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Theories and Theorems of the In-Company Continuing Vocational Training in Germany

Abstract: First, the text provides a definition of the subject area of the in-service training (in-company continuing vocational training). Unfortunately, in-service training is rarely seen as an educational field of activity, where the public joint responsibility and active participation provide important regulatory frameworks beyond market radicalization and market failure. A series of different theories and theorems are classified based on a tripartite multi-level model. Although there is no theory of in-company continuing vocational training, a variety of approaches with different explanatory potential are intensively used in the continuing education research. Nevertheless, there is a need for further consolidation and development of the theory-based and above all andragogic studies in an interdisciplinary research and activity field.

Keywords: in-company continuing vocational training, theories, continuing education research, multi-level model, configurations.

Theories of the in-company continuing vocational training—an approximation

Theory can be taken to mean an attempt to describe, to understand and to explain (causally) the basic elements of a reality. This should enable us to make forecasts. Following the traditional concept, theories must be testable so that their falsifiability or contingency may be demonstrated. If we agree on such common understanding of the different views of science (i.e. critical rationalism, critical theory), we have to ask some questions about the fundamental meaning of the theories of the in-company continuing vocational training:

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- What is meant under the subject matter of “in-company continuing vocational training”?
- Which contexts should be described, understood or explained within this subject matter? To what and to whom should the forecasts refer?

These questions will be addressed here. Different theories i.e. theorems² of the continuing education research will be discussed on a comparative basis. The term theorem is used complementary to the term theory, since there are often slogans in the continuing education research (“from further training to competence development”). In a strict scientific understanding we could exclude such theorems i.e. axioms from the representation as pretheoretical. However this would complicate the understanding of the continuing education research and its genesis. It has often been criticized that despite the boom in the continuing education research, the theory development has not kept up: „despite numerous research activities in the area of the in-company continuing vocational training, we cannot speak about an existing continuing education theory“ (Meyer & Elsholz, 2009, p. 11).

Definitions of the in-company continuing vocational training

The definition provided by the German Education Council has become fundamental in comprehending the continuing education in Germany: “Continuing or recommencement of organized learning after the completion of an education phase with various durations” (Deutschen Bildungsrats 1970, p. 197). This way, further training is differentiated from the initial training. This differentiation is also important for the in-company continuing vocational training. Many learning processes take place in companies and enterprises that are organized and regulated within the so-called “dual system”. In general, we could say that regulation of the vocational education and training is understood as a joint task for the economy, social partners and the government, whereas the continuing vocational training is rather seen as a private undertaking with a mere co-responsibility of the government. Management of the initial and further training in companies differs greatly in the regulatory sense. However, company practice shows that it is not uncommon for the same persons to be in charge of both initial and further training activities. Furthermore, no clear distinction has been made between initial and further training on the international level for different reasons (different

² Theorems are mostly “only” propositions, whereas theories are coherent, consistent systems of descriptive and explanatory statements. Therefore, theories have higher complexity. Theorems can be constituent elements of theories. One of the most popular theorems in the social sciences is the Individualization Theorem.

educational traditions, lower level of educational development, etc.). Nevertheless, despite evident differentiation problems it can be said that in-company continuing vocational training refers to the learning processes undergone by employees after the dual education or university graduation.

One could oversee in the definition of the Education Council that it includes “organized learning”. This limitation to formal or non-formal teaching/learning processes has led to a tendency of excluding informal learning: “A short-term training or on-the-job training is not included in the framework of the continuing vocational training” (Deutscher Bildungsrat, 1970, p. 197). Learning in companies and enterprises can however take many different forms, such as through courses, work-related tasks, or a mix of the two (i.e. instruction, course attendance, coaching, blended learning, job-rotation). It is known *inter alia* from the work science that we are learning *en passant* during the work process. In the past decades the so-called “informal learning” has been gaining recognition in science, policy and practice. There are numerous reasons for this and they should not be idealized, since it is often about the mere desire to reduce costs (in the short run) by way of, so to say, “natural” learning directly on the job. There are excellent reasons to support both learning directly on the job and distantly, and to interlock these two (see Behringer & Käpplinger 2011). Focusing on informal learning may, among other, mean a double discrimination of certain already disadvantaged groups, if structural discrimination is misinterpreted as individual’s discretionary right (Baethge & Baethge-Kinsky, 2002).

