



“Kompetenz” and “Beruf” in the context of the proposed German Qualifications Framework for Lifelong Learning

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Abstract

Purpose – The purpose of this paper is to answer a set of questions related to “Kompetenz”, “Beruf” and the German Qualifications Framework for Lifelong Learning. What is a competence, can it be measured? Is the “Beruf” really endangered by the focus on learning outcomes? What are the implications as regards the learning process? Are permeability and mobility between occupations fostered?

Design/methodology/approach – Literature was analysed to identify elements which are linked to the introduction of qualifications frameworks in Germany and which have an impact on the German system of education and training. Additionally some primary research was done by interviewing about 50 experts in the field. The results were published prior to this paper in the form of a study on behalf of the German government. Here they are used to highlight potentially controversial issues: “Beruf”, “Qualifikation”, “Kompetenz”, “learning outcomes” and their relationship to qualifications frameworks.

Findings – It is assumed that “Beruf” will also be used in future but in different contexts. It will describe any type of occupation or profession without the need to specify the way to get there (“Berufsbild”). Instead, there will be flexible pathways, allowing for non-formal and informal learning. Its former role of structuring training will be taken over by “Kompetenz” within the qualifications frameworks. It is recommended to clearly differentiate between learning outcomes and “Kompetenz”.

Research limitations/implications – As a one-year pilot phase to test the proposed qualifications framework is about to start, the final outcomes may be different from what is expected on the basis of this research.

Originality/value – The paper answers a set of questions related to “Kompetenz”, “Beruf” and the German Qualifications Framework for Lifelong Learning.

Keywords Employment, Learning, Qualifications

Paper type Research paper

1. “Kompetenz” and “Beruf” in the German context – some background information

Education and training in Germany has traditionally been geared towards a “Beruf”. For a German, a “Beruf” is a basic right laid down in the constitution (Article 12) and is planned for a long-lasting gainful employment to secure and sustain his or her living. It is understood to consist of a range of jobs and activities and is embedded into personal and societal ethos. This was strongly put forward by the founders of the German “Wirtschaftspädagogik” (note: no generally accepted translation. My own proposal: pedagogy of education and training in industry; sometimes narrowed down to occupational or labour pedagogy), e.g. Schlieper, Dörschel, after the second world war (Schlieper, 1949; Dörschel, 1960). The “Beruf” is also understood as a regulatory means to structure the variety of occupations to guarantee that comparable qualifications are



at the same level. For each of the occupations a “*Berufsbild*” depicts the objectives, elements and examinations of education and training, and also structures it in respect to time, contents and formal requirements. However, a consistent implemented qualifications framework with a set of identical descriptors does not exist. Most occupations ask for a successful finalisation of an apprenticeship of about three years (Duale System); several degrees from a university (for professions) or some form of specialised training course. In the apprenticeship schemes education is taken over by vocational schools, most times in a day-release format, training is pursued on-the-job. It has been understood that in each case learners acquire the capability to pursue their “*Beruf*” adequately. This is documented formally by a report, certificate or degree (“*Qualifikation*”), allows the holder to apply for respective vacancies and has been supervised and quality assured by authorities such as chamber of trade and industry. Presently about 300 of the former 650 apprenticeship schemes still exist. Quite a few of them appear to be outdated. In addition, most of the occupations may not be regarded as “*Beruf*” as they are not described in form of a “*Berufsbild*”. Many people believe that the dual system of education and training played a significant role in the post-war years of the German “*Wirtschaftswunder*”.

“*Kompetenz*” (note: in here the German singular form corresponds to the British plural: competences) is a relatively new term. Schlieper (1964) focused on “*Können*”, the ability to do. Arnold (1998) characterises the change from “*Qualifikation*” to “*Kompetenz*” by highlighting the learner centred approach with a variety of “capabilities to act” (“*Handlungskompetenz*”) and the requirement to learn-to-learn. However, there is neither a general agreement on a definition of “*Kompetenz*”, nor how it can be taught and measured. Nevertheless, the term is in the centre of present discussions, in particular in the light of standardisation of objectives of teaching and learning. An update of “*Kompetenz*” was published by “*Ständige Konferenz der Bildungsminister der Länder*”. The KMK (2004) defines “*Kompetenz*” as an integration of knowledge (Fach-) and methods (Methoden-), social (Sozial-) and personal (*Persönlichkeitskompetenz*) skills and competences, as the competence to act (*Handlungskompetenz*). It is understood as a set of knowledge, skills and competences not only to perform a narrowly defined job but to be capable of operating successfully in an array of activities related to a particular occupation respecting values of the society. This definition underlines the paradigm shift: from the teacher to a learner centred approach, enabling learners to face and master challenges. As “*Beruf*” has been regarded as structuring vocational education and training, “*Kompetenz*” can be understood as the defined learner centred objective of teaching and learning. It structures any form of education and training according to progression, the value added in terms of competences. The German Qualifications Framework for Lifelong Learning has translated this definition into the framework. In the context of the European Qualifications Framework, however, competence – not competences – is described in terms of responsibility and autonomy.

