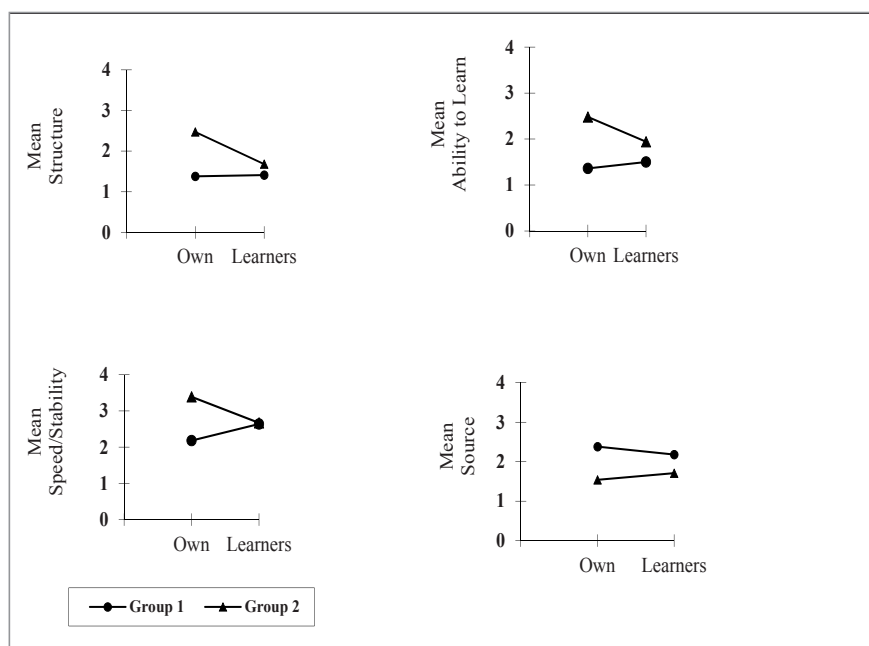

Figure 2: The own epistemological beliefs of students studying to become teachers, and the beliefs they assume their learners have (Rebmann, Paechter & Mokwinski 2012, p. 333 ff.)

When it comes to epistemological beliefs of teachers, Feucht's (2010) model (see above) does not differentiate between an own perspective and the perspective of others. Here, it's not just the teachers' own beliefs (own perspective), but the views they assume their students have as well (perspective of others) that are important for the creation of teaching-learning processes. This is why both general didactics as well as teaching methodology suggest lesson plans that are designed according to anthropogenic conditions, i.e. based on the needs and requests of the learners. With this in mind, the question is whether teachers discern between their own epistemological beliefs and those that they assume their students have. In other words: Are teachers capable of a change in perspective? Answering this question with yes brings with it the next question of which of these beliefs will serve as the foundation of their planning and creation of teaching-learning processes. When planning learning situations for instance, do teachers keep the epistemological beliefs of their learners in mind?

In a study by Rebmann, Paechter and Mokwinski (2012), 182 students studying to become teachers were surveyed about their own epistemological beliefs. After they completed an internship at a school, they were surveyed again regarding the epistemological beliefs they thought their students had. Here, four dimensions of epistemological beliefs could be replicated: the structure of knowledge, the source of knowledge, the ability to learn (control), as well as the combined factor of "the speed of knowledge acquisition/stability of knowledge." It is first of all seen that students studying to become teachers can in fact differentiate between their own beliefs and those of others. Second, when it comes to beliefs, the students overall judge the beliefs of their learners in a relatively consistent fashion. Third, there were basically two groups of students studying to become teachers: one group with differentiated own views, and another with less differentiated and/or absolute views. Those teachers having differentiated subjective theories on knowledge and its acquisition consistently differentiate between their own beliefs and those of their learners, even though they estimate their learners as having a more absolutist perspective when compared to their own. The other group assumes that, with two of the dimensions, the learners have the same kinds of absolute beliefs as they do; only with the speed of knowledge acquisition/stability of knowledge and the source of knowledge did they think that their learners' beliefs were more differentiated than their own (see Figure 2).

Outlook

Questions for further research emerge from the results on perspective changes. It remains to be clarified whether those who are no longer in their formative

years of training, and are less likely to undergo a role change (i.e. those doing their student teaching, and those teachers who already have professional experience) can also differentiate between their own epistemological beliefs and those of others. This results in additional questions including:

Which epistemological beliefs, i.e. the teachers' beliefs or those of the learners, have the stronger impact when it comes to planning and creating lessons?

This question is illuminating, particularly when it comes to the teachers' work itself. As discussed above, is this change in perspective a part of lesson planning? Teaching methodology basically expects that lesson planning involve anthropogenic aspects, i.e. that it also takes the requirements of the learners into account. This by rule includes the decision to include the epistemological beliefs of learners when planning lessons, which in turn requires diagnostic competence on the part of teachers.

How do the own epistemological beliefs and those of others impact the teaching-learning action in the teaching-learning situation? This includes e.g. an acknowledgement of the culturally-related characteristics of epistemological beliefs when attempting to effectively create learning arrangements and tasks that properly fit the target group. This is also an issue as it relates to matching epistemologies to the preferred teaching and learning methods. Having a focus on the right kind of teaching action(s) will require solid, continually improving field research (e.g. via observations) in the arenas of subjective theories on knowledge and learning.

Finally, it should be kept in mind that research findings should be applied to help achieve an increasingly effective teacher professionalization. Research re-

sults could e.g. generate modules discussing the importance of and findings on individual beliefs about knowledge and its acquisition; how they can be used to create more effective teaching-learning processes; and how they might be able to diagnose the issue of own beliefs and the beliefs of others.

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Business Teachers' Beliefs about Teaching and Learning

Abstract:
Even though teachers play a key role in determining the quality of lessons, there are only a few studies investigating how teachers operate at vocational schools. The following will address this deficit, describing different beliefs that teachers have about teaching.

From: "Subjective Theories" (berufsbildung, 2013, 144)

Teachers matter! Since publication of the Hattie study (2009) (at the very latest), this has been one of the central messages of empirical educational research. Teachers are becoming more of the focus in research as well, which in recent years has seen clear increases in its focus on the action and ability of teachers. Two notable examples of this include the COACTIV study (Baumert et al. 2010; Kleickmann et al. 2013) and the IEA Teacher Education and Development Study in Mathematics (TEDS-M) (Tatto 2013; also Blömeke & Delaney 2012). Here, teacher training research takes a close look at ascertaining teacher competence. There's a general agreement that, along with professional knowledge (technical skills, subject-didactic knowledge, educational ability), personal views, self-regulating abilities, and motivational orientations are also central elements of this construct (see Figure 1).

tracks that – depending on the degree of specification of the construct in question – examine pedagogical beliefs; teaching-learning perspectives; subjective theories; and implicit personality theories. What these all have in common is how they look at the psychological structures of teachers and their influence on perception and action in teaching-learning situations (see also Calderhead 1996). Borrowing from the international literature, the following will use the general term "beliefs" to describe the orientation and/or bundles of perspectives that pre-structure perception, allowing quick access to strategies in action situations. This research is based upon the cause-effect chain seen in Figure 2: Teachers' views help determine the quality of their teaching action, and high-quality lessons (that are e.g. well-structured and cognitively activating) promote the learning process and, ultimately, learning success. Be-
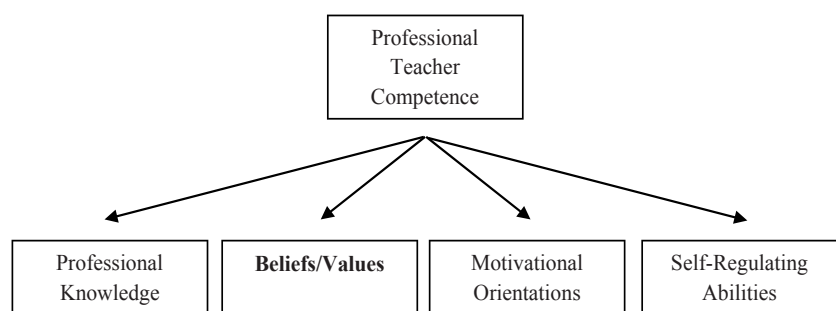

Figure 1: Teacher competence model (Kunter et al. 2011)

There are very few research efforts being made in this area when it comes to vocational teaching. The following will address this deficit as it looks at the competence element of "beliefs and values." There are a wide variety of research

cause the cause-effect chain shown here encompasses a large span of time (especially when, instead of exam success [output], the life success of the learner [outcome] is the preferred target variable) it is difficult to test empirically. Another
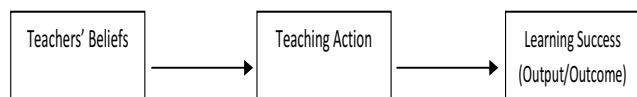
Jürgen Seifried

Figure 2: Views, action, and effects (Seifried 2009)

reason for this is that learner success is determined by many factors (including learners' dispositions, socially-specific influences, etc.).

Empirical Investigation

Method

The focus of the study presented here (Seifried 2009, 2012) was the investigation of the views of accounting teachers.[1] A written survey of 225 teachers at business schools (average teaching experience: 15 years; average age: 46 years) followed by an interview study with 21 teachers obtained extensive information on the following constructs: (1) educational basic orientation, (2) domain-specific views, (3) self efficacy expectations, and (4) attitudes about reform (Seifried 2009 and 2012 for a detailed look at the investigation).

Written survey findings

A cluster analysis was performed to identify the homogenous groups of teachers, initially on the basis of general educational views of teaching and learning (instructional and constructivist orientation). The majority of teachers here reported instructional perspectives (around 46% of the random sample). About a quarter of those surveyed could be characterized as constructivist. A very interesting third group (about 30% of those surveyed) was made up of those who had both constructivist *and* instructional perspectives, meaning (at least from a theoretical perspective) that they actually unite incompatible orientations. Comparable findings are also seen with studies from the general education realm, indicating the insufficiency of a simplified, either-or juxtaposition of instructional and constructivist orientations.

The characterization of the groups was the next step of the analysis, which used domain-specific views, i.e. beliefs that are concretely related to the teaching subject. Here the issue was e.g. whether teaching accounting content is seen as a schematic, strongly formulated procedure (pattern aspect and formalism aspect), or whether the opinion was that it tended more towards a dynamic involvement with ideas and thought processes (process aspect). As expected, constructivist oriented teachers have a greater focus on the process aspect than teachers in the reference group. In line with this, this kind of teacher reported a lower level of the formalism aspect and, most notably, a lower level of the pattern aspect than the other two clusters (accounting as a "toolbox"). The cluster-specific view regarding the reform perspective (surveyed were the opinions about the necessity of school system reforms) as well as beliefs on self efficacy (trust in the own opportunities to act) brought additional differences to light. Here, the advantages were on the side of the constructivist oriented participants.

The analysis of the survey form data delivered initial, relatively simplistic indications about the existing basic orientations towards teaching and learning. In light of the limitations of the extent and flexibility found with standardized survey forms, the following will incorporate statements from the interviews in an effort to obtain more findings on the basic orientations of the kinds of teachers investigated.

Interview study findings

There is a direct correlation between the role models provided by teachers and the basic orientation described above. According to this, there is typically a difference made between the *provider of information and procedures* on the one hand and that of the *learning consultant*. Here, the teacher having more of an instructionally oriented view should be seen as a conveyer of knowledge, while the teacher with a constructivist oriented view can be seen as a learning consultant or coach.[2] The following statements by two teachers from the instructionally oriented group can be considered representative of the role of a conveyer of knowledge:

"I think it makes sense to learn the rules in accounting and then apply them. That's easier than letting them [the learners] find out how this can best be done."

"I then try to communicate this new, decisive leap in steps that are as simple as possible. Like I always say, the 'salami' approach: one slice at a time."

The interviews showed a dominance of the role of conveyer of knowledge, which was particularly seen with instructionally oriented teachers. These interview participants talked about how they work with "snippets," structure factual knowledge, and – when necessary – break it down into its small(est) components. This view is clearly less dominant in the constructivist oriented cluster, with teachers here seeing themselves as "coaches," "learning assistants," or "moderators" as they describe how they prefer to support the learners' self-chosen activity. In general, constructivist oriented teachers reported a clearly more balanced role model function than the teachers from the other two groups.

Summary and discussion of the findings

From a cluster analysis perspective, three kinds of teachers could be identified at vocational schools that represent different views of teaching and learning. The majority of the teachers operate according to the principle of instruction. Those surveyed attribute a high level of importance to lesson management, and desire extensive guidance for their learners. This kind of teacher is countered by those who promote more of a constructivist view, and are of the opinion that students learn best when they discover the solution(s) to problems on their own, discuss their own ideas for solving problems, or develop other own activities. These two kinds of teachers are rounded off by a so-called "mixed" teacher who

displays a clear coexistence of these two paradigms.

These differences were investigated regarding their different constructs in an effort to further characterize the kinds of teachers identified. Here, a number of advantages for constructivist oriented teachers were determined in terms of self efficacy and their attitudes towards reform. Of particular interest in this context are the teachers' views of specific learning content. As expected, constructivist teachers have more of a process oriented, instructional oriented view that is geared towards a schematic and formalism aspect.

The cluster formation based on survey form data has the shortcoming of how variance is lost, doing only a limited amount of justice to the single instance. The interviews aimed to compensate for this deficit by allowing selected teachers to speak at length regarding their views. With the role of the teacher, the analysis showed that instructionally oriented teachers and the "mixed" teachers tended to emphasize the role of a conveyer of knowledge, while the constructivist teachers placed greater emphasis on the role of learning consulting.

In can be said in summary that the own findings support the results from related international studies in the broadest sense. When it comes to the (empirically proven) importance of views regarding teacher action, the question arises of when and how these are obtained. The fact is that the time frame of views, the manner of when and how views emerge, and their solidification still remain unexplained. Some studies cite memories from the own school years and teacher training as sources. Future research efforts will have to determine more precisely what the views are of business education teachers when they begin their studies and teacher training, and what impact their own school experiences have/had on the generation and development of these views.

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Notes:

[1] A domain-specific approach is recommended when analyzing the views of teachers. This is because of the general assumption that teachers are trained independent of teaching content (Seifried 2009, 2012). We selected this domain in light of how important accounting is for the development of vocational students' economic competence.

[2] Additional roles were mentioned in the interviews (tutor, nurturer, learning model) that will not be examined here in greater detail.

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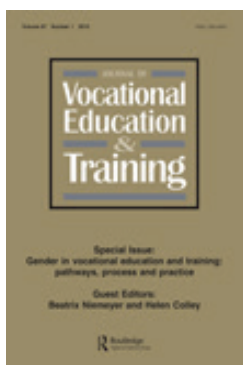
VET Equality

Abstract:

What are the qualifications and learning results found within the different realms of the education system? Are they in fact equal with one another? These questions (among others) are what the topic of VET quality closely examines. The significance of this issue and what it involves will be discussed in the following, and presented in the context of (sometimes very controversial) educational policy developments. What some might consider an outdated topic is in fact something that has never been as relevant as it is today.

**Sandra Bohlinger and
Dietmar Frommberger**

At its core, the issue of VET equality is the comparability and value of qualifications, learning results, and different forms of learning. Of greatest importance here is the relation between vocational vs. general/academic education, as well as the relation between learning results that are obtained inside and outside of formal educational programs.

The relation between vocational and general education

This topic has been traditionally defined most of all by the comparison between general and vocational education and training, especially in terms of qualifying for university study and being awarded a spot at a university. Over the history of general and vocational educational systems, a gap emerged between general courses of academic study, vocational training done entirely at a school, and dual vocational qualification programs done in cooperation with a company. These programs provided different kinds of qualifications and very distinct eligibilities: Some graduates were allowed to advance to university study, while others were not. For example, those doing professional (advanced) training courses that combined on-the-job learning together with classroom teaching were not qualified for university study upon completion of their programs.

For most of those providing professional education, and for those in the field of economic education, it has been clear for decades that the qualification for university study is not something that should be exclusively reserved for institutions of general academic study and their educational content. For those from the field of VET, differing values placed upon general and vocational education, especially in Germany with how those doing general education receive the coveted *Abitur* degree, are a clear case of unfairness and inequality. After all, the chance to advance to university study in Germany has conventionally been limited to certain institutions and learning content, without any solid theoretical and empirical findings showing alleged advantages of general academic education when compared to VET. In fact, in vocational teaching-learning processes, including learning that takes place within a company setting, person-related competencies are taught and acquired that contribute to general personal education and study skills. These are seen as primary, formal categories that are naturally intertwined with topical subject content, and by no means preclude the vocational subject content and teaching-learning processes required for them.

This theoretical VET position has made extensive inroads in establishing itself in educational policy. School-based VET and the educational programs regulated by the German Vocational Training Act are now also pathways towards general university education degrees and/or the opportunity to study at a university. And university and school laws have been changed accordingly in German states. This has been the case particularly at universities, which have worked in recent years to open their doors to those holding vocational qualifications. These developments have led to what is now known as the "third educational pathway" (Freitag 2012).

But as VET continues to be a program of both in-school and in-company training, this third educational pathway has so far had a relatively low level of impact. There are few students currently at German universities who have not completed an *Abitur* and instead directly entered via VET. However, at the very least, this pathway to the university is now firmly established, and is in fact a key for students accessing universities of applied sciences.

At the same time, the discussions regarding the development and implementation of the German *Qualifikationsrahmen* (qualifications framework) have shown that deep-rooted differences are found in how society views and evaluates general and vocational educational effectiveness. General academic education advocates do not consider VET degrees as equal to theirs, in spite of the fact that although the work to obtain vocational qualifications is in a different form and has different content, it *is* in fact on the same educational level as that

of general education (e.g. the German *Sekundarstufe II*). This has been made more than clear in the negotiations regarding the German *Qualifikationsrahmen*.

So progress in educational policy continues to encounter considerable, mostly latent reservations from society. VET now faces the challenge of maintaining its original function of awarding professional qualifications, while at the same time offering those obtaining its degrees a course of study that provides them with the required knowledge and abilities they need to take on the university study that they are now qualified for.

Equality between vocational and university education?

Educational policy is currently moving forward in leaps and bounds. These days, the issue is no longer about the equality between vocational and general education (as described above), but instead the relationship between vocational and university education. Thanks to changes in the German qualifications framework, vocational advanced training degrees are now on an equal footing with university bachelor degrees. This is a very rapid development indeed, the speed of which even the most optimistic proponents of VET would not have considered possible. Professionally obtained competencies and certifications are now being credited towards university courses of study as part of a number of different pilot projects (see www.hrk-nexus.de; www.ankom.his. de; www.wettbewerb-offene-hochschulen-bmbf. de), some of which have even been structurally incorporated into selected universities). Directly entering into masters studies is now also possible for those coming from a vocational advanced training certification background; this development has been explicitly supported by the *Kultusministerkonferenz* (Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany). These developments are causing some people to talk (quietly, but talking nevertheless) about a minor educational revolution.