In general, and especially since the beginning of the 1990’s, the common understanding of the term *continuing education research* that prevailed in Germany and also in the European Union, can be summarized as follows: “In-company continuing vocational training is taken to mean further training activities that represent pre-arranged, organized learning that is completely or partially financed by a company for its employees. In addition to courses, trainings, or seminars, in-company continuing vocational training also includes other forms such as briefings, job-rotation or on-the-job learning” (Destatis, 2007). This definition has been used for two decades now in comprehensive Europe-wide surveys, such as Continuing Vocation Training Survey (CVTS). It was also used as benchmark for surveys such as Adult Education Survey (AES). The definition adheres on the one hand to the criterion of the planned, organized learning, thus excluding the numerous forms of incidental learning or learning *en passant*. On the other hand, it does not relate only to learning in courses, but also to the so-called “other forms”. On-the-job learning can be included therewith, if it is intended didactically, organizationally by the company. It can mean instruction or guidance or installation of learning islands or other analogue or digital learning infrastructures near the job. In that respect, it can be stated, for the research purposes, that such a compromise was found, which takes into account the diversity of the learning methods in the business context (Behringer & Käpplinger, 2011),

avoiding to randomly expand the definition of learning, thus making it barely comprehensible.

Additionally, in-company continuing training is often connected to the financing criterion. The enterprise or the company has to pay, in full or in part, for the participation in a further training. Either by covering direct costs, such as course fees or any travel expenses, or by covering indirect costs such as personnel absence costs or lower productivity due to the absence from the job for further training. In contrast to that, professional, individual further training is financed completely by the employee and/or with the public co-financing. There are many borderline cases in practice i.e. forms agreed between the employer and the employees for shared financing (Kaufmann & Widany, 2014), i.e. when the company bears the training costs, but the employee takes part in the training in his/her spare time.

In defining and differentiating professional and in-company further training, the learning venue is actually unimportant. There were however approaches where in-company training was supposed to be limited to the company's learning location (Wittwer, 2010, p. 39), or where its meaning was reduced to considering workplace learning or learning-on-the-job often only in relation to the workplace. However in-company continuous vocational training takes place both in and outside the company. This is especially true for courses, where many small and micro-companies rely on external course offers due to limited resources. An external course offer is provided though the so-called "Further Training Market" by numerous private or public providers such as chambers, vocational training centers of employers or trade unions, producers, freelance trainers/coaches or adult education centers. The Configuration Theory (Käpplinger, 2013, 2016) draws special attention to how heterogeneous the organization and implementation of the in-company continuing training can be. There is no "typical company". Despite major further-training obligations at the moment, companies may choose to offer or not offer ongoing further training, or they may choose to offer or not offer any kind of training over time, including discontinuously. The interests and the power of different stakeholders and their open or hidden negotiation are of great importance. Contrary to statistic approaches and their average values and regression analyses the configuration theory emphasizes, that in-company continuing vocational training is developed in various forms in the company. Professional teaching staff in companies and in cooperating further training centers has to "read" these configurations and be able to act appropriately and creatively, in order to promote sustainable and useful teaching-learning settings. There is no funda-

mental conflict between the economy and the pedagogy, it is rather about the business context – which type of economy is supported by which education. In-company continuing vocational training is not only supporting the overall corporate success, but to different degrees also the different stakeholders in the company. Andragogy should be traditionally and normatively bound especially to the interests of individual employees and the learners' perspective.