2. The German Qualifications Framework for Lifelong Learning

2.1 Present state of development

Since 2006 working groups of the “*Kultusministerkonferenz*” (KMK, standing conference of the ministries for education and training of the 16 federal states) and the federal ministry of Germany (the governmental department) put forward ideas how to

design a German qualifications framework for lifelong-learning (DQR). The group of the KMK consists of senior staff of the 16 governments and one external expert. In the group at federal level, various stakeholders are represented, i.e. trade unions of a variety of sectors, federations of several trades and industries, representatives from school, vocational and higher education and training institutions, associations of social services and external experts, as well as senior staff from the federal government and from a federal state. The latter group was directly appointed by the ministry of education and research of Germany and is jointly chaired by the states (“*Länder*”) and the federal state to assure a direct communication between the various initiatives. The work started in 2006 more than a year after the Framework for German Degrees in Higher Education had been finalised. The latter was part of the Action Plan of the Bologna Declaration in 1999. It was designed by major shareholders of higher education and ministries. Representatives of industry, trade unions, and students were invited to comment and to participate in a final hearing.

The German Qualifications Framework (DQR) comprises eight reference levels. Each level outlines “occupational and personal competences which direct the alignment of qualifications obtained in general education, higher education and vocational education and training” (BMBF, 2009). It does not contain qualifications but the description of qualitative elements (learning outcomes) of levels against which a qualification may be recognised. First reactions to the proposed qualification framework by some influential groups, e.g. trade unions, revealed uneasiness about its introduction. They worry that the “*Beruf*” may become obsolete and replaced by “jobs” in the form of simple tasks. As the proposed qualifications framework for lifelong-learning does not describe “*Berufe*” but knowledge, skills and competence, fragmentation of “*Berufe*” and an increase of lower paid activities are feared.

2.2 Qualifications Framework for Lifelong-Learning embedded in the German culture

The reasons of anxiety about the introduction of a German Qualifications Framework for Lifelong-Learning may be regarded from different lenses.

In Germany, it is taken-for-granted that the national education and training system, the “*Duale System*”, carried by educational institutions and professional organisations, is more or less unique and has been extremely successful. The prospects to find an adequate “*Beruf*” for those who were trained accordingly had always been considerably better than for those who were trained for narrowly defined skills to perform specific jobs (experience lens).

It has been assumed that labour has to be skilled in such a way that within a professional area many activities could be performed. In case of an apprenticeship scheme in retail trade, for example, it meant that a young trainee acquired skills which later on allowed him in his “*Beruf*” to perform jobs as a sales-person, as cashier but also as someone to operate the store. This multi-skilled education and training has been extensive in terms of time but also in terms of manpower and thus expensive. On-the-job education and training took one to two years till the apprentice was able to operate independently so that the business organisation could benefit from him or her. An apprenticeship would normally last for about three years and cover activities of the whole professional area; the programmes were designed respectively (design lens).

Both perspectives have had a significant impact: first of all a certain resistance to change and secondly a sharp increase in labour costs, which consequently led to an

outsourcing of labour-intensive work to restrain costs. Production requiring lower level of skills was primarily affected. The counter-argument has always been the quality of the work being done (“Made in Germany”). This was obviously meant to sustain a high level of education and training. In private talks British personnel managers pointed out that they thought highly of the German training system. However, in case they were looking for a cashier they did not need a trained retailer. If they did not need the cashier any more they would train the person for other careers. In other words: they would rather look for employees who had specific skills and additionally the generic competence to unlearn and learn to flexibly adapt to new situations. This may hint at different approaches embedded in national culture, and also to the need to develop “trainable” work-force to allow for continuous updating and open adjustments according to changing needs.

Hofstede and Hofstede (2005) referred to Germany as a well-oiled machine considering two of his five dimensions (power distance and uncertainty avoidance). Germany, having a low power distance but high uncertainty avoidance does not normally jump at changes and reforms. New approaches require some time to be accepted. In fact, considering the time needed to introduce careers for new professions or updating existing programmes in education and training seem to underline that a new way of thinking takes some time to break-through. In other words, traditionally the German system has always taken longer to react to market changes but did not have to do as long as changes could be mastered with the knowledge, skills and competence acquired during the apprenticeship. Pro-active measures have not been the strength of the German system (creative lens).

The question is whether the introduction of qualification frameworks changes the traditional paradigm in Germany. If so this would – most likely – lead to a different approach to the concept of *Beruf* and thus a new way of thinking about values, beliefs and taken-for-granted assumptions related to an occupation and its related knowledge, skills and competences. As these are the core element of culture, the question is to which extent it has to change. As culture is learned this is possible – but how is it learned? It has to be stressed that the framework for lifelong-learning still is “work in progress” and the final version may be based on different criteria. The question is to which extent “*Kompetenz*”, and *Beruf* will be impacted by the introduction of a German qualifications framework.

In the following the paper tries to find potential consequences. Literature was analysed to identify elements which are linked to the introduction of qualifications frameworks in Germany and which have an impact on the German system of education and training. Additionally some primary research was done by interviewing about 50 experts in the field. The results were published in form of a study on behalf of the German government but also used here to highlight issues which came very much to the forefront and which seem to be controversial. The interviews were made in 2007/2008 (Gehmlich, 2008).