With all of this being the case, universities are increasingly developing academic advanced training courses that are significantly changing the relationship to

VET. Even conventional courses of university study are seeing a growing connection to vocational training, most notably to vocational dual programs of school and on-the-job company learning.

Equality within VET itself?

Germany's VET system is complex. It offers a number of different school certification programs as well as school/company-based dual learning for training preparation, professional training and retraining, and advanced training. There is now a discussion about flexible VET structures that would allow for better student transitions and changes between the system's different forms, arguing that mechanisms should be further developed to allow a more effective recognition and credit system for/between the different VET forms (see www.decvet. com). For example, it is currently being discussed to what degree the competencies and certifications obtained as part of professional preparatory training can be credited towards a trainee's first (dual) professional training, helping him/her complete it in a shorter period of time. VET equality is clearly an issue in this case. The relationship of full-time school training to combined training that has students attending school for part of the time and spending the rest of their time at a company is another issue being intensely discussed and examined. How can e.g. the work done within two different programs of these combined trainings be credited towards a final certification? These constellations make clear that equality in vocational and general education is very closely connected to the topic of possible transitions between their different forms and realms, as well as how existing qualifications and training completed within these can be recognized and credited towards future (or even other) certifications and degrees.

Non-formal and informal learning

Whoever wants to understand the value of learning outside the realm of formal educational programs (non-formal and informal learning) as it relates to the value of formal learning needs to understand that value per se does not exist. Values

(and therefore equality) are an attribution and a relationship that are created between an object and standard by an evaluating person. Worth and value are therefore constructs that are greatly impacted by culture, tradition, and social background. They are both shapeable and alterable.

Put more specifically, for hundreds of years, convention has considered formal learning done within accredited educational institutions with the goal of achieving a qualification or degree as superior to other forms of learning that occur e.g. coincidentally, unplanned, outside of formal courses of education, or even unconsciously.

The alleged superiority of formal learning and the common differentiation between formal, non-formal, and informal learning are first and foremost political, and guided by the desire for learning processes to be differentiated based on surroundings, the respective situation, intentions, and target groups. This thinking is however not scientifically founded. In the context of learning a foreign language, Scribner und Cole in 1973 showed that learning outside of formal education settings achieved better results than formal learning. The studies by Engeström (2001), Eraut (2000), Billett (2002) and Beckett and Hager (2002) provided further evidence against the "superiority" of formal learning. One of the most well-known studies on this topic was done by David Livingstone in Canada. 1,562 datasets in 1998, and another 9,063 in 2004 provided a unique insight into the extent and content of informal adult learning (Livingstone 1999, 2006). They show that formal learning is just "the tip of the iceberg" and "as opposed to the dominant thinking in our performance-based society [...] people with less schooling are in many ways, and in terms of important knowledge dimensions, at least as competent as those with a college education" (Livingstone 1999, p. 80).

Nearly 15 years later, there is a new debate on informal learning, which is now being re-discovered as a resource that could help counter the current trend towards a shortage of skilled labor in the workforce. For the first time, it now does not appear to matter whether learning is done non-formally (uncertified learning in educational institutions) or informally (casual everyday learning, as a hobby, in the family, or at work). What is important

is making learning visible in a way that allows it to be formally evaluated, recognized, and credited (validation), offering (improved) access to job market opportunities as a result.

The core of the current discussion is comprised of the development, implementation, and application of (legal) foundations, structures, and instruments for recognizing so-called *prior learning*. This is the term that has now been used for quite some time in the international context, replacing "non-formal" and "informal," and which simply refers to obtaining non-certified learning results. The equality of qualifications done in Germany compared to those done in other countries is also discussed within this context as part of the search for opportunities for their improved commensurability.

The issue of transnational VET commensurability

There are two debates about "transnational equality," and their contents are interconnected: (1) the equality of individual degrees and certifications done in Germany and in another country, and (2) the classification of (vocational) degrees for international comparative statistics for which the ISCED (International Standard Classification of Education) is used, i.e. the UNESCO's international classification of educational degrees. So although when it comes to the equality of different learning forms (see above) it does not matter *where* learning was acquired, or in which national and cultural context it took place, these dimensions do in fact play a role when it comes to transnational equality. Nowhere else is it clearer than in this instance that moral concepts in the educational realm emerge first and foremost via tradition and culture. For example, a qualification that is seen in one country as being of superior top quality might be classified in another as being "on an intermediate level." Globally, this inequality is frequently found in the comparison between qualifications from emerging and industrializing nations, and those from industrialized countries. Strong differences are also found within Europe: for example, the German dual VET system is not held in the highest esteem in many of its surrounding countries.

Germany and the EU have a number of legal bases for the individual recognition of professional certifications completed in another country. In Germany specifically, these were expanded by the creation of the *Berufsqualifikationsfeststellungsgesetz* (Determination of Professional Qualifications Act), and subordinated into the *Gesetz zur Verbesserung der Feststellung und Anerkennung im Ausland erworbener Berufsqualifikationen* framework legislation (Law to Improve the Determination and Recognition of Professional Qualifications Obtained Abroad). These new regulations aim to make the process of recognizing qualifications done in another country more transparent and faster. A particular priority here are the 350 or so non-regulated professions (as defined by the German Vocational Training Act and German trade and crafts code), the 41 German *Meister* professions, and the 40 federally regulated professions such as doctor, lawyer, and nurse.

Classification instruments such as the ISCED mentioned above or the European Qualifications Framework are not legally binding. But depending on the regional scope they have, they do in fact play a decisive role in the public presentation of a country's training graduation rates. As a result, they are an indirect, albeit important, part of the statements made about the value of a nation's educational system.

Closing comments

The equality of educational qualifications, educational pathways, and forms of learning when it comes to VET is a controversial, complex field that is rich in tradition. Its connections to other parts of the (German) educational system, and to the statistical, historical, cultural, and societal issues associated with it, make very clear that there is a great need not just for discussion, but for action as well. And solutions will not be of the "simple" variety. Particularly in light of the numerous constellations of those involved and their respective interests, the most urgent issues (access and admission to university education, recognition and crediting of general and VET) will most likely not be solved any time in the near future. Nevertheless, extensive knowledge can be drawn from the results of decades of discussion, initiatives, attempts at reform,

and model approaches to take the next new steps towards equality. In Germany, what is and remains the central guiding principle is vocational and professional competencies as the keys to meeting the requirements and challenges of the job market, i.e. "the ability and willingness to cognitively comprehend complex business and work processes, and responsibly form them in a technically competent fashion. The competencies required to do this aren't created via compartmentalized module fragments. They instead need holistically correlated, systematically instructed learning that joins together theory and practice" (Interview with Günter Kutscha, berufsbildung 2013, 142).

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Skilled Labor Changes

Abstract:
The following will examine the issue of changes in and to skilled labor. It will provide an overview of three VET issues, each of which have addressed the changes occurring in skilled labor in recent years: (1) the outlook for modern vocation as a new form of socially organized employment, (2) process orientation as a factor of curricular work, and (3) the phenomenon of increased dynamics and diversification of professional profiles.

Tim Unger and Martin Frenz

The vocational concept is the central interface of VET on the one hand, and the economic system on the other. Vocation is an economic and social organizational pattern offering trainees, skilled labor, and companies a reliable basis for identifying and regulating employment.

Modern vocation as a new form of socially organized work

The capacity and credibility of the German vocational concept has been repeatedly questioned since its inception. Recent years have seen the VET dialogue repeatedly predict a so-called "modern vocation." What this specifically includes are the (mostly new) occupations that require formal training and that are very communication intensive and service oriented (e.g. production technologies, sports and fitness professionals). This on the other hand also includes those forms of employment in Germany that require an intermediate qualification, but that occur in weakly regulated fields and expect a high level of formation, initiative, and input from the individual performing the work (such as with energy consulting). Authors such as Günther Kutscha, Kathrin Kraus, Rita Meyer, or Thomas Kurtz are optimistic when examining the transformational ability of the German vocational concept, although they also add that it's only a changed, modern(ized) vocation that can prevail on the international market, and properly integrate the VET requirements of training and education. So even though a complete change in vocational principles will most likely not occur in the medium or long run, there is in fact a recognizable development towards a new basic form of societal organization of the workforce. This is the gist of the arguments by the industrial sociologists Voß and Pongratz,

who predicted the spread of a new basic form of societal organization of employment at the end of the 1990s, referring to this as *Arbeitskraftunternehmer*, or "manpower entrepreneurs."

A closer look at the current state of research on modern vocation shows that the empirical foundation is relatively weak, at least for those wanting to claim a change of the vocational concept on a wide level. To be sure, there have been investigations done in individual professions and company fields. But what's lacking are comprehensive studies based on quantitative or qualitative representation. This is why we see the discussion on modern vocation as somewhat precarious, even though the arguments being made as part of its discussion do in fact show a high accuracy of fit to macro- and industrial-sociological dialogues, and can in fact achieve a high level of credibility as a result. But are the predictions being made about modern vocation maybe in danger of being discredited as pure fiction? Without an empirical foundation, will it not simply reveal itself to be a popular rhetorical device for scientists and policymakers looking to exaggerate their claims? These are key, and somewhat difficult, questions for us. On the one hand, there are always individual studies verifying the prediction of modern vocation and that find similar results (e.g. Frenz, Unger & Schlick 2011). On the other hand, empirical studies continue to be rare, and probably will continue to be so. After all, the size of, extent of, and difference between the different kinds of vocational employment make its representative, generalized research nearly impossible; there will most likely not be empirical findings on this range of issues. But perhaps it would make more VET sense in this field to explore the practicability of alternative methods to achieve insight and findings that are also compatible in an interdisciplinary context. Examples

here include qualitative typologies, or forecasts based on studies of exemplary professional fields.

Process orientation as an aspect of modern vocation and as an orientation factor of curricular work

Central curricular aspects of the modern vocation described above are process orientation, self organization, autonomy, a minor degree of formalization, etc. These all contribute to the positive finding about the transformational ability of the German vocational concept, and also aim to integrate the VET requirements of training and education. More than 15 years ago, the vocational education subcommittee of the Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany presented their learning field concept handout for the formation of vocational school framework teaching plans. Since then, there has been an increased focus on multidisciplinary and action-oriented teaching in vocational and economic education research as well. On the level of didactic objectives, VET for all professions should now be orientated towards processes of action and thinking, not individual partial steps or incomplete actions. A central characteristic of the learning field concept is that it should be developed based on the actual employment performed within the respective profession, and be oriented towards occupational job tasks within related work and business processes. Exams also now have questions about the job tasks themselves that come directly from work and business processes. All professions that have been newly organized in the past 15 years need to display an action-oriented structure, and be characterized by a very clear connection to typical situations found in the everyday workplace.

But for the commercial-technical field in particular, there's still the question of to what degree the postulate of work process orientation and the original economic business process orientation are suitable for refining the target value of VET and impacting curriculum construction (Busian 2011). Becker's work addresses the clear change of processes in the

automotive profession, e.g. in how it is achieving electromobility via technical innovation. Becker notes a shortcoming in vocational German education policy that diametrically opposes a development of the characteristics of a modern vocation: As opposed to current efforts in European VET policy to increase transparency and mutual recognition of professional qualifications, the bar for employment entry in Germany has in some cases been raised even higher, thanks to the fact that a person's overall training now requires certificates that are not part of or even integrated into their main course of professional qualification.

Kinne's article investigates and analyzes the requirements for skilled employment in the field of technical environmental protection. In an effort to show the consequences for professional training and advanced training of recycling management specialists, her investigations concentrate on the process orientation on the level of specific work tasks, typical business processes of the company, and their placement within societal systems. Using the example of the production technologist, Zinke and Koch comprehensively present the organizational employment changes occurring in industrial skilled labor: the integration of several partial functions into one single production system; just-in-time production within complex process and/or supply chains; wide variety; flatter hierarchies, etc. Both authors call for an altered professional image of industrial skilled labor that doesn't have specific processes (e.g. maintenance and repair, installation, machining, etc.) or specific products (metal, steel, plastics, etc.) characterizing these kinds of trades and crafts, but that instead shifts the emphasis to the core of the overall production process under the heading of "process innovation." But even on the didactic micro level, there's still the question about how a professional training that is geared towards work and business processes can be best formed in and between vocational schools and companies.

Professional backgrounds: Now more dynamic and diversified than ever

The signs of a shift towards a modern vocation are not only seen in operational, macro-social, and curricular organizational employment realms. A phenomenon currently being observed is how intermediate level professional backgrounds and qualifications are becoming increasingly dynamic and diversified, and are even displaying high levels of uncertainty. This is seen for example with police officers who work on the side as night watchmen, or even have part-time jobs at McDonald's.

Upon completion of their qualifications, and having spent a few years employed at a company, some architectural draftsmen and -women are now switching to the field of freelance energy consulting, and earn their living (at least for a time) without the benefits of the safety net offered by the German social system. People who work like this are neither temporally parallel to nor even downstream from different forms of socially organized employment. Their professional profiles indicate a transition from a traditional professional employment to an expanded and/or more flexible way to make a living. For them, the profession for which they did their training is not the lone script dictating how their careers should/must develop, nor is it a framework ensuring professional ability within new employment contexts. These people after all have had to take their existing competencies and decontextualize and acclimate them – all without the guarantee of being able to resort back to proven institutional knowledge.

As a result, they find themselves under the weight of the different demands of a professional identity: On the one hand, it's expected that they develop connections to a typical professional qualification profile or a specific company culture. On the other hand, it's expected that these connections can be relaxed or varied at any time for the sake of a flexible access to the job market. Specific professional profile learning processes are necessary to actively form these employment gray areas between the responsibility of having a job, and remain-

ing free to choose the career pathway at the same time. These have been discussed e.g. in Winfried Marotzki's (2006) structural educational theory, or recently with the habitus transformation concept by Florian von Rosenberg (2011).

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Journal of Technical Education (JOTED)

The Journal of Technical Education is focalizing the scientific exchange of research results in the reference field of technical and applied scientific-orientated education and it is addressed to scientists and teachers. The journal is integratively and comprehensively considering the fields of general education, professional training and university education in the context of technical and scientific-orientated benchmarks taking account of didactical, sociological, psychological and historical aspects. The Journal of Technical Education is a refereed journal with two publishing languages (German and English), directed by an interdisciplinary scientific advisory board. Submitted contributions underlie an anonymous triple blind review.

The Journal of Technical Education will be published in future online twice per annum (spring and autumn).

Challenges and Perspectives for Vocational School Teacher Training

Abstract:

There is currently an intense discussion regarding the old and new challenges for training future VET teachers, most notably against the background of what expert commissions are recommending. Along with the issue of ensuring quality standards, there are also questions of how to best reach new target groups via cooperative models and approaches to either train to be a VET teacher right after leaving secondary school, or even change the profession to enter this field. These aspects will be discussed in the following as they relate to the changes occurring in employment at vocational schools, social inclusion, and demographic shifts. A third solution that is suggested is single-subject teachers (current German policy requires all teacher trainees to study a double major and teach them once they become teachers).

From: "Teacher training" (berufsbildung, 2013, 143)

Uwe Faßhauer and Josef Rützel

Teacher training is a constant issue in the educational policy debate. There is a continual struggle to improve the structures and content of teacher training, particularly in light of the findings from international comparative studies on the educational system's performance ability as is relates to general education. All of this has improved lesson quality as its ultimate goal.

Some notable reports calling for change include the prestigious *Expertenkommissionen zur Lehrerbildung* (Expert Commission on Teacher Training) e.g. in Baden-Württemberg (Germany) that addresses teacher training for general secondary education (BW 2013), as well as the *Expertenkommission zur Sicherung der Lehrkräfteversorgung an den Berufskollegs in Nordrhein-Westfalen* (Expert Commission for Ensuring Future Teachers at Vocational Colleges in North Rhine-Westphalia, Germany) (NRW 2013).

Challenges

A key focus is the relationship that continually needs to be altered between scientific disciplines, subject didactics, and educational science in terms of their amounts of quantitative studies; their content orientation, depth, and specialization; and the institutional location of teacher training. In addition to topic-systematic competency development, teacher training should also make possible casuistic learning, i.e. it should be case-related and subject to situational professional action.

From the start, vocational schools, particularly those teaching technical trades, were never fully ensured an ample, continued supply of qualified instructors. The amount of people interested in studying to enter this field was choppy at best, and was always (and still is) influenced by the engineering job market. This is why special programs were continually initiated to meet this demand. There are still ongoing, scattered attempts to make this field attractive to new target groups and open new opportunities for its study.

Of particular interest here is the current professionalization process and efforts to academize instructor training for the fields of health care and nursing (Reiber, Winter & Mosbacher 2012). Orientated towards the standards of teacher training, and enjoying a strong level of growth, new patterns for vocation, professionalization, and employment are emerging. This as a result is causing a state of flux with teacher training standards and models, how teacher training is accessed and entered into, and what is being offered in terms of its study.

So there are a number of new challenges identified in the current debate that teachers have to confront, and which the next wave of new teachers will have to prepare for now during their studies. Many of these challenges have fundamentally impacted and changed the highly complex, multifaceted, and diverse ranges of tasks vocational instructors are faced with.

Career life at the vocational school

A glance at the homepage of a German vocational school makes this diversity and variety very clear. Typical patterns can be identified, even without going into national, regional, and professional differences. Vocational schools generally offer six to eight different school forms, including one school location where stu-

dents spend their vocational preparation year all the way to their vocational basic education year; technical colleges that award intermediate educational qualifications; a dual education system (often done in several vocations); a vocational training done entirely within a school setting (e.g. for a qualification as a technical assistant); and advanced vocational training at professional institutions (e.g. to become a German *Meister,* technician, or social worker). There's even college degree-level tracks of study at a German *Fachoberschule* or vocational *Gymnasium.* Often added to this are specialized trainings such as secondary German *Realschule* education for adults.

These courses of training are varyingly differentiated in terms of their curricula and educational standards. They also pursue different goals and are aimed at different clientele. For example, in the transitional system in Germany from secondary school into VET, cooperations are promoted between educational institutions, companies, regional networks, and the schools who are sending young men and women to do vocational training. There are also requirements in place in terms of professional orientation, educational diagnostics, the development of support plans and initiatives, and properly managing diversity. The dual VET on the other hand promotes cooperation between schools and companies, the implementation of learning fields, and the development of educational pathways. The much differentiated vocational colleges also have their own methods of promoting teaching plan development, cooperation, and lesson creation. Some of them now have cooperations with universities of applied sciences, and are instituting elements of bachelor qualifications into their programs as part of a double qualification.