Especially in the 1990-ies in the context of the boom of concepts such as “learning company” and “corporate culture” shift their focus from the individual to the organizational learning, which was proclaimed axiomatically: “For the in-company further training, it is important to go beyond the traditional narrowed perspective of an individual and his/her educational situation and to focus more on incorporating the individual into the processes of organizational development, to understand in-company continuing vocational training not only as a didactic teaching-learning relation, but moreover as a part of an organizational transformation process” (Arnold 1991, p. 25). This focusing on the social learning processes and the corporate business, production, or service processes has its justification especially in the in-company continuing vocational training, since further training should serve to a significant extent for securing the continued existence of the company. The in-company continuing vocational training is defined here mostly in respect of its function to other non-educational organizational purposes, so that we are also talking about “adjunctive education” (Gieseke & Heuer, 2011) or a form of “economically defined educational institution” (Geißler, 1990). This is the reason for a formerly rather reserved and even condemning attitude from the andragogic view of the in-company continuing vocational training, since there were worries about a mere (mis)use of learning for economic interests (Meueler, 1993).

After exploring the subject matter of the in-company continuing vocational training and clarifying its genesis and current status within possibilities, we will deal with the following question: which contexts should be described or explained in this subject area?

Research interests of theories and theorems

The research of in-company continuing further training can be related to many research interests, which cannot always be clearly assigned to one scientific discipline. There are different approaches, summarized below:

Table 1: Theories and their respective central statements for the in-company continuing vocational training (Martin & Behrends, 1999, p. 43)

<i>Economic Approaches</i>
<p>Human Capital Theory: <i>Further training is an investment and can be found primarily in the knowledge-intensive organizations. However, it also depends on the market position of the employees.</i></p> <p>Exchange Theory: <i>Further training is an exchange object; it is used either to gain competitive advantage on the labor market or to compensate for the disadvantages.</i></p>
<i>Political Approaches</i>
<p>Political Economy: <i>“Knowledge is power” and it is used or withheld strategically. A differentiation is made between knowledge as an instrument, as domination, and as applied knowledge.</i></p> <p>Coalition Theory: <i>Further training is used, if it is in the interest of the powerful ones. It is a compensation deal, side payment, and an instrument to resolve conflicts.</i></p>
<i>Institutional Theory Approaches</i>
<p>Culture-oriented Approaches: <i>Further training serves for socializing of the employees. It is used for securing legitimacy and self-image of one’s own organization.</i></p> <p>Structure-oriented Approaches: <i>Education is primarily connected to organizational procedures, planning of education becomes an integral part of investment and career planning.</i></p>
<i>Functionalistic Approaches</i>
<p>Allocation Approach: <i>In which economic environment is education efficient? Further training has an implicit relation to the basic functions of the company, especially to performance.</i></p> <p>Population Approach: <i>In certain economic and ecological niches further training is considered an integral part of the organizational “gene pool” and a result of diffusion processes.</i></p>
<i>Behavioral Approaches</i>
<p>Social Relations Approach: <i>Further training is used depending on social relations for different purposes (i.e. as a social benefit in patriarchal companies).</i></p> <p>Troubleshooting Approach: <i>Further training is a possible answer to the company’s problems; it is created from the organizational procedural logic, which manifests itself in decision-making.</i></p>

Two research interests become clear in this list. On the one hand, the economic interest showing expectations from further training especially in the area of contribution to a company’s or to economic development. On the other hand, there is a political or sociological interest, relating primarily to power, dominance and social connections. A pedagogic view is missing – quite typically – with these approaches, although it is absorbed partly by counselors. Many research interests can be found in disciplinary intersections. It is however hampering that depending on the discipline there are different understandings of terms and titles of the activity area, reaching from human resource management (HRM), HR-development, competence development to the in-company continuing vocational training. This disparate concept system is even more emphasized due to the fact

that the in-company continuing vocational training is considered to be a field of constant innovations. New concepts propagate new terminology, whereas a relation to the traditional lines and the renowned systematics seems not to be compatible with the desired innovations. This impedes cooperation and development of knowledge, since communication is difficult and the findings from other disciplines remain suppressed (Diekmann, 2010, pp. 940–942). Despite these obstacles the theoretic contributions from different disciplines can be classified heuristically in a multi-level model of the in-company further-training decisions (see also K appler, 2013), as shown in the following illustration. This will be explained in the following chapters with some examples in close connection to the pedagogic questions.