3. Implications of introducing the German Qualifications Framework for Lifelong-Learning

3.1 Differences between the German Qualifications Framework for Higher Education and Lifelong-Learning

Following the different philosophies of the Bologna and Copenhagen processes at European level, both frameworks, the Qualification Framework for Higher Education

Degrees (Danish Ministry of Science, Technology and Innovation, 2005) and the Qualification Framework for Lifelong-Learning (European Commission, 2008), highlight two distinctive approaches in Europe and so they do in Germany: the framework for higher education explains the levels of all academic degrees of the three Bologna cycles by applying a set of criteria under the heading of knowledge and skills to identify the competence needed at each level. It respects the “Dublin descriptors” (knowledge and understanding, applying knowledge and understanding, making judgements, communicate and learn to learn) to safeguard compatibility with the European qualification framework for higher education degrees.

The European framework for lifelong-learning does not explain degrees, certificates or other formal documents but is a matrix describing the progression of learning according to knowledge, skills and competence. Whereas the Bologna framework finally describes the level of academic degrees by defining respective learning outcomes, the EQF depicts the level of a set of learning outcomes without spelling out a specific “paper qualification”. This means that a degree holder of – for example – a bachelor, can identify which cycle and level his degree belongs to. A holder of a non-academic certificate in a specific occupation – for example a carpenter – cannot do so. For lifelong-learning national frameworks have to be developed so that the European Qualifications Framework (EQF) can act as a translation device to make national qualifications more readable across Europe.

The German framework for lifelong learning has taken up the two-column structure of knowledge and skills of the framework for higher education but is guided by the overall idea of “*Handlungskompetenz*”. Subject related competence (professional competence) is selected as one pillar and personal competence as the other. In both German frameworks a further subdivision of the criteria is made: in higher education the knowledge stream includes broadening and deepening of knowledge and understanding. The skills are structured according to instrumental, communicative and systemic capabilities that are needed to acquire and develop new knowledge, respecting the continuing shortening of knowledge half-life and the necessity of research. The categorisation of the lifelong-learning framework contains subject-related knowledge and skills, comprising all subcategories of the higher education framework, but also goes beyond this approach and subdivides the personal competence into social- and self-competence. The ability to work in teams, to manage a team and to communicate is defined as social competence. To work independently, taking responsibility but also being able to learn is interpreted as self-competence. This means, the present proposal is “*Kompetenz*”-based and does not describe any specific *Beruf*.

3.2 Education and Training within Qualifications Frameworks

3.2.1 The value chain and the learning process. The model of a value chain was developed by Porter (1985) in a business process context. It seems that learning processes can be compared to steps creating value (Gehmlich, 2005, 2008). However, the value does not consist of a profit in monetary terms but rather in an increase of knowledge, skills and competences according to the qualifications frameworks. Also in education and training primary and support activities can be identified which are started by recruiting students, supply the opportunity to acquire knowledge, skills and competence through teaching and learning and assess the progress by using various

forms of examinations. Once the learner has received his certificate or degree (“*Qualifikation*”) support is granted to him to find employment and throughout his career or even further on continuing education is provided with the intention to create an added value in the form of learning. However, these processes are only possible if support is available in the form of resources (e.g. infrastructure) and competences (capability of staff) (see Figure 1).

Today, the application of the value chain model is challenged: Is the direction of the process still adequate today, i.e. starting from “recruiting” to “added value”? Does the concept of learning outcomes not suggest the opposite direction, i.e. the learning outcomes as value added are defined first, and then the process to achieve them as was suggested by Arnold (1998)? If this is the case what does it mean? What are the effects in terms of “*Kompetenz*” and *Beruf*, if any?

3.2.2 *Objectives of learning processes: learning outcomes and “Kompetenz”*. In particular Anglo-American literature has influenced strongly the development of learning outcomes (Kenney, 2007). Bloom (1956) and Bloom *et al.* (1964) became known for having designed a taxonomy of the objectives of learning processes. A qualification framework mirrors a classification and therefore consists of a description of learning outcomes at different levels. According to the European Credit Accumulation and Transfer System (ECTS) User’s Guide (European Commission (2005/2009), p. 6) “Learning outcomes are statements of what a learner is expected to know, understand and/or be able to demonstrate after completion of a process of learning.” This definition is supported by the university based project “Tuning Educational Structures in Europe” on the basis of comprehensive interviews carried out with employers, graduates and academics across Europe and Latin America. Learning outcomes describe learning progress, vertically from one level to another, documented in the qualification frameworks. They also outline qualifications horizontally or even laterally by “bundling learning outcomes” at one or even different levels. Literature sometimes links learning outcomes to competences. Adam (2004) concludes that “. . . some take a narrow view and associate competence just with skills acquired by training”, some, on the other hand, understand learning outcomes in a very wide sense and use them as synonym for competences (report presented at the Bologna seminar in Edinburgh).