Vocational schools also are faced with (new) tasks beyond just teaching and developing curricula and cooperations. These include quality assurance, quality management, and the evaluation and development of schools into independent institutions and regional centers of education.

Social inclusion is an issue whose discussion is still in its early stages. Its impacts on the creation of the VET landscape and instructor professionalism (along with the impacts of other demographic developments) are something that unfortunately continue to remain underestimated.

Social inclusion

Social inclusion is guided by the principle of equality laid down in Article 3 of the German constitution. It aims for societal participation for all, regardless of their individual condition(s) (DUK 2009). In accordance with this, socially inclusive education allows all marginalized groups full access and participation.

"Socially inclusive education means that all people – regardless of gender, religion, ethnicity, special learning needs, or social or economic requirements – have the same access to high-quality education and the opportunity to develop their potential" (Sicking 2012, p. 4).

The debate on social inclusion was expedited by the UN Convention on the Rights of Persons with Disabilities that was enacted on May 3rd, 2008 and ratified by Germany in February of 2009. The German federal government passed a national action plan in June of 2011 which requires it to develop a strategy of goals and measures for its implementation.

Some people still remain less than satisfied with the limitations placed on the social inclusion debate and the efforts made towards people with disabilities. In their eyes, all other marginalized groups (or groups who are threatened with/by marginalization) are not factored into these efforts, including those with immigration backgrounds, those who don't "fit in" at school, the poor, the socially disadvantaged, homosexuals and transsexuals, the elderly, etc. And the goal of developing the educational system in a manner that includes as many people as possible from marginalized groups so that they too may be a part of "education for all" is also insufficient. The real goal should be one that entirely refrains from labels and segmentation, and unconditionally allows everyone an optimal education based on their individual competencies, potentials, and needs (Sicking 2012). Only when this is the understood approach can socially inclusive education be implemented as a human right, allowing the spotlight to fall unreservedly on each individual person and his or her own uniqueness and individual needs. Socially inclusive education means equal participation in education for everyone so that they may evolve and develop their own opportunities. It also means equal opportunity via diversity. The (vocational) education system is fit to meet the needs of learners, not the other way around.

Demographic shift

Because its challenges have become very clear and present, demographic shift is now also being intensively discussed in VET. Its traces are seen on all levels of the (vocational) education system. Although population forecasts are somewhat uncertain, and can regionally vary in some cases to a significant degree, four clear trends are in fact evident in Germany:

- the overall population is shrinking,
- due to longer life expectancy, the population is living noticeably longer, especially the percentage and number of those 60 years and older,
- more people are moving into highly populated areas and,
- the amount of people with an immigration background is growing; this is also the case with the older section of the population.

The amount of young people in particular with an immigration background will continue to grow. In 2010, 19% of the population had an immigration background. Among 24-year-olds, this amount is currently around 23%. Among one-year-olds, it is 35% (Autorengruppe Bildungsberichterstattung 2012, p. 17). These amounts will change not only due to immigration, but also because of policy changes that e.g. allow children with an immigration background to choose German citizenship or that of their parents. At present, only 45% of those having an immigration background are foreigners. Of the 10- to 20-year-olds in this group, 36.5% are of a foreign nationality; of those under 10 years of age, only 17% (Autorengruppe Bildungsberichterstattung 2012, p. 17).

These general trends can vary depending on the German state. Here, both population shrinkage as well as the age

pyramid found in each region can be very different from one another.

This is having serious consequences for vocational schools. From a quantitative perspective, the amount of students doing a dual education will diminish in rural areas. If current structures continue, the minimum amount of students needed for courses to take place will not be reached. This would result in the shutting down of entire educational programs and trainings, basically threatening the continued existence of some schools, with the accompanying negative economic, social, and cultural effects in their respective regions.

Social inclusion, combined with regional networking and coordination, school autonomy, and a flexible offering of courses via polyvalent modules offer enormous solution potential. Here, the older generation, previously not considered as belonging to the target group of the (vocational) education system, could be provided with high-quality education that is close to home.

The complex, diverse field of activity only briefly described here and the coming major educational demands of socially inclusive education will open different pathways towards the professionalization of teaching personnel. Differentiated models for VET have been established that are based on the German standard *Gymnasium* model with its two main academic specializations (majors) of university study. Their first task was to respond to the lack of students studying to teach in VET. However, the continued development of these kinds of university-style models has been slow, particularly when it comes to opening them up to new target groups.

Cooperation models emerge from a lack of new instructors

Since the early 1990s, strong efforts had been underway in Germany to locate teacher training institutions as beneficially as possible to universities of applied sciences. However, the continued shortage of new instructors at vocational schools, particularly in the technical trades, led to new policies, first in North Rhine-Westphalia in 2001 (at the Münster University of Applied Sciences, and

the University of Münster), and starting in 2003 in Baden-Württemberg with the implementation of the cooperation model between teaching colleges and universities of applied sciences. An additional organizational model has been established alongside the traditional university model that anchors a cooperation with universities of applied sciences, ensuring access to civil service via specialized processes of accreditation.

With the introduction of the Bologna Process within Europe, the previous *Diplom* business teacher tracks of economic education courses of study were converted into a purely university-style model. Considering the more than 100-year tradition of university business teacher training and its polyvalent degree, the new policy adopted by just about every German state to re-define this degree into a Master of Education has for the foreseeable future endangered its recognition and pedigree in the eyes of companies.

With their impressive 500-plus new students every year, the teacher training models in the health care fields are much differentiated. Here, cooperative and university models are complemented by programs at universities of applied sciences that train teachers for a career in health care instruction. This is truly a special (and specialized) form of teacher training.

It's currently impossible to determine via state or federal statistics whether something is being done to effectively counter the lack of teacher trainees in certain professional fields. One useful indication however are the numbers from an evaluation and re-accreditation of a university of applied sciences/teacher college model. Of particular note here is the relatively low amount (34%) of those surveyed who have at least one parent working in an academic field, and 10% who have a family member or close relative who is a teacher.

So only a minority of these students had their own access to professional teaching experiences, role models, and existing knowledge and resources. The survey participants investigated here are not those who "inherit" the teaching profession, but instead are academically building their own career from the bottom up. This means at the very least

that the new models of teacher training achieve new recruiting opportunities to reach a significant amount of those not having traditional or "typical" access to university education. They *are not* part of some kind of innovative professionalization concept waving an accusing finger at e.g. the (suggested) lack of applicability and practical orientation when it comes to the necessary expertise for professional learning processes or new profiles of learning that are lacking in university study.

New extra-occupational study models, and different professional pathways towards becoming a teacher

Study models are continuing to develop for those leaving their current professions to become teachers. This is part of the change to bachelor and masters structures at European institutions, as well as the process of universities opening their doors to those taking "untraditional" pathways to the university via extra-occupational study models and masters programs that can be done parallel to teacher training. This will be a key step in establishing another pathway towards teacher training that will strengthen within vocational schools the much-needed diversity of professional backgrounds, competencies, and life and work experiences.

Those directly entering teacher training from secondary school are primarily defined by professionalism and professional knowledge that help form the foundation of their expert status. But educational professionalism is also manifested in direct work with people in situations characterized by uncertainty, lack of knowledge, and unpredictability. What this means is that working as a teacher is not only a matter of defining content-based knowledge; it also requires specific process competence. The category of reflection is central to acquiring this, i.e. theory-driven thinking about and substantiating the own action within educational situations while keeping in mind how to remove/reduce the pressure to immediately act or make decisions. This is one of the key areas that universities will need to involve themselves in

regarding the new conceptualization of extra-occupational professionalization.

Outlook

Despite attempts at new models and access to teacher training, traditional pathways towards it remain the standard. A hesitancy continues to reign when it comes to recognizing or crediting professional competencies obtained on the job that might be helpful in a career as a teacher. And teacher training institutions continue to cling to a second specialization of study as a requirement for teacher training, making it probably the greatest hurdle towards opening up teacher training to new target groups, and increasing training personnel diversity. At the same time, in today's world of "knowledge explosion," are 60-70 credit points for one field of university study really enough? New requirements such as social inclusion, how to manage diversity, quality, educational management, sustainability, etc., are only marginally included in programs of study, and are postponed for later, advanced phases of training (if at all). This leads to problems in teacher training most notably with the new target groups coming from the professional world, who in some cases ultimately decide not to enter teaching as a result. This "closing off" makes it that much more difficult to make clear to teach-

ers the exact nature of the learners' diversity. Teachers having an immigration background, and those with extensive experience in the working world are very underrepresented in vocational schools. Teacher training institutions refraining from making teachers study a second topic as part of their qualification, and who instead focus on deeper, more extensive teacher training modules would be taking effective steps to counter these shortages. A possibility here would include modules on social inclusion, individual promotion, preventing violence, sustainability, quality management, etc. Well-developed methods to accomplish this are already in place, and are just waiting to be adopted. A course of study with these kinds of modules would also deepen and expand educational professionalism.

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The School-Based VET System: A Remnant, or an Innovation Opportunity for Vocational Education?

Abstract:

The following aims to achieve a systematic classification of full-time school-based VET in the German educational system, focusing on current changes in this field. These changes allow reforms that can provide an improved training content standardization. Doing this will be key in achieving a shift from a competitive attitude between the dual and full-time school-based VET systems towards a spirit of educational cooperation.

From: "Full-Time, School-Based VET" (berufsbildung, 2011, 131)

Full-time, school-based VET below the university level is in a state of shift in the German VET system. Traditionally, this kind of training is seen as an educational leftover when compared to the "greener pastures" of the dual training done in both a school and company environment. Some even think that those doing full-time school-based VET are simply those who couldn't get into a training program at a company. These two tracks of VET are the result of historical developments. And the lower status attributed to full-time school-based VET, and its primary emphasis on the tertiary, people- and service-focused economic sector, has only increased due to the development of the transitional system in Germany between secondary school and vocational education. And with the creation of a number of new full-time school-based VET and initiatives that are aimed mainly at the professional orientation and preparation of underperforming or academically weak young men and women, the reputation of this system has only increased as the one that takes in the "leftovers" who for whatever reason couldn't get into the dual system.

Despite this status, there are signs of a re-establishment of school-based VET. The reasons are found in the growth rates of the tertiary economic sector, and the increase in full-time school-based courses of training. This development has put the long-neglected school-based system back in the spotlight of VET research and educational policy. The increasing concerns expressed in the media about a coming lack of skilled labor in the German workforce, along with the lack of integration of a large number of those young men and women not having the same educational opportunities as their peers, not to mention the polit-

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ical and regulatory efforts to make the dual vocational system more flexible and transparent, have all opened the way towards new structural and curricular reform options to expand and develop full-time school-based training.

This development may very well lead to the full-time school-based system taking on a central role in education, and becoming an equal partner with the dual system. At the same time, potentials have been tapped that can dissolve structural boundaries and rivalries within the educational system, creating interfaces among and transparencies between dual and school-based segments, as well as with the transitional system. All of this might even initiate forward-thinking reform models for the entire VET system.

Systematic positioning

Structural and didactic-curricular VET reform models can't be created without being clear about their historical and systematic context. A systematic overview of the state and development of full-time school-based training is difficult to provide due to a lack of tangible research and incomplete data. As opposed to the professional classifications found in the dual system, the full-time school-based professions that are not regulated by the German *Berufsbildungsgesetz* (BBiG) (Vocational Training Act) and *Handwerksordnung* (HwO) (trade and crafts code), have no unified system for job titles and descriptions. Methodical problems are exacerbated by different systematization methods, a lack of reporting by the German *Länder* that are responsible for full-time vocational schools, and transfer problems to other data pools. Only with the increased

number of students entering the school-based VET system since the 1990s has it become of greater focus for research and policy. Since then, existing data from the German Federal Institute for Vocational Education and Training, in addition to other studies, have provided at least some overview of the development and state of affairs of full-time school-based training professions (Friese 2010; Pahl 2009).

When looking at the current systematics of the school-based VET system, the first thing that is noticed is the high level of heterogeneity in terms of the kinds of schools and courses of study, as well as the legal regulations and student population. Full-time school-based training includes the person-related occupations, social and household service, health care professions, commercial and technical assistance, the training to become a civil servant or administrator, and the media professions. The courses of study have the goal of either a full qualification for professional certification, or a partial qualification with the objective of professional orientation and introducing the student to the working world. Different school forms are in place such as technical colleges, professional schools, vocational schools, health care training centers, administrative training institutions, and courses of study at part-time vocational schools to provide basic professional skills and prepare men and women for the job market. The level of education and social background of the student population vary greatly, ranging from young men and women without a completed secondary education, to those having a German *Abitur*, all the way to adults already holding professional certifications, or none at all. There's clear social and gender segmentation found in the different school types. Women comprise more than 70% of the student population at technical colleges, and around 40% in the dual system (BMBF 2011, p. 29 ff.). At the same time, more and more men are entering the transitional system (Autorengruppe Bildungsberichterstattung 2010). Young men who do not have a secondary school degree (or who did not do well in school), and those with an immigration background can today be seen as the ones getting the "short end of the stick" in the German VET system.

Regulations are highly diverse. To be sure, technical colleges do offer some programs that are certified in accordance with the BBiG and HwO. However, the majority of full-time school-based training courses are regulated instead by the respective German states in which they are done. Adding to this is how, with only a few exceptions, continuing education for health and care professions is federally regulated. The field of continued education, specifically allocated to professional schools, is for the most part regulated on the state level. The transitional system, which includes training courses at part-time vocational schools as well as unemployment training, is regulated by the *Berufsausbildungsvorbereitungsverordnung* (Professional Training Preparation Act) together with the policies laid down by the German unemployment office.

There are even differences found within the individual subjects and how they are assigned to the different vocational school forms. While 21 professions in the field of nutrition and domestic management are certified in accordance with the BBiG and HwO (8 professions in this field are excluded), training done in 30 of the different health care categories is not certified in accordance with the BBiG and HwO, being mostly completed at health care colleges or training institutions (there is an exception to five of the health care fields that are in fact certified by the BBiG and HwO, and belong to the so-called "free" professions in Germany). These certification structures are also found with the field of education and social work. Out of 19 professions that are taught at technical colleges and health care colleges, two are done in accordance with the BBiG and HwO. In the field of body care, two professions are BBiG and HwO certified, while two are certified by technical colleges and health care colleges. This heterogeneity only increases when looking at who is responsible for the regulation of these professions, and where they are. The regulatory responsibility for the field of nutrition and domestic management for instance lies with three German chambers (the Chamber of Industry and Commerce, the Chamber of Crafts, and the Chamber of Agriculture), the German civil service, as well as state regulators (Friese 2010).

This wide structural diversity found within full-time school-based VET brings with it both problems and potential. Potential is found in how flexible curricular customization is possible that allows for (1) variety in the different topics and levels, and (2) transparency between the different training levels. From this perspective, the full-time school-based training system is well ahead of its dual system counterpart when it comes to the flexibility, differentiation, and transparency that have been called for by educational policy. There are however a number of structural weaknesses such as the lack of standardization of training content, competencies, and professional profiles. Companies will need a universal rating and recognition system to assess the quality and value of full-time school-based training. Vocational schools will also have to develop common networks and associations, as well as a professional model for educational personnel. From a historical and European perspective, the standardization of the German dual system can definitely be seen as a VET success. In contrast, the full-time school-based system displays the clear weaknesses of a semi-professional structure, due in part to its lack of standardization and universality.

Historical developments

These structural weaknesses have a long tradition, and are closely connected to the development in the school-based vocational system of classic "female" professions in the field of care work. Among the extensive array of different developments here, four tracks of school-based training can in fact be identified from a historic perspective (Feller 2008; Friese 2010; Pahl 2009). First, the norm-based, naturalistic concept of gender differences during the Enlightenment (i.e. nurturing and emotional capabilities are female aspects) starting in the mid-1700s saw the establishment of full-time, school-based institutions in the textile industry and institutes for training maids for city households as part of industrialization and the movement to provide schooling to the less privileged members of society.

Institutions of general advanced training in the form of Sunday schools at the

start of the 1920s developed into vocational schools for trade training in the dual system, and the full-time school-based home economics schools for girls and young women. The trade oriented training schools had the goal of "civically rearing" boys who had left (or been kicked out of) school. On the other hand, the home economics schools were not aiming to professionally train girls in household services, but instead wanted to prepare uneducated female factory workers from the textile industry for their "natural" profession of housewife and mother, and train bourgeois daughters how to be effective heads of the household. Historically, this didn't just split the VET system into dual and full-time school-based training. It also constituted a transitional function between school and the "family profession" which had some interesting parallels to the function of today's transition system and how it serves as a "buffer" between education and employment.

Specialized, structured home economics and social service schools emerged with the liberation of "bourgeois daughters" to enter the professional world. Here, vocational school forms developed that combined household, business, and socio-pedagogical subjects. Different levels of degrees could be earned that were equivalent to today's social work and education, domestic management, and nursing and care qualifications. The fourth historical track of professional education were the commercial advanced training schools that were expanded during the 20th century into mercantile, business, and (higher level) commercial colleges.

Of important note here is that the gender structure of today's VET system continues to be impacted by this historic industrialization phenomena. Full-time school-based training and professional concepts that are derived from specific employment requirements and by their nature are care work, are institutionalized with the gendering of employment without an integration on the vocational level. This development has led to serious impediments for both the professionalization and standardization of full-time school-based training, which today could in fact be lessened when considering current employment and education-

al policy needs. This would require the implementation of new regulatory and curricular reform models whose development is based on empirical analyses of professional needs, changes in professional backgrounds, and qualification and competency requirements.

Empirical developments and reform models

The extensive economic structural changes occurring in the past decades in Germany, along with the expansion of the tertiary economic sector have led to significant employment growth in personal service occupations, training, and consultation. This dynamic is currently strengthened by demographic shifts and the growing demand for family-supporting services (Autorengruppe Bildungsberichterstattung 2008). This change in employment structures is also seen in the vocational training system. As opposed to decreases seen in the dual system, technical colleges have been enjoying continual growth since the end of the 1990s. This trend is due mainly to the expansion of personal service fields of training which have increased by 40% since the year 2000, most notably in health care, child care, and social services (Autorengruppe Bildungsberichterstattung 2008, p. 104 ff.). These developments will require new professionalization concepts and a quality development of the school-based VET system, i.e. they will need regulatory and curricular standardization of both training standards, and qualification and competency profiles.