Figure 1: Levels of the Configuration Theory of the in-company continuing vocational training (own presentation)

Theories of the in-company participation in further-trainings – examples for the macro-level

On the *macro-level*, the first question that arises is why companies and enterprises are providing further training? Bottomline, they are not educational institutions and their main organization's purpose is not an educational one. Empiric studies (Behringer & K appler, 2008) show that many companies do not provide further training or do so intermittently. K appler (2016) points out that ap-

prox. 20% of the German companies does not offer any in-company continuing vocational trainings and he classifies them as “further training resistant configurations”. In this respect a pedagogically interesting question is imposed: what determines participation in further training and how can it be influenced. Theoretic and empiric studies are also important because of the increased economic and labor market related interest, explaining the participation of companies in further trainings, thus hoping to contribute to the economic development.

On this level the Human Capital Theory (Becker, 1964) has gained considerable prominence. Further training is seen here primarily as an investment in the interest of the employer. In microeconomics, the dominating mental figure of rational behavior (*homo oeconomicus*) is applied on the investment behavior of the employer or even employees. The employers are said to finance specific corporate further trainings, the contents of which are primarily useful for the company. The employees are rather more interested in attending general further trainings they could use on the labor market, in order to increase their own labor force value. The human capital theory provides therefore a basic distinction between the two forms of the in-company continuing vocational training – company-related versus general further training – and explains the different constellations of interests of employees and employers regarding the content and especially the mere economic benefit of further trainings. Primarily monetary benefits are recorded, whereas the non-monetary motives (i.e. job satisfaction, power interests) matter, if at all, as secondary and indirect economic motives.

This theory has proved to be very influential, although empiric researches have pointed to the need of theoretic modifications or “bridging assumptions” (Behringer et al., 2009, pp. 36–37). This refers to the distinction between company-specific and general further training that can hardly be demonstrated empirically. The popularity of the human capital theory can be explained among other through its acceptance by the internationally influential organizations such as OECD and the EU. Other theories and theorems, such as transaction costs or segmentation approach help modify the classic human capital theory and apply it to the economic segments. In this sense the human capital theory is a classic of the continuing education research, which is especially applied with the quantitative analyses of the larger data records and it helps explain the participation of companies in further training or their absence from it, broken down by companies, sectors or national economies (see Überblick in Käßlinger, 2007a, pp. 385–386).

Whereas the classical human capital theory is pretty indifferent towards institutions, a series of theoretic, partly neo-institutional approaches indicate an increasing importance of the socio-political and institutional framework con-

ditions. From the continuation of the classical welfare state theory in accordance with Esping-Andersen in the continuing education research (Rubenson & Desjardins, 2009) to approaches such as the “Varieties of Capitalism” (Hall & Soskice, 2001), comparative research is examining the connection between the welfare state and the investments in education. Contrary to the mental figure of individual rational behavior mostly determining the educational economy, the importance of the social, government and political institutions is pointed out. The empiric analyses of societies on the macro-level have indicated for many years a connection between the welfare state models and in-company further training activities. In developed welfare states the in-company further training activity is generally high, which has repeatedly been empirically proven by comprehensive and important empirical studies. Gross National Product is one of the best predictors of the percentage of stakeholders participating in further training (Markowitsch et al., 2013). At the same time, in the globalization there are no mainly convergent but rather often divergent developments in the cross-country comparison (Käpplinger, 2011). The danger of the “failed states” shows that polarizations are increasing both inside of society and between the countries significantly, endangering the democratic cohesion.