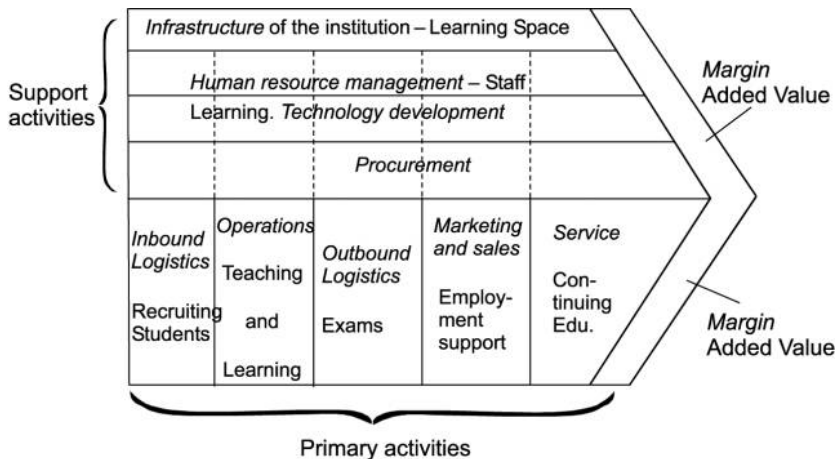


Figure 1.
The value chain

Learning outcomes must be accompanied by appropriate assessment criteria that can be used to judge that the expected learning outcomes have been achieved. Learning outcomes, together with assessment criteria, specify the requirements for the award of a credit. Credit accumulation and transfer is facilitated if clear learning outcomes are available to indicate precisely the achievements for which the credit is awarded (González and Wagenaar, 2005). This definition identifies learning outcomes as measurable objectives of learning as it includes a reference to the award of credits which is only possible if the achievement of the learner has been assessed. It also expresses ex-ante defined objectives of learning. The learning outcomes are the basis from which the learning process is derived which means: the traditional direction of the value chain (Figure 1) is turned upside down.

The same source (González and Wagenaar, 2005, p. 379) states that:

Competences represent a dynamic combination of knowledge, understanding, skills and abilities. Fostering these competences is the object of any educational programme. Competences are formed in various course units and assessed at different stages. They may be subdivided into subject-area related competences (specific to a field of study) and generic competences (common to any degree course) (see also Gehmlich and Ostergaard, 2005).

A clear difference between learning outcomes and competences is not obvious.

In the study Gehmlich (2007) questions the possibility to measure all competences. For example, the competence to work in teams is wanted by most of the enterprises when appointing staff. Several investigations have confirmed that 99 per cent of all enterprises ask for this transferable skill (DAAD, 2007). But how is the ability assessed? Is there sufficient evidence if a learner has cooperated in learning groups or worked together with others to prepare a paper? Maybe, a general preparedness is indicated but how could an objective grade be awarded? Therefore, the term “*Kompetenz*” might not be suitable when describing the outcomes of a learning activity. Whereas any learner acquires competences throughout education and training programmes – and also beyond in non-formal and informal ways – those which are and can be measured are qualified as learning outcomes. Learning outcomes to this extent are documented and graded competences. The learner will have acquired many more competences which may be revealed in specific – even unplanned situations – on the job or in any other context, e.g. someone can suddenly swim when being thrown into water although he might never have been taught. Learning outcomes are measured in relation to the outcome to be achieved (certificate, degree, e.g.) in a specific discipline, domain or profession and document what the person “can do”. This is in line with Bloom (1956), the “grandfather” of learning taxonomies who stresses the need to describe the achievements of learners by using “active verbs”. A proof is communicated in the form of “*Qualifikation*”, allowing to performing a particular *Beruf*.

The German term “*Kompetenz*” does not distinguish between “intended” and “achieved” outcomes. It seems to be taken-for-granted that “*Kompetenz*” and “learning outcomes” are synonyms and therefore the learning outcomes described in the framework are competences to contribute to the “*Handlungskompetenz*”, the competence to perform, independent whether they are measurable or whether there is evidence that the learner has achieved them.

3.2.3 *Outcomes of the learning process: Beruf and employability.* A further warning about the introduction of a qualifications framework is related to employability as goal, both of the Bologna and Copenhagen processes. Employability, it is said, asks for

individual certifiable qualifications that are flexibly designed and applicable according to changing needs of the market that require varying profiles at individual level. By and large all elements of vocational acquisition of skills and competences of the individuals are interpreted in the light of fostering competition and competitiveness (Baethge, 1992; also Severing, 1992). As pointed out earlier a *Beruf* is based on recognised and institutionally regulated vocational qualifications which allow for activities in jobs beyond individual workplaces and industrial sectors and which are linked to career and promotion systems as well as to existing systems of bargaining powers and the respective social laws. *Beruf* is aimed at the individual support and development with an independent professional identity and the ability to formulate interest and having the power to implement them. For Kutschka (1992) and Rauner (2005) the *Beruf* is the dominant basic principle of the labour market and of education and training and this foundation is undermined by following the objective of employability and will lead to a fragmentation of the *Beruf* along the criteria of qualifications frameworks.

Kruse (2002) asks to overcome the special and single relatedness of a *Beruf*. He does not agree with the *Beruf* as a model of competition; he believes in integrating parts of the employability, e.g. self-management, into any *Beruf*, fostering thus more individual responsibility and keeping institutional regulations and societal responsibilities in the vocational training as they are. Contrary to these opinions, Speck (2005) outlines employability from the perspective of an employer as an approach to take up the dynamics of the labour market and tries to establish a flexible workforce which represents a high innovativeness and allows for a fast adaptation to market needs. It all boils down to employees who take up the responsibility to widen and deepen their competence profiles and that employers supply resources and opportunities to keep and increase the level of employability of the employees. Nevertheless, Dörschel (1960) already pointed out that *Beruf* was often taken as synonym for “*Arbeit*” (work), and has lost its role as the centre of life.