Transparency and cooperation

Amendments to the German Vocational Training Act of 2005 have the potential to modernize and reform the curricula and didactics of full-time school-based courses of training. Following the demand in the 1990s for a dualization of all VET done below a university level, there's now additional Vocational Training Act reform options emerging in terms of transparency and cooperation in/between both systems. The incorporation in particular of full-time school-based training into the Vocational Training Act,

and the admission of technical college graduates via chambers and professional associations are creating the vital aspects of achieving the necessary interconnections between dual and full-time school-based training principles.

In addition, new reform approaches need to be formed for curricula and didactics and structurally implemented. This includes the expansion of the amount of practical work (and facilities for doing it) in full-time school-based training, as well as an improved level of cooperation between places for learning. Establishing training networks that can be developed between dual and full-time school-based training is another way to improve quality. Also important is the further development of systems to recognize and accredit the full-time school-based competencies obtained as part of dual training, advanced training, and certifications that allow for university admission. In light of the high proportion of women in the school-based system, there also need to be measures in place to allow for an effective work-life balance that will enrich, not impede, career development. Continued progress in the dual system to implement part-time VET is another innovation factor for full-time school-based training structures (Friese 2008).

Standardization and accreditation

A number of new procedures and quality development/management instruments are currently being tested, evaluated, and implemented as part of the debate on the standardization, accreditation, and management of VET. For the health care professions, and professions trained for in full-time school-based vocational schools, the (slowly proceeding) development of competence-based qualification profiles as part of the German and European qualification framework needs to continue. This will require the development of new competence-related curricula for person-related professional models. Specific subject-related skills such as social competence, emotional and interactive competencies, and the aptitude to perform work among uncertainty structures are without question key elements of technical competence in person-relat-

ed sectors of the economy. They as a re-sult will need to be present in market-oriented job profiles and vocational curricula. Finally, how can an optimal level of professionalism be achieved among the balance between care and rationality? Concepts will need to be developed that re-adjust and fine-tune the "working on people" employment skills common to person-related service professions and full-time VET.
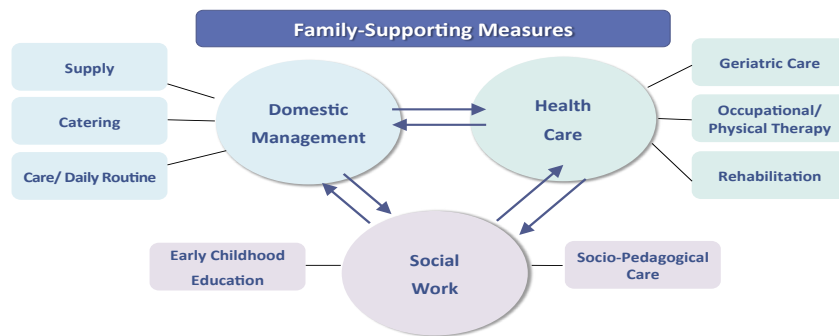

Figure: New job profiles and interfaces between person-related professions

New job profiles and interfaces

Quality development and professionalization of individual professions is not possible without an understanding of new demarcations between different fields of work. From this perspective, new professional profiles need to be identified for the early recognition of qualification requirements that can make clear the different interfaces between today's person-related market segments. This has strong implications for the interface between domestic management and health care, particularly when considering the increasing amount of women in the workplace, while the plus-65 segment of the population continues to grow. Along with these new home and health care needs, there are also interfaces emerging to fields of social work, thanks to the increasing importance placed on early childhood education and socio-peda-gogical care (see Figure).

This re-shuffling of professional profiles requires interdisciplinary curricula that allow vertical and horizontal movement between the professions, as well as technical specializations. It should also create access to professional continued education. Take for example the debate about European core professions that has been ongoing since the mid-1990s, and the compatibility of the German vocational principle. This is an opportunity for a curriculum allowing simultaneous training in both basic and specialized competencies, as well as a structuring of training and profession "families" into common core qualifications and specialization opportunities. New approaches such as these can have far-reaching professional implications for full-time school-based training.

Modular approaches and instruments

Along with the anchoring of professional standards for employment, in light of the market demand for qualified assistance personnel, and based on the potential and needs of the transition system, instruments should be created for those groups of people with lower levels of qualification, allowing them access or a return to formal training and employment. The VET reform guidelines presented in 2007 recommended structural improvements aiming at better flexibility, transparency, and compatibility of professional qualifications. This includes the implementation and certification of qualifications done in the professional preparation phase, as well as the introduction of modular training segments, components, and step-by-step concepts. The acceptance of these modular VET forms is still being debated. There is an understandable amount of skepticism about VET perhaps suffering a decreased level of quality when considering the potential for the job market to (mis)use modular training. An argument can however be made for the integration potential of this kind of training, i.e. it not only provides valuable job market qualifications, but access to training as well. So when looking at it like this, valuable groundwork can be laid e.g. for at-risk groups to receive VET, which in turn can open doors towards social participation and integration.

Professionalization of education personnel

Extensive reform is needed for the professionalization of educational personnel. Heterogeneous school forms, training structures, curricula, and student populations require a complex array of competencies, methods, and diagnostic and subject-didactic abilities from educational personnel. A systematic quality development will require a thorough analysis and curricular anchoring of the new competency and knowledge requirements that have emerged via empirical shifts. With its traditionally more theoretically oriented curricula, full-time school-based VET will benefit from the call of the knowledge society for complex, knowledge-based competencies. Another benefit for curricular differentiation is the greater focus on subject-oriented, real-life, interdisciplinary competencies that has emerged since the 1990s (this has also been the case in the dual system). Further, a key subject-didactic core of full-time school-based teaching has been methodic-didactic interaction and communication methods. Another decisive factor for a successful professionalization will also be overcoming the historically semi-professional structure of teacher training for full-time school-based VET and fields of study, sending it in a better, more academically solid direction.
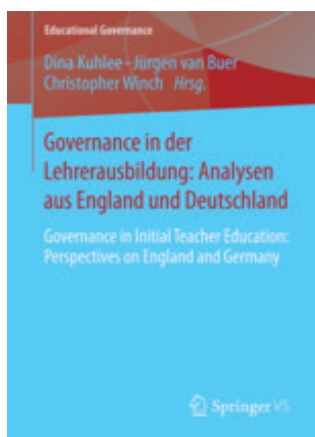
Conclusion

Thanks to reform efforts in VET, the full-time school-based VET system in Germany has seen quantitative growth, and is being taken much more seriously. Our analysis has shown that the historical stance towards full-time school-based VET as a "remnant" in no way corresponds to its true importance in educational policy. What has in fact been seen is that the full-time school-based system offers extensive reform possibilities for a more flexible, transparent VET, which can initiate positive developments in the dual system as well. On the other hand, the dual training structure that has developed over the course of history offers models for a much-needed regulatory and curricular standardization of full-time school-based training. From this perspective, these different VET systems are no longer based on historic structural rivalries, but instead offer exciting potential for future-oriented cooperation and synergies in Germany, with an even broader focus of achieving effective compatibilities on a European level.

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Ways and Bridges between VET and Higher Education in Germany

Abstract:

*In the following article, the so-called third educational pathway (*dritter Bildungsweg*) which leads from vocational education and training in Germany into higher education is described in more detail. It clarifies concepts, discusses current developments, and addresses implications for the structural and didactic development of VET.*

From: "Academization of VET" (berufsbildung, 2012, 136)

Dietmar Frommberger

In Germany, the issues "academization of the world of work" and "academization of VET" are occasionally jumbled in everyday use and professional discourse. The first term means mainly that training for certain occupations is increasingly run by universities, for example nursing professions and originally non-academic health professions, or social and secondary service occupations. This development is closely linked with changed requirements of the relevant professional world in which the extent of knowledge-based selection- and decision-making needs increase. It is also a consequence of growing demand for attractive and professional careers that are as self-determined as possible. Both of these facts, as well as the general increase in individual school aspirational efforts, lead to an increasing proportion of university graduates among employees. The "academization of VET" however points out that in vocational education, learning and competence development processes which were originally the realms of general or academic education; the self-organized generating, processing, and reflection of expert information to solve complex problems; the acquisition of methodological skills; or the growing importance of foreign language teaching (should) increasingly take place. For vocational and industrial education, which primarily deal with the academization of VET, an (actually very old) question becomes virulent again: To what extent can educational processes take place in the form of vocational education in schools and companies that are compatible with general (and thus higher) education? This issue also involves opening up universities to professionally qualified persons and, ultimately, a question of the development and differentiation of VET and higher education. The following discussion deals with these latter two aspects.

Opening up universities and the third educational pathway

In Germany, entry into higher education is mainly based on the qualifications of the upper secondary level (*Sekundarstufe II*) of general education schools. This "royal road" (*Königsweg*) to higher education is supplemented by the so-called second educational pathway (*zweiter Bildungsweg*), in particular through evening classes (*Kolleg*). Working people who wish to acquire a general higher education entrance qualification in order to study at a university may attend one of the state-regulated options of the second educational pathway, which are adjusted to the secondary school exit examination (*Abitur*). The access to higher education on the basis of general education standards is also possible through the academic aptitude test. But of particular interest for vocational training is the third educational pathway (*dritter Bildungsweg*), which involves the acquisition of the higher education entrance qualification/admission prerequisites via vocational pathways and professional qualifications.

When it comes to the transition from VET to higher education, there is a distinction to be made between admission rules of higher education legislation on the one hand, and access arrangements of school legislation on the other. The number of different admission rules of higher education legislation in Germany is extensive. The access arrangements of school legislation are based on qualifications which are acquired in vocational programs at vocational schools, and are therefore governed by the school laws (*Schulgesetze*) of the federal states (*Bundesländer*). Of particular importance here is the vocational upper secondary school (*berufliches Gymnasium*), in which the general or subject-specific higher

education entrance qualification can be acquired on the basis of subject-specific advanced training. The vocationally-oriented upper secondary school (*Fachoberschule*) and vocational high school (*Berufsoberschule*) are typically attended in this instance. The higher education entrance qualification can be acquired in both types of school on a subject-specific basis while taking into consideration (or even crediting) operational and professional experiences. In addition, it is possible to some extent to acquire a higher education entrance qualification in full-time vocational schools (*Berufsfachschulen*) and specialized vocational schools (*Fachschulen*). Basically, the potential for transition to higher education on the basis of VET school offerings in Germany is to be estimated as very high. So while the school law regulations for vocational educational pathways are significant in the federal states for the transition from VET to higher education, particularly to the so-called *Fachhochschulen* (Autorengruppe Bildungsberichterstattung 2008), admission procedures regulated by higher education laws aim to serve graduates of extracurricular VET, i.e. those persons who completed vocational training in the dual system and/or gained an upgraded vocational training qualification. These varieties of the third educational pathway are usually at the forefront of consideration in VET policy. At the same time, however, this transition and the access to university education it offers have so far yet to see significant participation in Germany.

The equivalence between VET and general education, and thus the enhanced understanding of obtaining a qualification for higher educational studies (*Studierfähigkeit*) in VET is attracting broad consensus, even though skepticism and resistance towards it continue. The current discourse now goes beyond the mere question of admission to a university degree program. It is now also argued that equivalence is given for vocational qualifications in relation to higher education qualifications (Buhr et al. 2008). This line of argument is supported by discussions and agreements about the classification of vocational qualifications in the German Qualifications Framework (*Deutscher Qualifikationsrahmen*). As far as the labor market and the employment system are used as a reference for the

comparison of educational qualifications, this argument is also supported by the fact that in-house functions and areas of responsibility (which are held by graduates in many countries) are performed by persons in Germany who gain promotion through VET. Although the completion rates are often also compared in various OECD comparisons, the skills actually being acquired are not. However, the line of discussion of the equivalence of vocational and higher education is basically relatively new and also a consequence of the increasing differentiation of the higher education landscape in the course of the gradation of university degrees. In any case, this process leads to agreements regarding the crediting for competencies acquired in the workplace toward higher education (KMK 2008) or even when it comes to the considerations of the direct entry into a master's program on the basis of vocational qualifications, competencies, and experiences.

The discourse on university admission of professionally qualified persons is now closely linked with the issue of opening up universities to new target groups, i.e. for "non-traditional students," "not regular students" (Hanft & Knust 2008), or "non-traditionals," "adult students," or "mature students" (Schuetze & Slowey 2002). "Further education students" fall quite substantially within this target group, particularly those persons moving to university after or during a period of employment. So the target group-oriented design of higher educational continuing education and thus the development of higher educational study programs and continuing education strategies of universities are in the foreground. As international comparative studies show, the rate of students from the segment of "non-traditionals" is relatively low in Germany (HIS 2008).

The further development, differentiation, and integration of VET and higher education

In the history of VET's development, the awarding of additional general education permissions for VET, as well as the higher education entrance qualification, were usually associated with a "regimentation" (*Verschulung*) of the curriculum

and the training organization. The outstanding challenge in this context, especially for the operational and practical experience linked to vocational training is whether and how the altered functional performances (providing university entrance qualifications, awarding a qualification for higher educational studies) are to be guaranteed without giving up the original vocational qualifying function of vocational education and continuing vocational training. The question in this context also arises regarding to what extent learners in VET actually acquire or can acquire the necessary requirements for the now formally allowed transition into universities and thus for a successful university education.

It is not subject to negotiation in theoretical VET terms that study skills can be developed even in VET and on the basis of professional contents and working process related skills development. This original vocational and industrial education reasoning, which for decades has been well established in professional discourse, could now also be enforced on the level of VET policy after much resistance, and even enjoys the consensus of the social partners in this matter. But when looking at the real constitution of VET, it however becomes clear that concepts which integrate this objective into the program should be further developed. It would be educationally irresponsible not to explicitly support the learners in VET here. With this in mind, it appears necessary to rethink a curricular and didactical supplement, connection, and integration of different training paths and levels in order to avoid loss of function of vocational training in the course of changing the permissions. Also, the very low demand for higher education studies on the basis of professional educational qualifications (when acquired according to the Vocational Training Act [*Berufsbildungsgesetz*]) confirms the need for further development.

So double qualifying training programs (*doppelqualifizierende Berufsbildungsgänge*) can become increasingly important for transitions into higher education; in many neighboring European countries, these are key educational elements (Deißinger & Wern 2012). Thus, the adopted approach to connecting general education and VET represents a possi-

ble solution which has been successful in Germany (including East Germany prior to Germany reunification), especially in its additive form, although not in respect to the integrative form. Regarding the integrative form, the main focus lies on the question of the development of an aptitude for higher educational studies on the basis of professional processes for developing competencies. Nevertheless, the concept of double qualifications has so far been focused on access to higher education, meaning it is focused on the relation between vocational and general education on the upper secondary level. The relation and assumed equivalence of vocational and higher education is hardly systematically considered in the concept of double qualifications. An exception could be dual courses of study in which higher educational and company training and learning processes would be further adjusted concerning didactics and curriculum, and would be anchored in a binding curriculum for learners. This

has, however, rarely been the case so far (Busse 2009). Such qualification strategies could also increasingly be part of works and collective agreements.

Such a development provides a great opportunity for vocational schools in terms of the development of VET offerings. On the one hand, this concerns the range of content throughout target group-oriented preparatory courses (*Brückenkurse*). On the other hand, the organizational and curricular cooperation between vocational schools and universities appears increasingly feasible and attractive.

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Sustainable Development as a Future Program for Quality Management at Vocational Schools

Abstract:

The guiding idea of vocational education for sustainable development can without question achieve a future oriented quality for both schools and teaching. So far however, there has been no noteworthy implementation of vocational education for sustainable development in everyday school and teaching development. Using the example of the German state of Lower Saxony, the following will attempt to conceptualize sustainable development as a program for quality management at vocational schools.

From: "Occupational Training for a Sustainable Development" (berufsbildung, 2013, 141)

Tobias Schlömer

Recent years have seen concepts, models, and instruments being introduced throughout Germany to achieve both autonomous development as well as a quality management of schools and teaching. These processes represent a paradigm shift in school management. Gone are the clear top-down hierarchies with their central directives on the state level. Now, schools are given extensive opportunities to develop their own goals based upon their specific individual potentials.

This paradigm shift was embraced early on in Lower Saxony's vocational schools. With the policy initiatives for autonomous action, the introduction of quality management at vocational schools, and extensive structural changes in school administration, the model test "Lower Saxony's Vocational Schools as Regional Centers of Excellence" (*Berufsbildende Schulen in Niedersachsen als regionale Kompetenzzentren*) achieved the key requirements for a systematic quality development (Brockmann 2007). Nevertheless, this initiative primarily presented only instrumental instructions; it does not offer actual content-based statements on what a program for quality development at vocational schools would specifically look like or how it would operate (Krey & Rütters 2011).

Practically achieving the abstract construct of school and teaching quality can in fact be done via an interconnection with the guiding idea of vocational education for sustainable development. This can without question generate a future oriented school and teaching quality. And its focus is on having a *real impact*: It aims to motivate, empower, and commit young people as it makes them aware of how they too can be a part of forming the future of the working world,

society, and employment (Schlömer 2009). This concept that aims to interlock quality management as an instrumental action framework for school and teaching quality with the orientations, guiding ideas, and content of a vocational education for sustainable development will be developed in the following.

Establishing a vocational education for a sustainable development: Where it is right now

The opportunity for quality development and autonomy at vocational schools could be a pathway towards a long-term, strategic, goal oriented establishment of vocational education for sustainable development on the school and teaching development levels. More than a decade after the German Federal Ministry of Education and Research (2001) published their feasibility analysis of vocational education for a sustainable development, its actual implementation still remains only a distant possibility. But this doesn't mean that foundational curricular and regulatory requirements haven't been established: Committee members of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany who have the task of establishing teaching frameworks for vocational school education have basically been handed the ideas behind sustainable development as an element of their educational task and didactic principles.

And to be sure, there are in fact a number of examples from everyday school life and teaching showing how sustainable development can be a solid strategy for modernization, quality, and innovation. However, the end products

that emerge here are often so custom-fit to the respective conditions of the specific schools that transferring them to other schools is often not possible. There have been e.g. concepts developed and tested for project lessons on climate change/protection; countless innovative sustainable student "companies" started; and sustainable production schools to help those in need.