The adult education or also economic education theory development i.e. discussion on the in-company continuing vocational training began in Germany fairly late. In pedagogy, in-company continuing vocational training has been viewed very critically due to the alleged and real (mis)use, since it would exclude education. Enno Schmitz (1978) was one of the few continuing education researchers, who addressed the issue of in-company continuing vocational training at a very early point in time critically, but nevertheless interestedly. He has developed the term “regulatory further training” and he understands forms of further training under it, where not only the acquisition of knowledge or increase in productivity were important, but where further training was used by company management to create loyalty. In a critical analysis of capitalism and ideology reference is made to the fundamental conflict between the capital and labor (see Bolder, 2001). Especially because the in-company further training would fulfill interests of the capital. Also Wittpoth (2011) points out repeatedly in his functionally oriented discussions, that the goal of in-company continuing vocational training was not always the acquisition of new knowledge, but rather the reproduction of hierarchies.

On the other hand, especially with the convergence theorem of the “educational qualification” (Arnold 1991, Arnold 1996) there is an optimistic expectation of merging of pedagogic, subjective and corporate interest through work transformation. The employers are losing their ability to regulate the work of

employees. Instead, they need a responsible, self-managed employee. Corporate interests and the educational interests of the individual would converge at an increasing rate. This approach has been further developed in studies such as the so-called "Regensburg Convergence Model" (Harteis, 2004).

Adult education and pedagogic receptions of the system theory (see Kuper, 2000; Kurtz, 2002; Harney, 1998) indicate contrarily divergent logic of action and systemic incorporation of in-company and vocational continuing training. They see a convergence between the in-company and pedagogic guiding principles. Vocational further training is often expressed in qualifications, stating publicly the working capacity of the individuals and making them comparable on the cross-corporative level. The in-company continuing vocational training is not addressing persons primarily, but non-public organizations: "Companies use professional development as a means to address their own needs" (Harney 1998, p. 11). "The organization is important and not the participant" (Harney, 1998, p.143). In-company continuing vocational training is primarily based on the company structure –according to this view. The in-company learning must be focused on applicability and it must be functional, which is explained systemically. The differentiation theorem thus points at "the organized school teaching delimitations that break apart when facing the corporate reality" (Gonon & Stolz, 2004, p. 16). These delimitations or "activity honeycombs" (Robak, 2004) are to be defined or expanded, in order to explore the pedagogic scope of action.

Generally, on the macro level, the in-company continuing training participation can be estimated as good up to very good. The essential determinants of the participation such as the size of the company or the sector are national and well known for comparisons (Weber, 1985; K pplinger, 2007), although there are discussions about their relative importance. The determinants cannot be however shown in one empiric data set as a whole, since barely one data set is providing all the variables. In this respect it is hard to classify the various determinants in their relative importance and their complex interdependencies. The data bases are too different and some determinants are too different on the national level. The former focuses often solely on the economic determinants, whereas the latter explains the in-company continuing vocational education with social influence factors. In the empiric long-term tendencies over the past 40 years there is a well explained expanding of the in-company further training activities. However, this expansion has slowed down since the end of the 1990-ies. Especially, the invested time and the total finances for the in-company further training are relatively stable or declining. In the theory, this has barely been discussed and it partly contradicts the optimistic forecasts on the increasing importance of the in-company continuing vocational training in the knowledge-based societies.

Büchter (2002) or Kühnlein (1997) indicate that the critical view in pedagogy towards in-company further training was followed as a rule by a rather affirmative attitude. This could explain partly why surveys in the area of continuing education explain unexpected decisions of many companies only with their not being fully aware of the necessity of further training (Behringer & Käpplinger, 2008). It would be worthwhile if the further training decisions could be more comprehensively analyzed in their competing relation to other decisions of the company (staff recruitment, marketing activities etc.).