In German Higher Education “employability” surely is one of the most controversial terms of the Bologna Declaration. Employability is blamed to be a too narrow approach for higher education study-programmes, is identified as “gravedigger” of many less popular but nevertheless worthwhile areas of study and finally as an orientation being too much driven by economic reasoning, leading away from Humboldt’s values and beliefs. It is overlooked that the Bologna Declaration and its process stipulates the traditional values of education as well and puts them even further into a lifelong-learning context.

Here it is not discussed whether any of these interpretations is correct or not, it is simply tried to find out how an “employability” orientation could be translated into curriculum development and how the various Bologna tools might help in this context. It is believed that many of these insights could be applied in vocational education and training as well.

In higher education employability assumes that the graduate is able to find his place in the labour market. This does not necessarily have to be in the area studied but could be in any field where the employer or the market requires his or her respective knowledge, skills and competences. More and more companies articulate strongly that at bachelor level they look for graduates who have a sound general knowledge and understanding about the subject area they studied but even more so have skills and

competences which may be useful – and in demand – in any form of employment, even self-employment. The first question therefore is: How can a higher education institution assure that their graduates dispose of what is required?

In the “Tuning”-Project more than 135 universities in 27 different countries tried to find an answer by sending out questionnaires to more than 7,000 graduates, employers and academics of nine academic disciplines in the year 2001. A similar exercise was done by Latin American institutions which applied the “Tuning Approach” about two years ago. Rather amazingly the results achieved – whether in Europe or Latin America – were very similar. Right now preparations are made to repeat the action in Europe. In summer 2007 an initiative was taken in Germany focusing on enterprises only but revealing similar results highlighting the following issues:

- First of all enterprises are interested in skills and competences which may not be directly linked to a defined subject area.
- If a demand for knowledge is required a rather general level is asked for. Specialist knowledge – as the interviewees confirm – is expected to be acquired “on-the-job” at the workplace.
- International oriented enterprises ask for foreign language skills. However, it seems that – at least in Germany – they expect knowledge of English only.

Tables I and II detail these results.

According to the “Desired ‘Can Do’ profile” enterprises (99 per cent) expect foremost that graduates are able to communicate and work in teams. The figure in brackets (5 per cent) indicates that this skill ranked fifth in the tuning study. In the other cells the

	%		%
Communication/ability to work in teams	99 (tuning empl. 5)	Can analyse	88 (3)
Problem solving	97 (2)	Broad subject related to knowledge	87 (academics 1)
Learn to learn	97 (1)	Knowledge about the EN	78 –
Independent working	96 –	Managerial competence	70 (bottom 5)
Adaptability	96 (4)	Specialisation	68 –

Table I.
Desired “can do” profile by German employers

Note: *n* = 670

	All enterprises in %	International oriented EN in %
Knowledge of English	68	95
Foreign culture/business practices	63 (tuning bottom 5)	70 (bottom 5)
Foreign markets	40	67
Other foreign languages	26 (bottom 5)	48 (bottom 5)

Table II.
Desired “International Can Do” profile by German employers

Notes: *n* = 670

information has to be read accordingly. When asking enterprises what the competence “to work in teams” meant, their answers were rather vague: “because others ask for it” or “they have to get on with others” etc. (Gehmlich, 2008). A differentiation between a “group” and a “team” is not made. The question, however, is how the “ability to work in teams” can be tested if Belbin’s (1981) definition of a team was accepted. This difficulty does not appear to be a problem as regards the other competences identified: to communicate, solve problems, learn to learn, to work independently, to adapt to new situations, to analyse, to manage could most likely be examined and always have been – most times, though, not explicitly stated.

However, in several areas, in particular in those related to skills and competences within an international context, significant deviations from the prior Tuning study were identified, e.g. whereas 70 per cent of international oriented enterprises in Germany expect knowledge, skills and competences about foreign cultures and respective business practices, the “tuning” study revealed a much lower expectation: these competences were listed among the least important (bottom 5). Quite interestingly, the difference between “all enterprises” and “international oriented enterprises” is not significant (63 per cent versus 70 per cent). Language skills in English are more or less required by all international enterprises (95 per cent) but still also more than two-thirds of all enterprises do as well. The extent of the required knowledge about foreign markets (40 per cent versus 67 per cent) by German enterprises might surprise (Table II). However, it should not be forgotten that the tuning study was made more than five years ago and it became obvious that outcomes varied considerably between countries.

Additionally the tuning results demonstrated a high correlation of the answers of employers and graduates whereas in relation to academics significant differences were revealed. This may be seen as a “must” and not necessarily a contradiction. Academics have to anticipate future developments when designing curricula; employers and graduates take for granted that study-programmes pass on the essential knowledge asked for in a certain subject area and look from a much shorter time-perspective than academics do. It should not be forgotten, though, that academic education has an impact on the labour market, too – with a time-lag, i.e. the length of study-programmes at least.