A better, more holistically oriented, and domain-specific sustainability approach was seen with the joint project "Education for Sustainable Energy Supply and Usage" (*Bildung für eine nachhaltige Energieversorgung und Energienutzung*) sponsored by the Lower Saxony Future and Innovation Foundation Fund. Here, seven experts on teacher training pursued the goal of anchoring learning content and competencies regarding the specific topic of the new energy economy in Germany as extensively as possible into lessons, the school program, and core curricula. The project "Energy Education Competencies for a Sustainable School Culture" (*Energiebildungskompetenzen für eine nachhaltige Schulkultur*) (ekonas, University of Oldenburg, Germany) used modular advanced training to motivate and qualify instructors at vocational schools to achieve a lesson-based and school-administrative integration of issues on sustainable development, with a special focus on the new energy economy that is emerging in Germany (Bloemen, Porath & Rebmann 2012).

A similar approach was seen with the "bbs-futur" project sponsored by the German Federal Environmental Foundation with the following goals (see http://www.bbs-futur.de): developing a vision about vocational schools of the future; creating a reference framework for a sustainable school development; testing didactically prepared examples of sustainable teaching and school development for everyday use; and the formation of partnerships with sustainably operating companies. The eight vocational schools here, some of which already have profound prior experience in the realm of sustainability, set the task of addressing specific priorities for a sustainability oriented school and teaching development.

The challenges of achieving sustainability oriented quality development at occupational schools

Recent years have seen promising individual approaches and concepts for sustainability oriented school and teaching development designed, tested, and in some cases even put into action. *Four fundamental issues* however remain that may in fact hinder the achievement of sustainable development as a strategy for modernization, quality, and innovation at vocational schools:

1. Even though the concepts of autonomy and quality management at vocational schools are important frameworks and action structures for a successful school and teaching development, they *do not offer any content-based configuration of quality management* that helps schools achieve a content-program quality in and of itself. Because it can very effectively achieve a future oriented school and teaching quality, the guiding idea of sustainable development can in fact help with this configuration. So what's needed here is an implementation model that fills school quality management with real content for a sustainability oriented school and teaching development.

2. A *holistic-content program for a vocational education for sustainable development* needs to emerge if an implementation model is to be achieved. This kind of content program is still waiting to be developed, despite first attempts to do so (see e.g. ekonas and bbs-futur). What's needed here is a complete content structuring of the comprehensive opportunities and design fields of a sustainability oriented school and teaching development without arbitrarily dropping prefabricated programs into the lap of schools and teachers.

3. When methodically observing the implementation of a vocational education for a sustainable development, and when looking at how vocational schools operate, it can be seen that individual *sustainability goals and measures are too unsystematic and are not pursued long term*. This is where the chance emerges of using the infrastructure of a school-based

quality management as a systematization tool. Along with the content-based program formation, there is as a result the need to differentiate the above-mentioned implementation model in a methodic-instrumental fashion as it pertains to the quality realms and core tasks in school quality management.

4. There is so far *no extensive strategy in place for the establishment of sustainable development in school and teaching* that reaches all vocational schools, not just the "usual suspects" that are already environmental and sustainability pioneers.

One concept that intends to constructively address this issue is the interconnection of the implementation of school quality management at vocational schools with the goal and content of a vocational education for a sustainable development (see Figure). The following will differentiate this kind of interconnected model within the context of the four issues described above. Its orientation is found within the general framework of school quality management in Lower Saxony, Germany.

Content configuration of school quality management

Good model requirements were found with those early initiatives in Lower Saxony that had autonomous school management as their guiding principle, pursuing and developing *bottom-up* educational quality from the organizational goals and environments in each individual school (Brockmann 2007). School administration and teachers in Lower Saxony's schools received a strong degree of autonomy, including everything from an expanded freedom to create their lessons as they felt best; develop the school curriculum; and provide a high level of professional commitment, leadership, and development. They even had a say in how the budget was managed. This autonomy was finally incorporated into educational policy in July of 2007. It is complemented by school inspections that, instead of implementing an external management, work to make the schools "self managing" as they consult and support them to achieve increasing levels of educational quality.

School quality management	**Vocational education for a sustainable development**

offers *instrumental* action structures and frameworks for school and teaching development.

guides effective and future oriented quality development (in terms of *content*) at vocational schools and colleges.

Implementation model:
Sustainable development as a future program for quality management at vocational schools.

Strategy for a wide establishment of sustainable development that appeals to all vocational schools, not just the "usual suspects" of environmental schools.

Systematic implementation of sustainable development in school and teaching structures via an orientation towards the model of school quality management.

Holistic vocational program for a sustainable development that gives schools the opportunity to create their own programs and develop their own profiles.
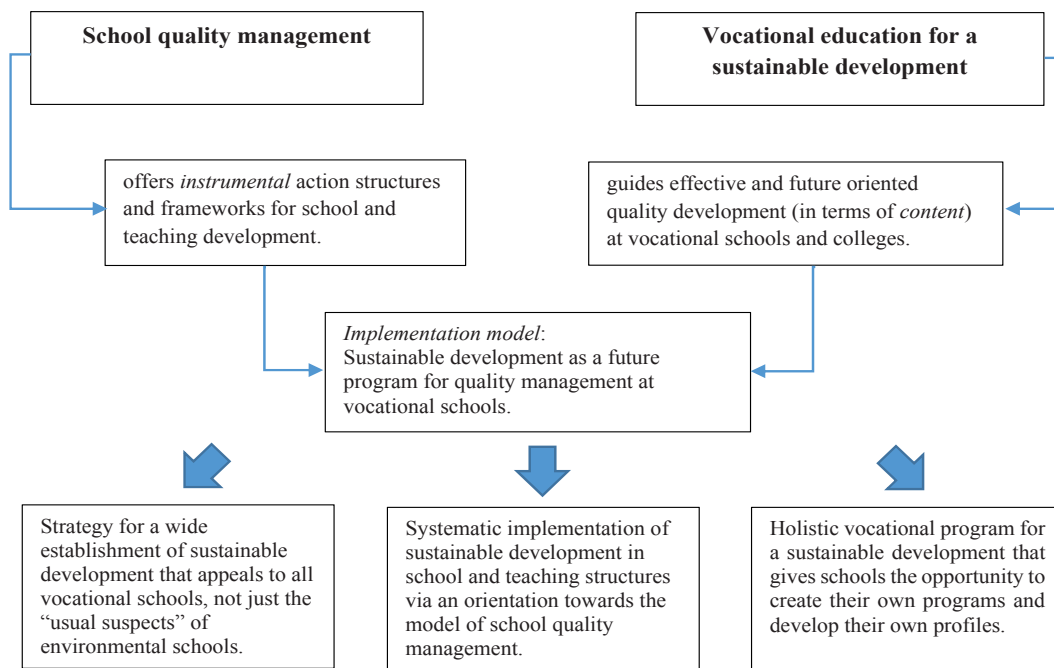
Figure: Interconnection of school quality management and vocational education for a sustainable development

In Lower Saxony, the autonomous quality development at schools is (in terms of content) pre-structured by an *orientation framework for school quality.* The orientation framework in particular shows significant correlations between the *outcome* of good school quality and its development via *process quality.* Here, schools are shown important application fields of quality development that among other places are found in teaching-learning processes; the creation of school life and culture; school cooperation activities; and educational professionalization of teachers. School is described as a dynamic, networked system that first and foremost (most notably when taking the social and economic surroundings into account) should keep in mind the backgrounds of its learners and their needs when developing the school program and profile.

The orientation framework is "based on a holistic notion of school quality, but not a comprehensive quality model" (Künzel, Roggenbrodt & Rütters 2009, p. 14). This is why a decree was enacted in 2005 in Lower Saxony to instrumentally support continuous quality development. This requires vocational schools in Lower Saxony to introduce a system in accordance with the *European Foundation for Quality Management* (EFQM). Experience with the implementation of the EFQM model should however be taken with a grain of salt. After all, it was originally developed for markets, and isn't necessarily applicable to the functional conditions of schools. In response, the Ministry of Education and Cultural Affairs created a concept for school quality management at vocational schools that bundles together the EFQM criteria into quality realms. A particular focus here is the school core process of creating educational programs. These are accompanied by the quality realms of running schools, developing schools, managing personnel, administrating resources, developing cooperations, and managing results and successes.

What needs to be kept in mind is that the orientation framework and school quality management at vocational schools offer important framework guidelines for quality development. But in spite of this, quality management systems just by themselves "do not provide content-based indications of what a qualitatively effective vocational school is. They instead represent a complex set of instructions for inspecting and improv-ing the structures and processes at vocational schools" (Krey & Rütters 2011, p. 216). The instruments of quality management themselves do not (yet) have *content configuration.* In other words: A *content-programmatic* "charging" is needed to make the abstract construct of school quality understandable and operative for all who are involved in it.

A requirement for a content-based configuration of school quality management is a holistic-differentiated program of a vocational education for a sustainable development that covers not only teaching quality, but school quality as well.

Content of sustainability oriented school and teaching development

The guiding idea of sustainable development can achieve an effective, future oriented school and teaching quality. It to a great degree focuses on having a *real impact* in how it motivates, empowers, and commits young people as it makes them aware of how they too can be a part of forming the future of the working world, society, and employment. The *outcome of teaching quality* is specifically seen in

how it promotes an ability to professionally operate within the guiding principles of sustainable economics and development. Here, vocational schools prepare their learners for a future that will be characterized by drastic social, ecological, and economic challenges, most notably in the context of climate change, new energy economies, and financial crises. The job market has countless sectors where environmental and social aspects comprise the key elements of companies' business models. Sustainable economics is fundamentally changing the requirements of business and work processes (Schlömer 2009): Products and services will need to be developed that are better at meeting the needs of people instead of just feeding the bottomless pit of consumption. Energy and resources will not just have to be efficiently applied; they will in the most optimal of situations be part of a closed economic loop ("from cradle to cradle") that continually re-uses and re-applies them. Responsible economics involves all kinds of manufacturing and service realms. A key task will be to achieve a close-knit relationship between companies, professions, and employment that is based on economic-ethical norms and values.

This profession-company sustainability action should be implemented on all levels of teaching development, specifically speaking on the *macro level of school curriculum development.* How? By first of all making sustainable development a competitive curricular principle for individual school conventions, and second, by selecting usable curricular reference points (guiding ideas for a sustainable economy, society, and technology; for skilled labor and qualifications; and vocations). Actual sustainability oriented teaching-learning processes should be structured on the *meso level of teaching conceptualization.* This can be achieved not only via the proven arrangement of the sustainable in-school student company, but in particular through cooperations with companies known for their sustainability orientation, as well as those companies who are not (!). The latter can offer challenging, realistic opportunities for learning more about sustainability. To be sure, this process would also include social projects that go well beyond a business model to challenge the

personal development of learners. Learning situations should be formed on the *teaching micro level* which, when taking into account the professional backgrounds of young men and women, on the one hand promote professional flexibility, openness, and interdisciplinarity for the creation of complex problem approaches and solutions to uncertain problems and challenges. On the other hand, sustainable teaching should continually enable the participation of learners in social, ecological, and economic developments within their local communities. These kinds of teaching-learning opportunities will integrate young men and women into society and the job markets of tomorrow, preparing them for the phenomenon of lifelong learning.

Achieving a vocational education for a sustainable development via teaching quality development nevertheless requires a *thorough, holistic school development* which, along with the teaching development described above, also promotes the organization of schools and their staff. These developmental processes cannot be reduced to individual actions such as the often-embraced installation of solar panels on school rooftops. However well intended ideas like this may be, they ultimately reveal themselves as mostly cosmetic efforts of individual sustainability pioneers. Sustainable development as a principle for action and creation requires more than just sustainable symbolism. It also needs the established rules, routines, and ideals within the social system of a school to be questioned and reestablished to make them better and more capable of meeting future challenges.

Systematic implementation of sustainable development in school and teaching

For vocational schools, a sustainable organizational development means that they as regional centers of excellence are oriented towards (or better yet, oriented *together* with) their region, and investigate via systematic networks: (1) what importance the guiding principle of sustainable development will have in the future, and (2) what contributions can be made towards a sustainable develop-

ment. What's important, and what can be contributed are always specific to the society, community, and social level; the educational backgrounds of learners; as well as the business models and job market structures of the regional economy (Schlömer 2009). Sustainable organizational quality via networking also means that autonomous schools learn from other vocational institutions by comparing and exchanging school quality development and sustainability models.

Sustainable school organizations can play an active, pioneering role within their networks for society and the economy by pursuing a stringent sustainability standard within their own core (teaching) and support processes. This includes everything from a CO_2 audit of their energy and resource use/consumption within their school buildings; mobility management (efficient management of the daily commutes of teachers and students); measuring pollutants and toxic substances (e.g. in the school's desks and chairs); supplier rating (e.g. office supplies); reporting on sustainability ("Do something good and let others know about it!"); and consulting for educational partners and companies.

These visions, goals, and efforts should be creatively developed by vocational schools, and systematically pursued as an "enterprise." This would ensure a radical cultural change that goes far beyond a strictly economical-technocratic management such as that suggested by the balanced scorecard concept adapted by some schools. After all, educational ventures are radically different from for-profit companies in how quality is not measured by the value of business processes and saleable products. Instead, "teaching and education […] do not guarantee success. They can only ensure the essentials: Learning must be a subject in and of itself" (Arnold 2010, p. 81).

Long-term establishment of a sustainability oriented school and teaching development

A sustainability oriented school quality development as a program can generate the correlation between systematic quality management on the one hand, and learning and work cultural changes

of schools on the other. Sustainable development requires a school and learning culture in which all members of the school system and the region have a say in what happens, and can be a part of negotiating and forming which specific goals and values of sustainable development will be pursued at their respective school(s). While this idea of participation is a necessary *instrumental* requirement for quality management ("This won't work without those who are impacted by it"), for vocational education for a sustainable development, it's a central *content* requirement! Vocational education for a sustainable development's challenge to vocational schools is for them to make contributions as regional centers of excellence towards a sustainable development within their social, economic, and learning cultural environment and, in the process of doing so, make the absolute best out of their learning processes.

Outlook

The pathways and milestones for a stabilized complex of quality management and sustainable development in vocational schools have now been clearly set, allowing for their real application in schools. A necessary requirement for the success of a sustainability oriented school quality management program is that it be geared towards the specific conditions and structures of each respective school

and its teaching. And sustainable development as a quality measure for school and teaching development can be effectively established only when a further requirement is sufficiently met: essential structures for teacher professionalization throughout all phases of teacher training.

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VET Quality

Theoretical Approaches and Assessment Perspectives

Abstract:
Quality has become an essential factor for evaluating the effectiveness and efficiency of educational processes. The following will provide a retrospective summary of the development of what quality has been understood as being in VET (as well as in its varying dimensions), while also summarizing the interplay of the different educational quality determinants. This is done in an effort to determine how the quality of the German VET system can and should be currently evaluated. The backgrounds in particular of what are generally agreed to be quality deficits will be critically examined.

From: "Quality in Company Education" (berufsbildung, 2013, 139)

Martin Fischer

The past several years have seen an ongoing debate about quality in the German VET system. The *Bundesinstitut für Berufsbildung* (German Federal Institute for Vocational Education) and the *Bundesministerium für Bildung und Forschung* (German Federal Ministry of Education and Research) have initiated the pilot project program *Qualitätsentwicklung und -sicherung in der betrieblichen Berufsausbildung* (Quality Development and Assurance in Vocational Education). Here, intensive educational institutional cooperations, the right kinds of quality assurance instruments, and improved trainer qualifications aim to further develop the quality of vocational company training. Ten pilot projects are being sponsored and scientifically accompanied by this program (Hemkes & Schemme 2013).

Quality is often discussed when it is insufficient or not present. This raises the question of how the issue of quality specifically pertains to the quality of the German VET system. To answer this question, the functions can be analyzed that a VET system needs to fulfill for a society. These include (Greinert 1995):

1. The *utilization function*: This takes a look at the costs and benefits of VET – for learners and instructors, for companies, and for society as a whole. And it can in fact be seen here: VET costs and benefits are not evenly distributed in Germany. More than three quarters of all companies benefit from the fact that the rest (i.e. not they) do the actual investing in education and training. Added to this is how the VET system is increasingly state subsidized by the systems supporting preparatory phases of training and professional transitions in early years (i.e. with the transitional system in Germany between secondary school and VET) in general; and specifically by subsidies paid to trainee and apprenticeship programs.

2. The *selection and allocation function*: The German economy's demand for skilled labor is by no means covered by the VET system. This is due in part to the low amounts of companies offering training and apprenticeships (not to mention the low amounts of people actually completing these programs). And to make matters worse, some booming sectors of the economy (e.g. service) are insufficiently set up to provide training.

3. The *qualification function*: There's doubt about whether all trainees can obtain the competencies that they will actually need in today's economy with its increasing professional demands. The extensive competency analyses conducted with trainees in some German states indicate a need for improvement in this area, and not only in the quality of the actual VET, but also when getting ready to enter VET while still in the secondary school system.

4. The *retention and integration function*: Despite the better balance that now exists between training programs offered and the demand for them, there are still issues concerning the initial transition from school into professional education. This has consequences for the integration of young people into the job market. There are currently around 300,000 young men and women in this transitional stage. And the transition following this (from training into the actual work force) has become more problematic in Germany, causing some unions to respond with corresponding contracts and limitations.

So the question is: How can German vocational education be developed and improved?

Quality development: Dimensions and levels in VET

Quality assurance in German VET has often been approached from a so-called *input quality* perspective: Are there in fact mandatory frameworks in place for training? What about the infrastructure for technical aspects and personnel? Is the training staff qualified to do what they do?

This question (along with similar ones) was posed when exactly these aspects did not exist at that exact moment in time. For example, the time around the start of the 20th century saw an extensive liberalization of educational regulations ("economic freedom" declared by the German Reich's industrial code of 1869), and a "breeding of apprentices" by personnel who were however not required to have specific qualifications. This in turn led to the call for measures to counter the "sloppiness" present in crafts and trades. Back then, this was not referred to as "input quality," just "a decent technical apprenticeship" instead.

The input quality factors of German VET were a key focus of the *Sachverständigenkommission Kosten und Finanzierung der beruflichen Bildung* (1974) (Expert Panel for Vocational Education Costs and Funding), also known as the *Edding Kommission*. This panel identified clear qualitative differences between professions requiring apprenticeships and companies offering vocational education. The panel in turn saw this as a result of input factors such as (the lack of) well-planned training, training staff qualifications, etc. Their report makes clear that the system-level input quality (e.g. based on German Vocational Training Act regulations) can vary greatly from the input quality on the level of individual companies that offer vocational education.