One of the challenges is that, on the one hand, research of participation in continuing education performs very well on the macro-level and on the level of probabilities. Notwithstanding the above, the decision-making behavior is highly contingent and heterogeneous (Wittpoth, 2011), if we look at theme so- and micro-processes of the in-company further training decisions. In this respect, a relatively high generality of results is set on the macro-level, both theoretically and methodologically, which could be used as a guideline for strategic decisions by the political decision makers and which fulfills the new implicit rules of the social sciences for calculating large data sets. Kaufmann and Widany (2014) point out different financing and external resource selection structures offering opportunities in the vocational and in-company continuing training. In the educational practice relevance of these analyses is limited to summary and reference values. In this respect the levels to follow are referred to as action and reflection guidelines for (pedagogically) professional approach.

Theories for program planning and education management in the in-company continuing vocational education – examples for the meso-level

The following approaches focus their research interest primarily on the meso-level of planning, management and decision behavior of the persons in charge in companies that provide further training. On the other hand, there are numerous conceptions and concepts about education management, education controlling, HR development or program planning. Company and HR management literature (Becker, 2005) makes reference to the decision models of in-company continuing vocational training, postulating prescriptively cyclic, circulatory sequential chronology of the three main phases – planning, implementation and evaluation. The needs' analysis i.e. derivation of further training activities from the company goals and action problems is very important for it (see Sava, 2012; Sork, 2010). Loop models exist in different forms both for education manage-

ment, education controlling and quality management (Käpplinger, 2010; Lattke et al., 2013). Empiric, testing surveys of these models and their relevance for action are however seldom. It is striking that especially in business administration literature the in-company continuing vocational training is understood only as an element of HR development, beside recruitment and HR management. This means that continuing education is observed merely as one instrument among others, so that developing knowledge, qualifications and competencies of the existing staff goes alongside recruitment of new staff with the missing competencies or simply alongside better exploitation of the existing resources. The knowledge management approaches (Pawlowsky & Bäumer, 1996) create an example for it, that it is often important to make individually existing qualification, knowledge and competence potentials available on the company level. Generally the explanation models are based on a rational-choice approach and are very strongly oriented towards economic goals. Decisions regarding in-company continuing vocational training are made in line with the general company goals and implemented in an economically functional manner.

In contrast and partly in direct criticism, adult education theories of program planning and/or education management point out that planning and organization of in-company further trainings is created through “Approximation Actions” (*Angleichungshandeln*, Gieseke, 2000) between different stakeholders. Accordingly, it would be an illusion to assume that further training programs could be developed following a planning cycle. Program planning activity is rather interactive (Caffarella, 2002) and refers to different “knowledge islands” (Gieseke 2000). However, the in-company continuing vocational training has not been in the focus of corporate studies on program planning and education management in adult education (see von Hippel & Röbel, 2015), but it has been frequently discussed beside other areas of activity. Be that in the case example of Cervero & Wilson (1994) or Robak (2004) in a company case analysis on education management. Basically these studies confirm that in-company further training planning is taking place interactively in different constellations. Robak (2004) speaks of “activity honeycombs”, Cervero and Wilson (1994) of power questions and action strategies. Consequently, Käpplinger (2010) shows by means of implementation of education controlling in companies, how differently it is executed and how different the configurations of goals, stakeholders and further training methods are. All these studies point out antinomies of professional behavior between economy and pedagogy (see von Hippel, 2011). In-company further training planning is not only committed to corporate goals, but also to disciplinary, professional goals. This could lead to conflicts in goals that have to be managed

explicitly or implicitly among the different corporate or external stakeholders such as further training providers.