These results demonstrate again the similarity of expectations, requirements, beliefs and assumptions in all areas of education and training. Therefore, it can also be assumed that the consequences in terms of the design of education and training schemes are very similar, though the methods of implementation may differ. Also, for the whole education and training system in Germany designers of learning programmes should be aware that the acquisition of knowledge is of prior importance – albeit the shortening half-life. However, its role has changed: knowledge has become the vehicle for a learner to acquire skills and competences in the form of defined learning outcomes at an identified level. Without knowledge no one can recommend steps to be taken or can apply methods to analyse an issue. Neither can anyone communicate without contents.

3.3 Relation between “Beruf” and “Kompetenz”

The German law on vocational education from 23 March 2005 states that vocational training has to allow learners to acquire abilities, knowledge and skills

(*Handlungskompetenz*) in a structured learning programme so that they will be able to perform in a respective occupation (“Beruf”). When analysing qualifications frameworks of other countries it can be seen that most describe learning outcomes at different levels, those which can be assessed, traced back and which make up – as a bundle – a defined qualification. The basic issue is: what should be assessed in a learning programme; what the learner has achieved or what he or she potentially might achieve? If the latter was the basic objective, the term “Kompetenz” should be used; if achievement was tested, the term learning outcomes should be preferred. A conclusion would be that qualifications (degrees, certificates), also a “Beruf” are stipulated by learning outcomes.

Having said this it also becomes obvious that the terms “qualification” and “competence”, if used in the German context, may be “false friends”. Though they are more or less spelt identically (“Kompetenz”, “*Qualifikation*”) they express different things. “Kompetenz” is the overall ability to perform within the German context. In the European framework it means the ability to act responsibly and autonomously. A German “*Qualifikation*” refers to the status being awarded on the basis of respective documents (e.g. Bachelors degree, Certificate of a Plumber). In the European context it appears that a level is characterised by a set of knowledge, skills and competences described as learning outcomes. This set of learning outcomes Germans would qualify as the competence to pursue a particular *Beruf*. Therefore, someone who performs a “Beruf” has acquired the competence to do so (*Handlungskompetenz*) through education and training in occupation-oriented knowledge but also in a range of various skills and competences. “*Kompetenz*” is therefore understood as a bundle of knowledge, skills and competences; “*Qualifikation*” the formal document to prove it. But how is a bundle “made”?

For the time being the design of the German qualifications framework stresses competences, i.e. it focuses on the potential rather than on achievements. In February 2009 a draft version was finalised. Within the next year the framework will be tested as regards its applicability by inviting experts from various disciplines, professions and backgrounds. Groups have been formed representing four industry sectors: engineering (mechanical and electrical), trade, health and IT. Although the outcome approach is stated the implication is endangered as there seems to be some misunderstanding. Many experts believe that at each level a *Beruf* is already “fixed” and the “*Kompetenz*” described at that level corresponds to those of the qualification, more or less. It is difficult to realise that it is a must to describe each occupation with its respective “*Qualifikation*” according to the structure – and only the structure of the German qualifications framework. Using the same descriptors will reveal whether the various learning outcomes of a *Beruf* correspond to a particular level or identify certain gaps as regards one descriptor and perhaps or an affluence in relation to others. If this straightforward procedure is followed it is most unlikely that each *Beruf* fits exactly all criteria of one level to the same extent. In other words the difficulty is to take a qualifications framework not as a horizontal expression of a qualification but as a bundle of knowledge, skills and competences. For each *Beruf* an adequate level has to be identified. The qualifications framework is not a career ladder, it details progression of learning instead. This is different from the higher education approach that horizontally explains the respective degree (Bachelor, Master or Doctorate). Vertically, both

frameworks describe the added learning defined by a delta of knowledge and skills from one level or cycle to another. It is hoped to erase these misconceptions before the qualifications framework is finalised. The objective is not to upgrade or downgrade any qualification, the intentions should be to describe in a fair way and with utmost possible precision and care the learning outcomes of education and training programmes and on this basis to mirror them with the German qualifications framework. For the time being the DQR is a matrix of learning outcomes in which the level indicators are based on “*Handlungskompetenz*”, not on *Beruf* (“*Qualifikation*”).

Another misunderstanding is the belief that seemingly equal qualifications, e.g. certificates received on the basis of successful apprenticeship-programmes, should be grouped at the same level. This, however, does not have to be as demonstrated by the following example: Whereas for the time being any apprenticeship – by and large – is seen to be at the same level the qualifications framework may reveal that some outcomes of apprenticeship schemes, for example the training of a retailer as a *Beruf*, might be at a lower level in comparison to a bank clerk although both learning pathways are of the same duration and include several subject-related similarities. The retailer, for example, may not be considered as having reached the final stage of the considered level. In other words, a level may identify several stages of development (sublevels). Therefore the delta between the levels has to be very clearly documented and described. It is assumed that this can be achieved better by defining learning outcomes than competences when accepting learning outcomes as those competences that have been assessed.