So it makes sense to understand and analyze quality in education as existing on a number of different levels, differentiating between the macro level (educational system level), the meso level (the individual educational institutions), and the micro level (the teaching-learning processes level). The Edding Kommission introduced the differentiation between the input dimension of quality (the pre-existing company framework conditions for training that need to be assured)

and the output dimension (result quality: completed trainings, graduation statistics, competencies, and satisfaction of trainees and instructors). The Edding Kommission provided the first arguments that ensuring input quality on the macro level (e.g. via laws and regulations) does not guarantee quality on the micro level (when it comes to how well a company conducts its training). With this being the case, along with input variables, process and result variables are also important when it comes to quality.

This means that when analyzing and developing VET quality, the quality dimensions throughout the training process (input, process, output, and outcome quality) need to be kept in mind in combination with the levels of quality development (the micro, meso, and macro levels).

Quality dimensions throughout the training process

Training processes require certain inputs, e.g. technical and personnel-based infrastructure; training centers, material, and planning; etc. The quality of these requirements is labelled with the term *input quality*. In the teaching and learning process, these guidelines are combined using selected didactic elements, and then filled with life. Doing this (more or less) achieves the process quality of training in the hope of encouraging an output, i.e. a learning result. Output quality relates to this learning goal in terms of what training is meant to achieve, e.g. the acquisition of professional competencies by the trainees. "Outcome" means the application of the achieved competencies in the workplace and on the job market. This can also mean e.g. being offered a decent job by the company who provided your training once it has been successfully completed.

These quality dimensions can be ascribed to indicators that are all more narrowly defined by the respective input, process, output, and outcome quality:

Input quality (also known as structure and/or potential quality) deals with the quality of the training factors prior to its start. Indicators of this include material, organizational, and personal equipment; qualifications of the training personnel;

the quality of the teaching and training (framework) plans; tools; teaching and learning materials; trainee entry requirements; etc.

Process quality (also known as implementation and/or throughput quality) looks at the teaching-learning process and its didactic configuration. Indicators are e.g. the quality of the methods and media used; availability of training personnel and how often work processes are described; the degree of orientation to the training framework plan and/or whether training plans are adhered to; the quality of the relationship between the instructor and trainee; etc.

Output quality (also known as result quality) talks about what is achieved by the end of the training – e.g. passing the final exam and achieving the formal degree or certification and grades; obtaining professional employment ability; a qualitative improvement in the learning performance of trainees; trainee and instructor competencies and satisfaction; etc.

Outcome quality deals with the transfer of what has been learned into productive employment and its value on the job market. It tends to require a longer period of observation. Indicators here are e.g. trainees' development of learning competencies and independence; promotion of individual learning pathways; lowering dropout rates; mandatory hiring levels by the company offering the training; break-in times once the new hire has started work upon completion of training; youth unemployment rates; etc.

Quality development levels

Input quality can on the system level (for example based on the regulations set forth by the German Vocational Training Act) be clearly different from the input quality on the educational level found within a company providing training. Because of this, the quality dimensions described above are organized into the *micro level* (teaching-learning processes and/or training units), the *meso level* (individual VET institutions such as trade schools, companies offering training, chambers of commerce, inter-company educational institutions, etc.), and the

macro level (the VET system level with its legal regulations, guidelines, recommendations, etc.).

This can help in the assessment of (project, company, or system-related) training quality, and also allows for the determination of quality changes that might be needed. (see Figure 1)

Different education quality perspectives

All kinds of different reactions emerge in answer to the question of which quality aspects can fill the framework suggested here. As an example, for years the *qualifications of the training staff* were seen as critical for training quality. Along this line of thinking, the qualifications of adjunct instructors (skilled workers providing training) were considered as needing improvement. Later on however, a survey of companies performed by the German Federal Institute for Vocational Education and Training (Ebbinghaus 2005) identified the *qualifications of the trainees* as playing a key role in training quality. On the other hand, trainees saw things differently in an earlier survey (Feller 1995) that was also conducted by the German Federal Institute for Vocational Education and Training. In this instance, trainees were the happiest with adjunct instructors compared to their full-time counterparts.

So the term of quality itself doesn't really say anything about what quality actually is. Instead, it depends on how people conceive it. Empirical investigations show that the different societal groups who do trainings have different conceptions of quality; these correspond most greatly to their own interests. Instructor qualification regulations play the largest role for training administrators for whom training is about input variables that aim to ensure the qualification function of training. Companies offering training programs are more focused on output variables, i.e. finding the right kinds of qualified employees. They tend towards more of an allocation function of training; if input factors come into play from a company perspective, these are the requirements that trainees themselves bring to the table. Trainees appear to see relationship quality as important
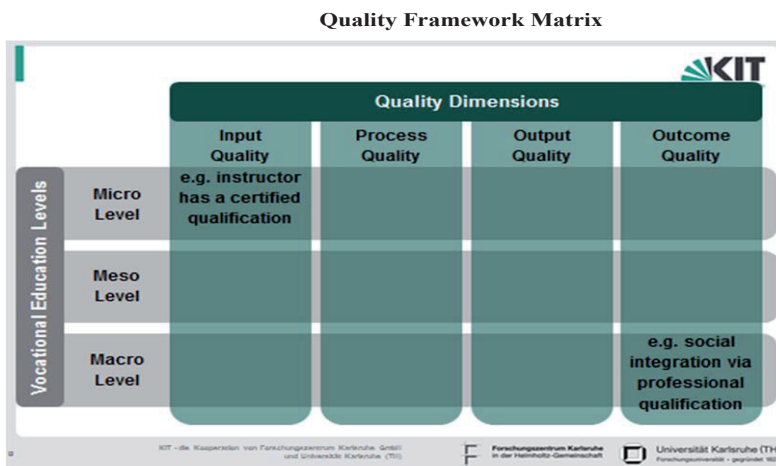

Quality Framework Matrix

Figure 1: Vocational education training quality framework matrix (Fischer et al. 2014, p. 148)

that is achieved within the process dimension of training – here, adjunct training staff apparently have the most to offer.

None of these perspectives are wrong. They simply show that education quality needs to be seen as a multi-perspective entity. Only when the different observation and action perspectives are actually set into motion can an idea ultimately result about what education quality can actually be!

The scientific findings on the topic of education quality offer an opportunity to see input, process, output, and outcome quality in relation to one another and/or create this kind of correlation. A system of quality indicators and/or factors for vocational company training needs to keep this in mind. The correlation between input, process, and result variables is probably of a non-deterministic nature: Despite the high level of input quality in the German VET system, quality problems may occur on the process level if e.g. a relationship quality between the instructor and trainee does not exist. In Switzerland, more at-risk learners than previously thought are able to successfully complete VET (Stalder 2011), meaning that out*come* quality is not the same thing as out*put* quality. This is why the "interfaces" between input, process, output, and outcome quality need to be examined closely when assessing the quality of a VET system. The input quality is no indication of the outcome quality of a VET

system, and vice versa. Often, as is the case in Spain and Italy, an oversimplified perspective concludes that youth unemployment levels, a possible indicator of VET system outcome quality, correlates to or is the result of lacking input quality. But the enormous fluctuation of youth unemployment rates in these countries in the past ten years (between 20 and 50 percent) shows that this kind of explanation is insufficient and needs to take additional factors into consideration. And the similar rates of youth unemployment found at times between Great Britain and Germany are hardly proof of both countries having an equal input quality in their respective VET systems. Great Britain after all has a system that basically lacks all of the fundamentals such as professional outlines, training framework plans, defined qualifications for instructors, etc.

Conclusion and outlook

An examination of vocational company education quality points out quality deficits in German VET. The perspective here is not one comparing the German system with those in other countries, but instead observes what functions VET is able/supposed to fulfill for a society in general:

Cost and benefit of VET (utilization function); meeting the demand for skilled labor (selection and allocation function); trainees obtaining competencies (qualifi-

cation function); and problems in making the transition from school to training, and training into the work force (retention and integration function) all indicate a need for change and/or action.

Depending on the perspective, various "culprits" have been (and continue to be) identified for these deficits:

- trainees who are not prepared or mature enough to do training;
- instructors, especially adjunct instructors, who are not qualified enough;
- vocational school training staff who don't do enough to help achieve an effective training-job market transfer for their trainees;
- companies who do not do enough in the area of training, and if they do, take improper advantage of their trainees;
- chambers of commerce that do not sufficiently monitor the quality of training;
- vocational schools who are notoriously behind the times in terms of professional and job market developments, and who are simply not effective administrators;
- universities who educate future vocational teachers in accordance with technical standards, but do nothing to prepare them for the requirements of working at a vocational institution;
- a government that allows each individual state exceptions to VET regulations, doesn't hold companies to their vocational obligations, and makes things too comfortable when it comes to inter-institutional cooperation.

Without going into specific detail on each one of these points, none of them can be fully denied. But none of these "culprits" is fully and completely responsible for its shortcomings. Deficits on the part of trainees are an indication of issues within the secondary school system and a lack of preparation for the working world. Qualification deficits on the part of instructors are a possible result of lacking incentives, support, and advanced training in the world of VET. If learning institutions are not engaging in cooperation with each other, this is a sign of how people-dependent cooperation activities are, and a sign of a possible lack of support from companies, schools, and government. Government

"restraint" in eliminating quality deficits indicates the basic internal state of the German VET system that builds upon private economic initiatives; is dependent upon temporary economic calculations as a result; and whose organization is split by both the state and federal governments. The latter of these factors has led to the "Quality" federal pilot project program (see above) not promoting vocational schools as state institutions, even though cooperation between companies and schools have (correctly) been defined as a key focus of the program.

These mutual dependencies that cause quality deficits and hinder continued quality (the list was deliberately kept short here) show that VET quality emerges in collaboration with system components. The "Quality" pilot project program acknowledges this in its finding of how VET quality needs to be seen from a multi-perspective, and that quality development needs to be conducted in a multi-perspective fashion as a result. A system of indicators of high-quality training has been developed based on (1) the theoretical analysis of the issue of quality, and (2) the results from the pilot project (Fischer et al. 2014).

The quality framework presented here aims to encourage quality development measures to be considered across different quality dimensions (input, process, output, and outcome quality) as well as regarding instructors and trainees (micro level); companies, schools, and chambers of commerce (meso level); and federal and state government, and society in general. Doing this alone would make clear the reciprocal correlation and relative value of each individual measure and indicator. VET quality, as the thinking goes, does not occur simply by fulfilling one or even several quality criteria, but instead via a balanced development where different perspectives at the very least have the chance to encounter one another.

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Knowledge Reporting: The Development of Professional Employment Competence

Abstract:

Competence and company competence development can be conceptualized and substantiated from both an economic and business education standpoint. The following will examine both of these perspectives, taking a particularly close look at the management and reporting of knowledge.

From: "Company Competence Development"
(berufsbildung, 2012, 138)

**Karin Rebmann and
Tobias Schlömer**

Both vocational and business education have seen the term *professional employment competence* establish itself as a central guiding idea in planning, forming, and evaluating teaching-learning processes. According to vocational education policy in Germany, an educational process is successful when it develops individual professional employment capabilities within the subsystems of VET structures. According to § 1(3) of the German Vocational Training Act, VET "is required to impart via training courses the necessary professional skills, knowledge, and abilities (professional employment abilities) needed for qualified professional activity in the changing world of employment. VET also must allow for the acquisition of required professional experience." In the same way, professional advanced training according to § 1(4) of the German Vocational Training Act should allow individuals to "acquire and adapt to professional employment abilities, or expand upon them as part of a professional advancement."

This regulatory goal formulation indicates a reciprocal relation of the individual to the employment system. The employment system presents opportunities in how it provides work and task profiles into which professionally qualified workers can actively contribute their competencies, forming and advancing their professional profiles in the process. Only when the opportunity arises *to be able* to act within the employment system does an achieved professional competence contain value for the individual. This value is shown on the one hand in individual personality fulfillment, and on the other hand in how obtained competencies pay out economically at work. At the same time, the individual value of competence has an increasingly shorter shelf life (Trost

& Weber 2012). *Megatrends* are seen within job markets that include service orientation, internationalization and globalization, along with the highly dynamic development of information and communication technologies. Those wanting to remain competitively employed are basically being forced to continually update their original competencies as part of a lifelong learning process.

From a job market and therefore an economic perspective, individual competencies need to be seen as immaterial company resources. Companies use the individual abilities and dispositions of their employees to exploit innovations in markets; serve customers with a product and service portfolio; carry out service creation processes as efficiently as possible; form a close-knit relationship to their social and ecological surroundings; etc. *Company competencies* involve making employees' individual competencies as useful as possible for company activity as they depict the spectrum of action opportunities a company as a whole has access to for creating economic value.

Competence evaluation from the organizational and individual standpoints

Both individual-centered pedagogy as well as organizational-centered management teaching describe and create company competence development. The theoretical foundations of both views could however not be more different from one another. The development of company competence is designed via assumptions regarding organizational learning (for more, see Schreyögg 2008). Here, the so-called *Veränderungslernen* (change learning) seeks out company

problems (e.g. too many customer complaints), and critically examines and reflects upon employment structures that may be outdated, worn out, or simply in need of change. In the best case scenario, these are then completely overhauled and properly readjusted. From a management theory perspective, an expansion of existing employment abilities within organizations can normally be managed in a closed-loop fashion, or at the very least by taking an instrumental approach. A pedagogically-based promotion of learning processes on the other hand bases itself on cognition theory assumptions: Learners here take their current perceptions and experiences, and attempt to incorporate them into already-existing experience and knowledge constructions. They then test their constructions about reality within professional forms, joining their ideas via the medium of language with the ideas of others.

The "products" of learning as a result vary greatly. Pedagogically desired learning aims at the acquisition of competence as "human abilities that have situation-appropriate employment as their *foundation* and which makes this possible in the first place. Professional employment competence describes the matured potential of professional abilities that allow a person to *act* in accordance with the performance requirements in *real professional situations*" (Reetz 2005, p. 1). While the pedagogical view has a potential being developed that individuals can apply as they wish in the contexts of profession and employment, organizational learning on the other hand limits this application context: "The learning process of individuals is without question supported and advanced. But the reference point here is always the organization. It provides the context and mode in which individuals process knowledge as members of an organization" (Schreyögg 2008, p. 442). Organizational learning as a result generates a spectrum of employment opportunities that allow the existing knowledge base in a company to be adapted to future requirements.

Company competence development regularly contrasts these two perspectives, resulting in intersections (see Figure 1) between the competencies of the individual and organization. Employees bring a part (!) of their profession-
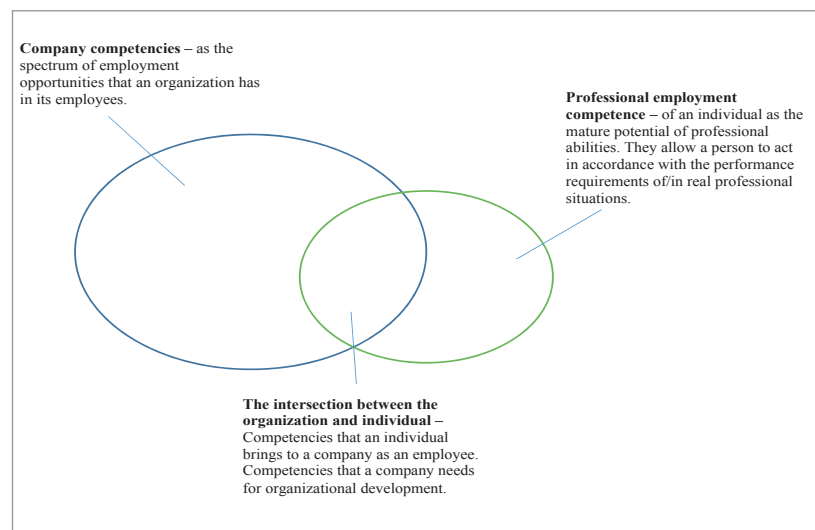
al employment potential to achieve the tasks they face at their job. These are employment potentials that have economic importance for the organization. At the same time, less important competencies (at least from the perspective of the organization) are generally not accessed which nevertheless can be significant for personality development.

Put another way, the original VET goals of developing the personal self-determination, maturity, and responsibility of individuals are subordinated to an exclusively *economic* personal development to ultimately serve the collective company interests, and are only applied when they can be of help to achieving economic goals (Becker 2005). On the one hand, this logic is basically inscribed in the concepts and models of company knowledge management. And, the last five years have seen it prominently placed into instrumental effect in both business research and practice with the method of *competence and knowledge reporting*. Along with their original business studies functions, knowledge management as well as knowledge reporting have a certain level of importance for the promotion of professional employment ability that is legitimized within vocational and business education.

Knowledge management in companies

Concepts of an economic knowledge management are based on the outlined assumptions about organizational learning. Here it's assumed that the development of knowledge in organizations is instrumentally manageable. A core task is making individual knowledge accessible for the organization. Von Glahn (2009, p. 23) defines the necessity for this very succinctly: "While the individual impacts the organization-wide level of knowledge in terms of his or her competencies, training, and learning ability, an organization from a system-oriented view develops and uses its common intelligence and collective mind. The existence of individual experts within an organization is therefore not fully sufficient. Only when among other things technically-specific knowledge is shared within the organizational system and, in doing this, collective knowledge is activated, can 'organizations learn' and achieve competitive advantages in the process."

These formative goals are pursued in knowledge management via a holistic management cycle. Here, the subject-specific knowledge of employees is objectified according to the following steps and/or central questions regarding an economic factor of organizational per-

Company competencies – as the spectrum of employment opportunities that an organization has in its employees.

Professional employment competence – of an individual as the mature potential of professional abilities. They allow a person to act in accordance with the performance requirements of/in real professional situations.

The intersection between the organization and individual – Competencies that an individual brings to a company as an employee. Competencies that a company needs for organizational development.

Figure 1: Company competence development between the organization and individual

formance creation (von Glahn 2009): First, learning processes in companies should be provided with a direction by defining knowledge goals. This step should establish exactly what the existing knowledge is, while at the same time determining the necessity for the "purchase" of external knowledge (i.e. from outside of the company's own four walls). This is followed by the creation of structures that promote learning as a means to "produce" internal knowledge. The knowledge developed here should then be distributed within the organization; used effectively and efficiently; and finally secured. Different instruments and methods have been developed in organizational theory for the implementation of these management building blocks, most notably knowledge reporting.