To put it more pointedly, we can say that there are two major positions on the meso-level in the area of theoretic approaches. There is one group of rather *corporate or HR management approaches*, which are mostly oriented towards a rational-choice model. When it comes to planning and organization of the in-company further training, cyclic models are prescriptively described and they represent the planning, the implementation and the transfer, derived from corporate goals and a rational need analysis. After completing a further training, results are rationally evaluated and the findings are incorporated in the following cycle of planning and implementation. The activities follow primarily the functions deriving from company's purpose or problems related to operational efficiency. In contrast to this group there are *adult education approaches*, which comprehend planning and implementation as activities that take place relationally and interactively with many factors, thus making tensions between pedagogy and economy visible. Additionally, various interests of different stakeholders are suggested (trainer, learner, superiors, company management, works council, etc.). Professional approach is understood as an action that is not simply corporate goals oriented. Instead, the focus is put on the differentiation between profession and organization.

Although empiric research is more intensively represented in andragogy, the corporate and HR management explanation approaches have a greater response due to their allegedly higher compatibility with the organizational myths and ideologies (Mintzberg, 1983), which do not need the sentence "further-training goals have to comply with the company's goals" for an empiric description, but for justification of educational work in economic, corporate interest.

Regarding the operational activity of the company, the state of research provides primarily a prescriptive and descriptive orientation. The complexity and heterogeneity of the further training decisions becomes clear on the meso-level. A fairly great mismatch between the economic and pedagogic approaches may be irritating, but it can also be seen as an incentive for a confrontation with different approaches i.e. perspectives. Cyclic models have their strength in clarity, thus reducing complexity, whereas the adult education approaches offer much more differentiation. Theoretically and empirically it would be desirable to have more analytical studies in the future. Especially comparative and differentiating studies for different industries and sizes of companies, but theoretically responsive beyond individual cases would be beneficial, since the in-company continuing vocational training is treated in most studies comprehensively for one kind of the representative company.

Examples of theories for the micro-didactic design of the in-company continuing vocational education

On the micro-level there is generally a whole spectrum of learning theories available. In the continuing education research of the past years, especially constructivism (Arnold & Siebert, 1995; Gerstenmaier & Mandl, 1995), the subject theory (Faulstich, 1997; Ludwig, 2000) or transformative learning theory (see Mezirow, 1997; Popović, 2013) are of central importance. Cognitivism and behaviorism are however less significant – at least in the andragogy discourse. It is particularly important that in-company continuing vocational training is substantially influenced and structured by the company and the work context.

In the international context the discourse of the in-company continuing vocational training includes many things under workplace learning. Articles about it come primarily from the Anglo-Saxon and Scandinavian area (Bassanini et al., 2006; Billett, 2001; Evans et al., 2006; Engeström & Middleton, 2006). The attention is focused on workplace learning processes. The question is asked specifically, how a work environment influences employees in their development of competencies and how competences can be developed for this context. Individual preconditions or organizational framework of the workplace learning is examined respectively. There is a differentiation between learning-on-the-job, learning-off-the-job or learning-into-the job, whereas special attention is devoted primarily to learning-on-the-job. Empiric studies consider they could quantify learning activities and point out the underestimated importance of the informal learning (Livingstone, 1999). This discourse is pointing partially to a similar direction as the transformation theorem that proclaims a deeper transformation, which has to lead from a (course-designed) further training to (workplace close) development of competences (QUEM, 1996; Staudt & Kriegesmann, 2000). This theorem was an integrative part of a large educational policy research and development program at the end of 1990-ies. Empirically and also theoretically it was rather shown that formal and informal learning processes are mutually dependent and it is not future-oriented to construct a regulatory and interests' driven discrepancy here (Arnold, 1997; Baethge & Baethge-Kinsky, 2002; Behringer & Käßlinger, 2011). Other studies in the adult education discourse of von Ludwig (2000) and especially Dehnbostel (2010) regarding learning in the company context were particularly informative. Ludwig addresses learning processes from a subject and power-theory perspective. Dehnbostel and his students focus primarily on the learning processes based on the competence theory approaches. In general, the competence concept is used more often in the com-

pany context as well (Egetenmeyer, 2008). Among others Allespach (2005) is getting closer to the in-company continuing vocational training from the trade union and employees/internal perspective and Hocke (2012) examines learning of workers' councils in conflicts.