Within the framework of the study (Gehmlich, 2007) experts agreed to the fact – as at European level – that qualifications consist of a bundle of learning outcomes. To this extent one could state that the acquired learning outcomes make up a profile that might be reflected by a formal qualification (Luomi-Messerer and Markowitch, 2006). At individual level, as has been argued above, this normally means that the learner has acquired more than a sum of learning outcomes as he or she has gained insights into the relationship between various elements of learning outcomes which might not have been planned as such by the learning programme. The major concern of those interviewed is that the “bundle of learning outcomes” has to be compiled in a coherent, consistent, intelligible and consistent manner that is in a way which “makes sense”. The anxiety in Germany is based on the fact that the *Beruf* may be split into a list of skills out of which the trainee can choose as the whim takes him or her. This “cafeteria principle”, a “pick-and-mix”, is seen as the end of any *Beruf* as the orientation for combining learning modules is not any more an occupation but rather the need for a particular job. It is believed that education and training for an occupation should be structured as a “menu-system” of learning outcomes by those who plan the respective curricula and syllabi.

3.4 Design of programmes in education and training

The results of the “employability profile” have to be translated into learning outcomes, the objectives of formal learning processes in education and training. To do so, the respective national, sectoral or even institutional qualifications framework should be considered independent whether this is done in the light of the European Qualifications Framework for Lifelong-Learning or the European Higher Education

Area: they all have to be compatible with each other (See Benchmark Statements in Britain or sectoral frameworks for social work, chemistry, engineering and business and management in Germany. Some establishments have designed institutional frameworks to foster mobility between sectors, branches, faculties and programmes).

3.4.1 *The learning chain.* Having identified the learning outcomes of a programme the curricula and syllabi have to be designed by going backwards, i.e. the learning outcomes are the starting point. Learning materials, teaching and learning methods are learner-centred, focus on the objective to allow each learner to achieve the stipulated learning outcomes.

This change of paradigm, turning the traditional way of design upside-down, is characterised in Figure 2, the “learning chain” demonstrating that such transparent programmes should be quality assured which can be much easier done than in the past.

The subject-related and generic competences may be taken from the national and or European Qualifications Framework or – most likely – from an investigation made to define the profile of the learning programme. This may take into account both, short-term needs but much more long-term perspectives of the labour market and the society to educate and train best human resources for the future and at the same time shaping both as well through the graduates of the various programmes in education and training. The example considered in Figure 2 is the German Qualifications Framework for Higher Education which focuses on subject-specific and generic competences as outcome, considers teaching and learning materials and methods as “throughput” to achieve them and defines criteria which appear to be useful for an applicant to be successful in the programme. To this extent applicants can be much better advised both in terms of suitability but also as regards the profile of the outcomes.

3.4.2 *Documentation of quality to build trust.* This change of paradigm requires management methods to guarantee quality. It is not enough to highlight the outcomes; information is also needed how they can be achieved. A solid documentation is required to make the learning process transparent, to support trust-building between

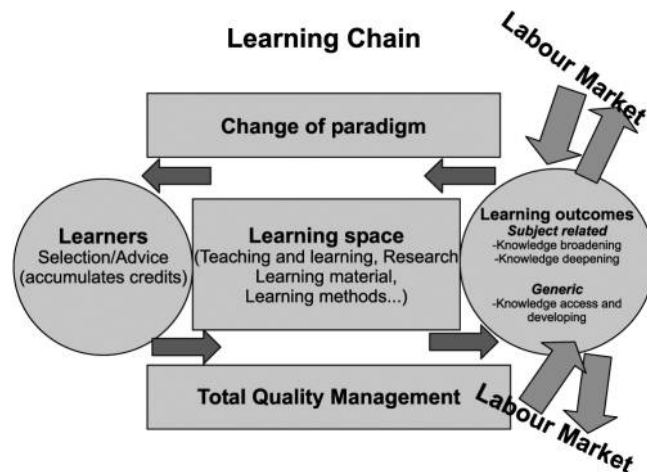


Figure 2.
The learning chain

all stakeholders, and to make the process work. Within the framework of the learning chain of education and training these documents are:

- Qualifications frameworks. On top of the frameworks described, sectoral (discipline) or even institutional could be helpful.
- Definition of a profile of the learning outcomes of the programme according to the areas of future needs of the labour market and the society.
- A programme catalogue describing all elements/modules of the learning programme by defining the learning outcomes and allocating credits to them. This is only possible if the required bundle of learning outcomes has been defined.
- The allocated credits identify the workload needed to achieve the stipulated learning outcomes (this is a point of argument between the two systems in question: ECTS workload based and ECVET highlighting the importance within a programme: However, within the framework of this paper this cannot be considered further).
- From the perspective of a learner the credits document that he/she has achieved the learning outcomes; however, credits do not explain how the learning objectives were achieved, this is done by local grades (local grading system).
- Learners can acquire and/or transfer credits within a programme or institution, between various institutions at home and abroad and also outside any formal education and training, i.e. through informal and non-formal learning. This is documented by Learning Agreements and Transcripts of Records.
- The Diploma or Certificate Supplement explains the national degree awarded in a standardised format.
- Education and training programmes have to be quality assured (in Higher Education a Register will list all those organisations that are eligible to act as quality assurance agencies. It is assumed that a similar list will be designed for lifelong-learning).
- This process is geared by a set of agreed Standards and Guidelines at European level.