Competence and knowledge reporting in companies

Knowledge reporting is performed in the interests of company development. It was widely developed and practically tested as part of the "Fit for Competitive Knowledge" initiative sponsored by the German Federal Ministry for Economic Affairs and Energy *(Bundesministerium für Wirtschaft und Technologie)* with the goal of developing and securing immaterial resources in Germany, a country with low amounts of natural resources (Lange & Kraemer 2009). What emerged was a procedural model to record and present the immaterial resources present in a company. What's meant here is much more than just what people know, and this is where the terms of *competence and knowledge recording* particularly come into play, as the following company attributes are investigated: human capital (e.g. technical knowledge; knowhow and the professional attitudes of the employees; and innovation ability of teams), structural capital (e.g. the company culture; production and methods of operation; potential of the company's different locations; patents and copyrights), as well as relationship capital (e.g. relationships to customers, partners, and investors).

Along with the plain representation of competence and knowledge resources, what also needs to be depicted here

in the form of cause-effect relationships is their importance for value-adding business processes and/or the success of the entire business (BMWi 2008). The following multiple-step procedure and its corresponding work steps are recommended for the creation of a knowledge reporting:

(1) business model description, (2) definition, evaluation, and measurement of intellectual capital, (3) ascertaining of effect relationships between knowledge, competence, and a company's creation of value, and (4) deriving the right kinds of knowledge development measures.

So in terms of human capital, the practical examples documented by the knowledge reporting allow these kinds of personnel development indicators to be found just about every single time, which show how significantly vocational education spurs a company's success. On the one hand, figures are cited such as training statistics; how often a company hires its own trainees; investment amounts in vocational and advanced training in relation to total personnel costs; and how often employees take advantage of training that is offered. There are also performance indicators such as what a job description calls for and the actual estimated employee competencies, or the service orientation levels found with customer service representatives.

The amount of knowledge is ultimately a numerically supported documenta-

tion of human resources. Nevertheless, it still manages to deliver indications of which measures can be applied to (1) develop knowledge- and competence-based resources in a company, and (2) determine how much time is needed to achieve this.

Business education evaluation

From a business education perspective, the knowledge reporting method and the knowledge management approach offer important professional competence development reference points. Professional competence development allows the value of employees' professional employment abilities to be depicted in an economic "language." The importance of knowledge reporting as a communication medium could be of particular value when the costs and use of vocational and advanced training need to be made as transparent as possible, as well as when the quality of a company's training needs to be developed and secured in a high-quality, goal-oriented fashion. These methods without question offer a procedural approach and semantic that can successfully join vocational and advanced training more strongly to a company's economic core processes. And there are only a few individual management concepts in place (including the balanced scorecard) that can causally connect the

Human capital resources	Figures	2010 (Plan)	2011 (Actual)	Goal
Employee potentials	Traning in %	8%	6.5%	↑
	How many of its own trainees a company hires in %	100%	75%	↑
	Investments in vocational and advanced training in relation to personnel costs in %	2.5%	2.5%	→
Technical knowhow	Amount of training days taken by employees	3.9%	3.5%	↑
	Advanced training final exams passed (in %)	95%	95%	→
Sufficient competence to perform job	Consistency between what a job description calls for and the estimated employee competencies in %	80%	75%	↑
	Customer satisfaction with the service provided by the employees (service level value from customer surveys, in %)	90%	70%	↑

Figure 2: An excerpt from a knowledge report

realms of individual competence development to companies' success goals in a comparable fashion.

In addition, the establishment of knowledge reporting and management in companies can in some ways strengthen the role of vocational and advanced training personnel. To be sure, the recent establishment in Germany of nationally recognized advanced training regulations for certified vocational and advanced training instructors as well as for certified vocational trainers have been important policy steps towards a formal professionalization of vocational learning. But these will hardly suffice by themselves. Company educational structures will also have to be professionalized so that teachers, coaches, and the personnel responsible for training can perform their two-pronged role in companies as competently as possible. As those tasked with accompanying learning, they on the one hand need to generate effective opportunities for self-organized learning along a range of both systematically- and situational-based concepts. As managers of training, they will on the other hand be required to make the fruits of individual competence development usable for the organization.

The latter in particular can offer usable approaches to knowledge man-agement. At the same time however, it needs to be kept in mind that the economic logic of optimizing business processes in accordance with efficiency and effectiveness criteria can only be at best partially transferred to vocational education. Although there's no doubt that the gains from vocational education can be displayed in the form of knowledge reports, the individual learning processes behind the actual competence outcome(s) can in no way be unified or instrumentally standardized. So instead of a management-oriented external control (which appears possible with business processes), the management of individual learning will be the sole realm of the learners themselves.

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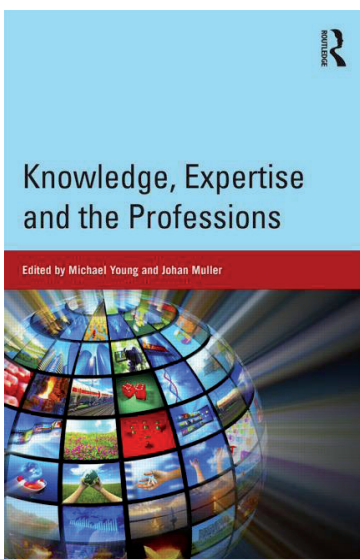
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Didactic-Curricular VET Developments in Germany

Abstract:

The development of curricular foundations for VET follows specific didactic principles and regulatory requirements. These change over time. Learning outcomes and demand orientation are currently increasing in importance. In this report, these developments are classified and linked to the basic characteristics and functions of curricular VET foundations.

Dietmar Frommberger

Didactic-curricular developments in VET focus primarily on the concepts, experiences, and results of research on issues of curriculum design and curriculum analysis in VET. Here, the training regulations and framework curricula are particularly affected. The didactic-methodological aspects with which primarily the immediate skill-teaching processes (i.e. teaching and learning) are brought into view, as well as the aspects of evaluation and diagnosis in VET and research on VET, are only indirectly touched upon. This topic can be divided into the following issues:

- the state of and developments regarding the thematic and intentional alignment of VET (determination of content and objective, i.e. the determination of the desired individual scope of disposition);
- the state of and developments of curricular structuring and sequencing of vocational curricula and courses of development (e.g. the apprenticeship principle (*Ausbildungsberufsprinzip*), occupational groups, modularization);
- the state of and developments of the paradigmatic orientation – i.e. design principles of curricular foundations (e.g. input versus outcome orientation and competence orientation, scientific versus situation orientation, subject versus learning field orientation).

This thematic definition clearly does not exclude the relationships between the various issues. To cite an example: questions of modularization for the purpose of structuring curricular foundations are often negotiated in direct relation with outcome orientation.

At first glance, the topic often appears relatively abstract to the reader, and perhaps only slightly relevant to the development of VET practice. Upon closer examination, it however becomes clear that it addresses central questions of VET key decisions. After all, the relationship between the life worlds (and here, regarding work and occupation in particular) to individually overcome the related preparatory and organized learning, training, and evaluation processes in school and at work is provided by the curriculum, manifested in a curriculum that the learner should know (or at least be able to) especially when it comes to having the ability to behave appropriately in typical, specific situations.

The curriculum is therefore of the highest relevance for the planning of training and qualification processes. At the same time, the curriculum serves in achieving transparency and comparison, normalization, legitimization, and standardization as well as for a review of teaching and learning processes. It also represents an education policy management tool in this respect. The curriculum therefore performs central didactic and regulatory functions. The curricular foundations are highly different in the historical development of education and VET systems as well as in international comparisons. The curriculum is not to be understood as a kind of deduction of recorded requirements of the life world (which are very divergent when considered in historical and international comparative terms), but rather as a result of decisions of social actors and institutions in response to ever-changing realities and demands in business and society (Deißinger 2009). To this extent, the issues mentioned above have to be negotiated permanently and answered anew.

The curriculum, conceptually linked in a long discussion in educational science with very different meanings is here primarily understood as a form of documentation of desired training and further education processes ("intended curriculum") and only marginally as the content actually offered in teaching and training

("implemented curriculum"; the descriptive research on teaching provides useful results on this), or as the actual achieved results of these intentions ("attained curriculum"; large scale assessments for example could present interesting findings on this) (IEA 2010).

Two directions of awareness are focused on in curriculum research. On the one hand, the production, analysis, and interpretation of ascertainable information are pursued for the purposes of description, differentiation, and explanation of existing curricula in VET (curriculum analysis). On the other hand, they are pursued for the purposes of development and implementation of curricular elements in VET (curriculum design). Because of VET policy, the work on issues of curriculum design clearly dominates quantitatively in VET research. The science-based development of curricular foundations is of major importance for the regulatory performance of tasks and design. An increased focus on curriculum analysis would be desirable for the further development of vocational and industrial education.

The current didactic-curricular developments in VET

Curricular foundations for VET are subject to continuous development and improvement. In the field of initial vocational training according to the German Vocational Training Act (*Berufsbildungsgesetz*), a permanent development of new, or a modernization of existing, training regulations and their coordination with the vocational school curriculum frameworks of the federal states take place. In addition, curriculum development in VET is done for many different full-time vocational education programs as well as for further training.

In Germany, curriculum development and reorganization have been characterized in recent decades by very different concepts and considerations that include a wide range of elements such as the proposals for basic vocational training or basic and specialist vocational training concepts, the approaches of key skills (*Schlüsselkompetenzen*), shared core skills, elective skills, the key objective of occupational competence or proficiency,

the concept of training occupations that are receptive to design, the structure of application areas, graduated training, modularity (*Bausteinkonzept*) and the approach of modularization, the learning field orientation, and the highly relevant outcome or learning outcomes orientations. The latter often operates under the name of *competence orientation* as well. In addition, the traditional structural models are altered by differences in the input and output range of initial VET in the form of various offers of pre-vocational training, especially the qualification modules (*Qualifikationsbausteine*), as well as additional qualifications (*Zusatzqualifikationen*).

Changed and updated thematic priorities are set by establishing new key figures for a training occupation. Operational specializations are rooted here, along with general economic, technically and socially determined demands (sustainability, international competence development, etc.). As a result, and according to the Vocational Training Act, very different concepts for training regulation and further training regulation exist for VET. Overarching and consistent approaches are often sought and developed within certain occupational fields or branches.

Competence orientation is currently growing in importance in Germany when it comes to the reorganization of training regulations and in accordance with the Vocational Training Act (in higher education as well). Indeed, the key objective of occupational competence or proficiency and its various dimensions of competence are very firmly anchored in training regulation practice. This general competence orientation is however becoming increasingly operationalized, i.e. it is taken as a formulation principle in the various elements of the curriculum. The descriptions of the individual scope of disposition ("the trainee is able to ..." etc.) are increasingly coming to the forefront, with an even stronger relation to various scopes of activity and professional challenges in occupational and professional environments. Although these orientations have clearly existed for some time, the trend has clearly strengthened in the following two directions:

1. Learners, their development, and the desired skills of these learners are the

center of attention as opposed to abstract content catalogues. Thus, the learning process and the learning outcomes gain the upper hand when it comes to the description of curricular principles. Linked with the desired task of increasingly diagnosing the state of individual developments in learning concomitance (*lernbegleitend*), i.e. assessing and regularly recording the competencies actually achieved, learners (and especially teachers) are more obligated and responsible for the success and the result of learning processes. According to the model of output control in educational work "the learning performance itself [is] an element of planning. Something, which is treated as not further attributable, external assessed output at input control, is systematically included in output control in a feedback loop" (Künzli 1999, p. 24; Trans. Frommberger). Learning success is however not responsibly assigned in traditional curriculum work and, in principle, is left to the responsibility of trainees: "Conformance of plan is controlled and answered for, but not fulfilling the plan" (Künzli 1999, p. 24; Trans. Frommberger). In this respect, the control of learning and teaching success is currently in the public eye, and the control of school work and education and training work is done in an increasingly product-oriented fashion.

2. The selection of learning subjects always takes place in terms of the question of what meaning the respective subjects could have in the lifeworld context. Nevertheless, different selection criteria are possible. Traditional subjects make a strong reference to the so-called related sciences (*Bezugswissenschaften*) and subjects whose relation to reality is made through a form of problem-oriented and abstracted (theory-building) world exploration. Thus, the lifeworld reference is ensured because every science is linked to practical problems. However, this reference is partially or only indirectly visible. An alternative selection criterion is the immediate "practical" action situation in which the acquired knowledge and skills could be used and applied where a reference is made to the field

of application and action. This second selection criterion, also referred to as the "pragmatic principle" (*pragmatisches Prinzip*) (**Künzli 1978**) is principally more important for curriculum development in VET than in general education, and is currently becoming even more prevalent. When looking at the differences between "didactic cultures," the pragmatic principle is basically attributed to curriculum theory and practice found in the English speaking world (**Hopmann & Riquarts 1995**). Terms such as "needs based approach" and "curriculum as a cultural map" are used. Learning experiences are central to curriculum decisions.

With this form of outcome and learning outcome orientation currently and significantly shaping the curriculum development for VET in Germany, the assumption (and expectation) which is particularly characterized by education policy is that the primary formulation of results of training processes facilitates the recognition and credit of learning performances which take place outside of standardized curricular training courses, e.g. informal learning environments or even those in completely different learning contexts such as those found in foreign countries. The detachment from strict educational canonization – so the reasoning goes – could for the purpose of permeability between different education and training subareas ultimately facilitate the process of recognition and credit.

In addition to this form of competence orientation which is becoming increasingly important in the development of training regulations, it can be observed for the design of curricular foundations in Germany that for the question of curricular structuring and sequencing, this mode gains acceptance when it comes to increasing individual choice in accordance with the mandatory basics. Structural differentiation in school systems has traditionally been affected by things such as school levels, types of school, class organizations, and subjects, all of which are to be understood in their historical development as standards of organization of secondary (i.e. socially or state-influenced) education (**Oelkers 2004**). Thus, the increased optional offers which are often organized in a modular manner are

to be understood as a (now alternative) form of standardization and differentiation which will most likely supersede and complement old solution patterns. Modularized curricula (or initial and further training regulations, study regulations, etc.) represent these kinds of curricular standardization and differentiation which may not necessarily link the organizational, temporal, and substantial structure and sequence of educational programs, training courses, and certification processes to a united and administratively desired collection of curricular elements. Instead, they will tend to open and increasingly hand the decision making and design options over to learners.

The characteristics of modularized curricular standardization and differentiation forms vary in principle between a relatively strict state-desired prescriptive shaping of processes of educational and vocational training courses on the one hand (supply orientation) and the strong freedom of choice (demand orientation) on the other. The modules may be part of an overall collection (e.g. of a training occupation) and/or are available as a separate curricular element (**Howieson 1994**). It is possible in its extreme form of modularization (for example, in the system of national vocational qualification in England) that demanders assemble their "portfolio of qualifications" individually. Here it's an individual portfolio with a variety of possible combinations of partial degrees – including the possibility to change employment with only a partial degree (e.g. marketing or human resources) without further certificates – depending on the labor market's supply and demand situation. The moderate option (for example, in the Netherlands or Denmark) is characterized by an overall graduation, which is the sum of all acquired partial certificates. These partial degrees are however systematically assigned to a training or continuing education as compulsory components and have to be completed to attain this graduation. In reference to various structuring concepts for VET in Europe, the observed overall trend is that where a high level of fragmentation of different partial degrees prevails, greater systematization is to be brought about, and where VET courses and degrees traditionally have a minor individual scope

of action, options are to be increased (**Frommberger & Krichewsky 2013**).

Conclusions

The current trend in the context of curriculum design in VET in Germany changes the existing balance. Here, the principle of outcome orientation as well as the curricular demand orientation is becoming increasingly important. The associated didactic and regulatory determinations of aims have been taken into account. It should however be stated at this point that (keeping with the metaphor) it is essential to carefully preserve the balance. In other words, the essential elements of curricula should be maintained. Curricular standards in which the desired learning outcomes are not associated with a clearly elevated content profile lead to arbitrariness. Especially in VET, skills development and professional decision making abilities in particular are directly related to professionalism, which in turn is to be defined in its content. The potential of learning, development, and training processes has a close relationship to the objects of learning, i.e. to the content. Only specific and carefully selected subject content leads to necessary expertise, and on this basis to the development of competencies and required further competence. The purpose of institutionalized processes in vocational and further training in particular is to facilitate these professional learning processes. And this is not only the case practically, but in relation to theory as well, since a regulation for a training occupation doesn't simply provide a mirror image copy of the existing professional reality. Rather, the vocational pedagogical imperatives are to legitimize this construct. Occasionally, however, a tendency of development in VET policy is to perceive which vocational and further training profiles are understood as pure copies of professional practice. In this case, explicit vocational and further training would be obsolete in the long term and the quality of skilled labor training would be lost.

In addition, vocational and further training schemes are not to be understood as mere blueprints for the performance of examination and certification processes. On the contrary, the opinion

still dominates that competencies are to be explicitly and systematically developed in vocational and further training, especially those competencies which cannot simply be acquired in the immediate context of externally controlled (commissioned) work, employment, and occupation. This claim presupposes the crucial decision-need to complete a minimum training core and a minimum of mandatory vocational and further training components.

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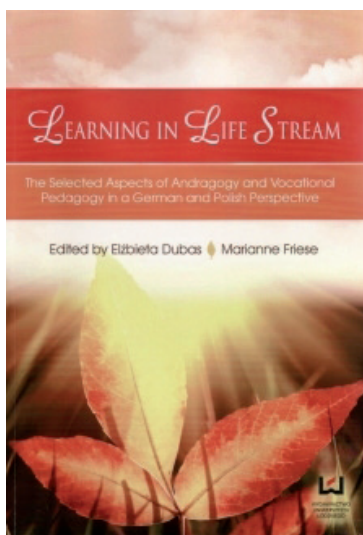
Learning in Life Stream

The Selected Aspects of Andragogy and Vocational Pedagogy in a German and Polish Perspective

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The project of the book was developed during seminars for members of both cooperating teams (Department of Andragogy and Social Gerontology at the Faculty of Educational Sciences of the University of Lodz and the Vocational Pedagogy Institute at the Department of Educational Sciences of the Justus Liebig University of Giessen) held in Lodz in 2008 and in Giessen in 2010. The key idea of the book is lifelong learning in various areas where new social roles appear, creating new educational needs. Thus, the publication's title has been chosen rightly as its range covers diverse pedagogical issues. The choice of the content serves three functions: to present scientific achievements of both teams, to prepare foundations for further exploration, to fulfil the requirement of establishing the basics of the theory of lifelong learning going beyond adult education. The book's structure developed by the Editors does not divide but. in line with the idea of the whole work, unites different areas and scientific research methodologies.

Inclusion – A Contribution to Address the Challenges of Demographic Change

Importance and potential of inclusive education for vocational education

Abstract:

Social inclusion has become one of the key aspects of the educational debate. Socially inclusive education requires a specific understanding of just what social inclusion specifically is, particularly in light of the fact that this concept contains a multitude of ambitious goals. Using an approach for implementing socially inclusive strategies to show potentials of how socially inclusive education can be understood as an opportunity for the future, the following will analyze the challenges from and necessity for social inclusion in educational processes.

From: "Social inclusion in vocational education" (berufsbildung, 2012, 137)

Peter Sicking

The concept of "inclusion" or more precisely "inclusive education" has now been at the center of the national and international education policy debate for some years. In Germany, the concept of inclusive education is largely equated with the inclusion of children and young men and women with disabilities into the general mainstream school system. This perspective received an additional impetus through the ratification of the UN Convention on the Rights of Persons with Disabilities (Article 24, "Education") by the government of the Federal Republic of Germany in 2009. However, this is a highly simplified perspective that disregards the actual importance and range of inclusive education. To be sure, the implementation of the UN Convention on the Rights of Persons with Disabilities is (surely) an important sub-goal of inclusive education. But inclusion must more importantly be understood as a fundamental paradigm shift in pedagogy, basically covering all marginalized groups in the education system. This comprehensive meaning clearly emerges from the UNESCO definition of inclusive education:

"Inclusive education means that all persons despite of their gender, religion, ethnic group, special educational needs or social or economic background are granted the same opportunities to take part in quality education and to develop their full potential. It is not the learner who has to integrate himself into an established system but the education system which needs to consider and adapt to the requirements of all learners. There-fore, the definition of inclusion goes beyond the term of integration. The concept of inclusion contains the right to attend regular schools for everyone. Inclusion puts the diverse needs of all learners into focus and understands this diversity as an opportunity for educational processes."

The following quotation from the international reference document of the 48th UNESCO World Conference of Education Ministers in Geneva in 2008 once again strongly emphasizes that inclusive education must go beyond the inclusion of people with disabilities into the regular school system:

"In several countries, inclusion is still thought of simply as an approach to serving children with disabilities within general education settings. Internationally, however, it is increasingly seen more broadly as a reform that supports and welcomes diversity amongst all learners. It presumes that the aim of inclusive education is to eliminate social exclusion resulting from attitudes and responses to diversity in race, social class, ethnicity, religion, gender and ability. As such, it starts from the belief that education is a basic human right and the foundation for a more just society. In this sense, it is the means of ensuring that Education for All really does mean all." (UNESCO 2008, p. 5).

The original objective of inclusive education is however not limited to the possible consideration of all potentially marginalized groups during the development of the education system in the sense of a genuine "Education for All." Rather, it is about completely and finally

saying goodbye to the various classifications and segmentations of children and young people with different living and learning conditions: Inclusive education wants to provide optimal education to *each child*, unconditionally, and on the basis of his or her individual skills, potentials, and needs!

This widened perception of inclusive education simultaneously leads to a considerable increase of its potential impact and range. From this perspective, inclusive education can also be regarded as an important contribution to addressing the challenges of demographic change. Pedagogical considerations and ethical and moral obligations for equal opportunities in terms of basic human rights are without question still the core arguments behind the commitment towards inclusive education. At the same time however, it seems necessary to reflect upon inclusive education from a social and economic perspective and to examine its potential relevance regarding complex current and future challenges such as globalization or demographic change.

The challenges of demographic change

According to the recent population projection by the German Federal Statistical Office, the population in Germany will change dramatically in the coming years and decades (Statistisches Bundesamt 2009a, 2009b, 2011). By the middle of this century, Germany's population will decline by 20% from currently 80 million to 65 million. Every seventh German citizen will then be over 80 years old (around 9 million people). The biggest economic challenge, however, lies in the projected decline in the working age population from currently 50 million to 33 million (a 34% decline). Then, 67 pensioners will be counted for every 100 persons of working age. These kinds of (similar) worrying developments can also be expected in the education realm: The number of pupils in general education schools in Germany will decline by 1.8 million or 20% during the next ten years alone. The student decline in secondary schools will even be higher at approximately 30% during the same period.

In this situation, and with a clear shortage of junior employees to fill positions in the coming decades, Germany still clings to an educational system that permits many children and young people neither an optimal individual support nor adequate participation in the labor market when it comes to equal occupational opportunities.

General schools in Germany are attended by around 9 million pupils (school year 2009-10) (Autorengruppe Bildungsberichterstattung 2010). The proportion of children with a migration background in the secondary *Hauptschul-System* averages 43%, while in the *Gymnasium* school track that qualifies graduates for university study, it is only 23%. And while the proportion of children without German nationality at the *Gymnasium* is merely 4%, in the schools for children with special education needs, foreign children are clearly over-represented.

Although specific conditions must certainly be taken into account in these schools, the total of about 400,000 pupils at the 3,500 German schools for children with special education needs have only limited career perspectives: more than 75% of these children finish their school career without CSE. For them, future prospects are particularly bleak. Increasingly, children from German families with low educational backgrounds who have resigned because of unemployment, poverty, and declining participation opportunities and who can't see the sense in a good school education are being affected by the sorting-out mechanisms of our traditional education system. Also, when it comes to particularly strong skills and talents (keyword: giftedness), the present education system in Germany doesn't sufficiently respond to the needs involved in optimally supporting and qualifying children in accordance with their individual potential.

An enormous and urgently needed knowledge and skill potential remains unexploited. This is because Germany still gives preference to a traditional concept of a multi-unit, hierarchically graded school system that typically doesn't build on skills and capacities, but rather on the deficits of children and young people while neglecting their individual potential.

Inclusive education as a solution

However, inclusive education structures that are based on the individual skills and needs of each child and that strive for a high-quality education for all children and young people, regardless of gender, origin, social or economic living conditions, disabilities, or special education needs, are effectively able to address the negative side effects of demographic change. Only under these conditions is the development of all existing potential possible. At the same time, inclusive education schools are an inevitable prerequisite for equality, social participation, and occupational self-realization.

The concept of inclusive education would, however, only be minimally effective and sustainable if it were terminated suddenly after general school education. And in fact, it is of great relevance for vocational education in Germany, most notably in how it stands (1) at the transition from school to apprenticeship or work and (2) in the field of vocational education, where the appropriate consideration of individual needs, potentials, and skills of young people as well as the optimization of (infra)structures and the training of teachers and instructors are needed in a comparable manner such as that found in the general school system. And against the background of growing cultural diversity within our society, the promotion of intercultural competence will increasingly gain importance in the field of vocational education.

Inclusive education concepts for the school-to-work transition and for vocational education are increasingly being discussed, as the "inclusion issue" continues to move more and more to the center of the debate – for example in regard to lifelong learning as an important approach in the sector of occupational development. Here, the focus remains on the integration of people with disabilities; this simplistic vision of inclusion must also be overcome in the field of vocational education.

A promising approach for implementing inclusive strategies on the basis of a widened understanding of inclusion is currently under development at the District Crafts Association Hellweg-Lippe *(Kreishandwerkerschaft Hellweg-Lippe)*, the professional representation agency

of craft enterprises in the German city of Hamm and districts of Soest and Unna. The idea behind this initiative is the medium-term establishment of a "Center of the German Crafts for Inclusion and Diversity." The goals of this initiative can be summarized as follows:

- raise awareness about the challenges of demographic change and the related social and economic challenges (e.g. lack of skilled workers) with a particular focus on the developments in the field of crafts
- raise awareness for "inclusion" and "diversity" as key concepts to address these challenges
- raise awareness for the potential benefits of inclusive education in school, vocational school, and apprenticeships
- staff training for instructors and crafts masters in the fields of "inclusion" and "diversity"
- training for apprentices and company employees in the areas of "diversity" and "intercultural competence"
- networking and joining forces of all relevant actors and organizations in this area

- generating a "think tank" to develop new models, projects, and programs in the areas of "inclusion" and "diversity"
- planning, implementation and evaluation of appropriate projects with a particular focus on apprentices and trainees

The District Crafts Association Hellweg-Lippe with approximately 3,200 member companies having over 45,000 employees and 4,500 supervised apprentices per year is one of the largest providers of commercial and technical vocational education and training in the German state of North Rhine-Westphalia. With the planned establishment of the "Center of the German Crafts for Inclusion and Diversity," the District Crafts Association Hellweg-Lippe is one of the pioneers and trailblazers for inclusive education in the field of vocational training.

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Transitions in Vocational Education

Abstract:

Using different theoretical approaches, the following will take a closer look at the transitions in vocational education, relating them to the current situation in Germany. It will be seen that these transitions need continued attention. The future will require a change in terms of educational concepts as well as what is being offered when it comes to training. This will be a key element in continuing to improve transition processes.

Manfred Eckert

The challenge of successful transitions is as old as vocational education itself. After all, how could Kerschensteiner or Spranger have developed their vocational education theories without the promise (or at least the hope) of vocational education ultimately leading to a successful career choice? And this means not only "a" career, but *the* career where a young man or woman can find the right profession, seizing its opportunities and rising to fulfill its challenges. Even Spranger's adolescent psychology and its different "life forms" clearly include a theory of occupational selection. This issue was missing in authoritative societies such as the Third Reich and East Germany. Here, individual selection of a profession was of less importance, with the greater issue being that every person knew their place in society and contributed towards its advancement. Individual desires didn't matter.

They do however increasingly move to the forefront when naïve, oversimplified concepts of "progress" start to deteriorate, and when the outlooks for technical and economic development, job markets, qualification requirements, and forms of employment become increasingly uncertain. Then individuals have to take charge of their own professional pathway. Here, the career path has to be intensively managed, and continually reoriented; this is where individualization really starts to matter. This phenomenon has been noticeable now for a few decades, even as it continues to change. In the 1960s the discussion started about whether we will continue to have "jobs for life" or whether changing professions will become the norm. And this has been reflected in the concepts for business and employment studies in German secondary schools; vocational preparatory and basic education years; later on in lifelong learning programs; in key qualification concepts and competencies; as well as in the transitional system in Germany between secondary school and the working world that has developed greatly over nearly 30 years.

All of these issues have been roundly addressed. They don't require another VET journal for their discussion, although it should be noted that their situation has in fact notably changed in recent years. Lack of apprenticeship opportunities is no longer a key issue. A greater focus is now on demographic shift and a shortage of skilled labor. This causes companies to offer training positions to those academically weaker young men and women who previously might not have been taken into consideration, which in turn is reflected in the supply-demand relation in the German government's report on VET. Chances here become much better for young applicants who are entering the training/employment world for the first time, or are shifting into it from other backgrounds. This overall situation is leading to upheavals that, because they improve the opportunities for young men and women, are being warmly welcomed by the VET world. For instance, the criticism of "lack of trainability" is no longer the argument against offering training or jobs to young men and women that a company wasn't going to hire in the first place. "Lack of trainability" now casts light on a real problem: How can weaker young men and women be brought up to speed in a manner allowing them to successfully take on the challenges of vocational education, instead of being overwhelmed by it and winding up as a waste of a company's time and money? This is where the new challenges lie – as well as the concepts to address them. They aim at the improvement in transitions, making the most of existing resources, optimizing the vocational education performance of companies, and strengthening those currently making the transition between school and the working world. This will be the focus of the following.

Transition models

A closer look shows that two different views of transitions developed in the past: (1) a psychotechnic model, and (2) a biographically accentuated model. The psychotechnic model assumes that transitions have to be achieved via the "right connections"; a key idea here is "passability." This is a socio-technologically oriented model: systems that take in trainees set requirements, and systems that put them into the working world need to make sure their graduates meet them. This thinking is found in a number of points such as the debate on an applicant's suitability to enter into training, in determining an applicant's skills and abilities, and entrance exams. Here it's certain that a good idea is checking in advance whether an applicant is the right choice or not. This thinking follows the psychotechnic tradition, a concept developed nearly a century ago by Münsterberg: In industrial or military contexts, people were sought who could fulfill important tasks as quickly as possible and with a minimum of training. When performing in risky situations, "successful failure" simply cannot be something new, or even an option.

This is different in vocational education. Training generally lasts three years, and involves a long-term learning and training program that gradually builds competencies and experiences as career development processes reach fruition. The entire period of training is a socialization process and a biographic transitional phase between school and company employment. This phase contains a handful of developmental tasks for young men and women. The job of instructors and teaching staff at vocational schools involves didactically constructing a step-by-step complex of challenges that are custom-fit to the trainees. Encouraging trainees to "seek and find" is an essential part of the program, which should also include a determination of competencies via dialogue and evaluation. "Passability" also comes into play here, albeit from another, more dynamic perspective. Requirements need to be done in accordance with the current developmental state of the young men and women; they need to challenge but not overwhelm. To put it another way, adaptivity, a term from the field of diversity management, is essential. Here, work requirements and forms are adapted to employees coming from different cultures. Adaptivity requires an employer to provide identifiable room for creative action. This is a re-update of an idea that Rauner introduced into the VET discussion years ago. Its basic thinking also applies to the processes in VET; they need to be formed. Its requirements and organizational forms are in no way shaped by inherent necessities resulting from organizational structures or technological developments. Work and learning forms need to be harmonized with the needs and requirements of learners and employees. This requirement without question is also guided by human resource factors.

Providing effective transitions

Kell and Kutscha started including the transitional model from ecological socialization research (Bronfenbrenner 1981) into the discussion on transitions in the 1980s.

According to this model, quality career transitions open people up to the world around them and promote personal developmental processes. Here, it's assumed that young people benefit from being introduced to and supported (microsystem) by as many appropriate action contexts as possible via stable social relationships. They also partially encounter the social world though the experiences of the people around them – the working world through the parents, the school world through their siblings, the stories their grandparents tell them, etc. The right kinds of insights have to be opened to them (exosystem). If young people are simultaneously active in several social systems – e.g. at different learning locations – they improve their chance to learn and develop provided that these systems contain caring, supportive people that cooperate with one another (mesosystem). This is also true for transitions that occur over time. These promote development in particular when they are networked with one another, and when participation in the social system temporally overlaps. Important here are pre-existing information and experiences, as well as people that provide a "bridge" function between the releasing and receiving systems. Transition compatibilities are also important for the own career and the professional development. Put another way: "Jumping right into the deep end" – as the saying goes – is completely outdated according to this model. On the other hand, transitions, even those that are well prepared, always represent new requirements that need to be successfully overcome and that comprise an important part of personal development. These need to be individually well prepared and customized towards the young person's respective abilities.

This is where the new problem and task challenges begin for trainers. At the start of training, the individual trainee shows up to the company as a "clean slate," while at the same time bringing his/her own individual career and social background. There's no test that can properly identify these individual preconditions. So this is where a solid, unbiased observational ability and a dialogue-based training can be very helpful in allowing both trainer and trainee to equally and constructively contribute to the overall experience. Although these are not new concepts, they can in fact be expanded upon. They supersede the old form of confrontative education where young trainees were thrown into company interaction forms and started out in the boring role of "helpers." Things are different now. But with that being said, the trainer continues to be the pedagogical actor who has to "teach" young men and women the reality of new and specific interaction forms within a company. How to work together with colleagues, and corresponding rules and expectations need to be learned. This is the tension found in the school-company transition which will never fully go away.

Transition time frames

A technical transitional action model assumes that action situations line up one behind the other like a string of pearls. Like two pearls in this chain, these situations are separate and have little to do with one another. Phenomenological observations (Merleau-Ponty 1966; Schutz 1974) however see this differently. Situations

exist within time-based contexts. They have a biographical story and thrive on how they always include a future orientation. And in no way are they completely rational and goal oriented. Instead, they have wide horizons and are relatively open towards their outcomes. This can be seen with the career choice, which involves all kinds of information gathering, experiences, learning about yourself, and trying new things. All of these are interwoven with one another to create a complex individual biographical process whose end (hopefully) results in a good career choice and entry into the working world. Only in retrospect does the individual "logic" of this process become visible. This is why two perspectives are especially important in transitional situations: the context with the own biography that has developed so far ("Why is something right for me at this time?"), and the own biographical future ("Where is something going to take me?"). As a result, during the processes of transitioning into the next career stage, the question is not only "What's the right fit for me and what am I good at?" (essential element: determining aptitudes), but also "What can and do I want to develop into? What is the framework for my professional future – what can and should I become?" (essential element: biographic orientation). From an action theory perspective (Schutz 1974), the subjective meaning of action emerges that we commonly paraphrase with the term "motivation." From this grows the personal strength necessary to get the self involved in the development of the own biography to meet challenges and overcome adversity.

Being aware of transitional process character

Transitions are individually running developmental processes. This is clear from everyday life. Separations are one example of this. They emerge slowly, are completed via time-consuming steps, basically require long re-orientation processes, and come to completion after a time, perhaps in a phase of new stability. Choosing a career is similar to this. And an important factor here is that this process is not only individually different in terms of content, but when it comes to its time frame as well.

Young men and women who are the same age might be at completely different phases of selecting a career: While everything is crystal clear and final for one person, another might not have the vaguest idea of where to go or what to do. This becomes a problem when this kind of heterogeneous group is made the same offers at the same points in time. Here, visits to companies outside of the selected profession are boring to those who have already decided what they are going to do, while those still looking around could find this type of offer to be very helpful. An apprenticeship at the "right" company can be exciting, while at the "wrong" company it can pull a young person down. What this means is that taking care of young people as they make their transition from school to the working world – regardless of their background – needs to be highly individualized, or should at least offer the chance to try out individual search and decision strategies. Organizing collective processes without (1) keeping these necessary individualizations in mind and (2) offering the right kinds of action opportunities is most likely doomed to failure.

Model tests, model projects, and other innovations

All kinds of model tests aim at promoting transitional processes. In the field that looks at the transition between school and profession, just about all of the German *Länder* have projects underway whose goal is to prepare these kinds of transitions and make them as smoothly running as possible (Lippegaus-Grunau, Mahl & Stolz 2010). The federal *Berufsstart*, *Berufsstart plus*, and *Perspektive Berufsabschluss* model tests in Germany that deal with among other things regional transitional management also belong to this context as they aim at new, strongly individualized management of transitional processes via personal development opportunities. This occurs through a conceptualization or making the most out of new learning experience offers in social learning contexts, as well as in career-related and company learning and educational programs.

The complaint often arises that model tests and projects are a flash in the pan. They burn hot and brightly, and fade quickly. But current transitional projects are making increasingly clear that new educational concepts and offers are required. After all, traditional school organizations and other educational institutions with their fixation on the internal school curriculum are not sufficiently preparing students for the challenges of life. Mobility, flexibility, and self-management of the own career (including personal stability) are key factors that are an absolute must in today's school organization. They will live on far longer than any federal, state, or local project, because these days, they are utterly essential.

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