In future the Bologna and Copenhagen Process (Initiated by the European Commission in the area of vocational education and training) may converge into one life-long-learning concept which hopefully means an enhanced permeability between education and training, i.e. general, higher, vocational as well as continuous education and training, and the learner centred approach may pull institutions and organisations to respect societal responsibility for those having successfully finished a course or programme in terms of employability. This “pull-effect” will surely increase the likelihood that education and training documents will become interchangeable which can already be noticed in the example of the “Europass”, an “envelope”, comprising the Diploma Supplement used in higher education, the Certificate Supplement to explain vocational education and training pathways, or the Language Pass, introduced in schools and universities, a Mobility Pass which may replace the manifold of individually designed papers issued by institutions to document learners’ achievements at foreign institutions or in work placements which, however, are

often internationally not “readable”, and finally a template for a curriculum vitae. All these forms should be filled-in in a language widely spoken.

3.4.3 Recognition and permeability. The importance of a much-needed clarity can also be realised when taking into account future requirements as regards recognition. Accreditation of prior or even prior experiential learning is not considered yet in the present discussion. However, if the objectives of permeability and lifelong framework would be designed these issues had to be considered much more intensively. This may be demonstrated by the following example.

While being employed in the human resource department, someone wants to swap the employment and to work as a controller. Presently this will hardly be possible as it is common opinion that training for a personnel job is irrelevant for that of a controller. However, after having designed qualifications frameworks a much deeper analysis of the situation can be made. Are – for example – some skills and competences needed to do the job in the personnel department more or less equivalent to those needed in the controlling area (e.g. managing personnel, working with a PC)? This discussion is in particular difficult to lead in Germany as hardly any business organisation has introduced instruments such as a “skills card”. The basic information of a company is still focused on “paper qualifications”, i.e. documents from educational and vocational training establishments or other employers listing subjects but hardly any other programme outcomes. The initiative taken by the University of Kassel (Clement, 2005) to recognise individual skills rather than qualifications has increased the anxiety of trade unions, expecting a fragmentation of education and training which – according to their fears – may lead to the end of the German *Beruf*.

5. Outlook

Creating a Qualifications Framework for Lifelong-Learning will also in Germany raise the awareness, that a purely knowledge-based education and training will not be sufficient for future needs. Also, it is not adequate any more, to narrowly design curricula for specific jobs at entrance level. Experience has shown that half-life of knowledge becomes shorter and shorter and that as a consequence education and training have to become broader and broader, in particular at entrance level. Lessons have been learned from teachers, printers etc. who suddenly had not been in demand any more in the past – for dissimilar reasons. However, the question had been the same: Could they be employed somewhere else? The acquisition of generic skills has come to the forefront. It is assumed that in future the dividing line between professions, disciplines, domains of today will disappear more and more, and more interdisciplinary occupations will come up as opportunities. Therefore, the need of qualifications frameworks is enhanced. Germany will have to change its culture to take up the reform – to underline the assumption at the beginning of this paper. In doing so four success criteria will have to be taken into account:

- (1) *Suitability.* Respecting present systems of education and training but not regarding them as “set in stone”.
- (2) *Acceptability.* Considering expectations of stakeholders but not taken them as “taken-for-granted” without further investigations and discussions.

- (3) *Feasibility*. Testing realistically impact and consequences of frameworks, and designing adequate strategies of a lean implementation in agreement with authorities.
- (4) *Sustainability*. Realising the long-term effects and raising the awareness that changes will not be superficial but thoroughly comprising all areas of education and training.

It is assumed that the introduction of a qualifications framework in Germany necessitates a change of culture first of all. This is possible as Hofstede confirms that culture is learned and not inherited. In other words: values, beliefs and assumptions have to be changed to consider a framework as an acceptable tool for future vocational education and training, based on “learning outcomes” which replace the traditional system built on the *Beruf*. This will help to make the German system much more flexible and up-to-date. It necessitates to look at learning process from the point-of-view of the result. In other words, the traditional value chain is turned upside down.

The introduction of a German Qualifications Framework for Higher Education may lead to a different understanding of the term “*Kompetenz*”, it definitely will require an update of defining professions and make it much easier in future to change their educational and training profile. It is most likely that the term *Beruf* will not disappear. However, it will not be used in the traditional sense. The *Beruf* is most likely not to be described by a *Berufsbild* anymore with detailed mandatory training and education obligations but it will rather be understood as “doing something for a living”, for which specific competences are stipulated. *Beruf* may stay as a more general term for occupation.

The German term “*Kompetenz*” will take over in the sense of documenting the ability to perform. “*Kompetenz*” will also replace *Beruf* as regards the principle to structure vocational education. In fact, it is hoped that instead of “*Kompetenz*” learning outcomes will be used which are the key elements of the qualifications frameworks. It would be wise to distinguish clearly between learning outcomes and “*Kompetenz*”. Learning outcomes are those competences that have been achieved successfully. They have been tested in a formal process which has been quality assured independent from any institution where they have been acquired. They, finally allow for an increase of permeability between various learning pathways, formal, non-formal and informal. The term “competence” from the European Qualifications Framework, however, can only be used in this specific context, to identify responsibility and autonomy as part of learning outcomes.

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