On the whole, many further studies could be mentioned (i.e. Dörner, 2004), which rely on different learning theory approaches in order to examine the in-company continuing vocational training. Biographic theory concepts, beside the constructivist and subject theory concepts, are very popular. For the comprehension and the approach purposes in the teaching-learning situation in the in-company continuing vocational education, the context of work, profession and company have great importance. This is specific, since companies are not classical further training institutions that have to include trainers from external further training providers, when cooperating with the companies (Schmidt-Lauff, 1999).

Summary

There is no big theory on in-company continuing vocational education, which would relate to all three stated levels. A quite frequent criticism (see Martin & Behrends, 1999; Schiersmann et al., 2001; Meyer & Elsholz, 2009) that theory development for the in-company continuing vocation training was on a rather low level compared to the meanwhile high output of publications is somewhat justified. However, there have been many studies in the meantime, which have to be consolidated and brought in relation to each other. There are different theories trying to describe and explain the in-company further training scene with different representation demands on different levels. Despite the frequently voiced call for interdisciplinarity, these theories are mostly assignable to single disciplines and the interdisciplinary communication on the research status is relatively low. This especially applies to economic approaches that barely consider studies beyond their own discipline. At the same time, theories such as system or human capital theory are often borrowed especially from andragogy and/or transferred to this activity area. In general a certain competition of theories from the economy science with theories from the social sciences can be stated on a larger scale. Although there are concepts such as convergence theorem, spotting an approximation i.e. synthesis of economic and pedagogic perspectives in view of the new production conditions in knowledge-based societies, it is more often concluded that these perspectives are antinomies.

In view of the conceptual history that is massively and intensively influenced by the general developments in the society and exceeding the mere discipli-

nary discussions, it seems even more necessary to agree on the theoretic basis for the discussions. Theories are denoted as eyeglasses that help perceive the world and its phenomena. At the same time this image is showing us that some phenomena in the close or far range can be perceived more or less good by some theories. Theories are also referred to as “telescopes” (Sork, 1996) for seeing the future developments, but sometimes also only for observing the past ones. From the scientific history and the social policy point of view it is interesting to understand when some theories and disciplines experience a boom. Do theories shape our view of the world or do the current developments and interests choose theories appropriate to them? Eventually, we could say quite openly like Lewin, there is no such practical thing as a theory. This becomes even more important especially in such a disparate, interdisciplinary and interest-drawn field as the in-company continuing vocational training.

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Teorije i teoreme kontinuiranog stručnog obrazovanja u kompanijama u Nemačkoj

Apstrakt: Na prvom mestu, ovaj rad daje definiciju oblasti obuke u okviru preduzeća (kontinuirane stručne obuke u okviru preduzeća). Nažalost, na obuku u okviru rada se retko gleda kao na oblast obrazovne aktivnosti, gde javna odgovornost i aktivno učešće zajedno pružaju važan regulatorni okvir koji ide dalje od tržišne radikalizacije i neuspeha na tržištu. Niz različitih teorija i teorema je ovde klasifikovano na osnovu trojnog modela višestrukih nivoa. Iako ne postoji teorija kontinuirane stručne obuke u okviru preduzeća, u istraživanju u oblasti kontinuiranog obrazovanja intenzivno se koristi nekoliko raznovrsnih pristupa koji se razlikuju po svom eksplanatornom potencijalu. Bez obzira na to, postoji potreba za daljom konsolidacijom i razvojem studija sa teoretskom i, iznad svega, andragoškom osnovom, u ovoj oblasti interdisciplinarnog istraživanja i aktivnosti.

Ključne reči: kontinuirana stručna obuka u okviru preduzeća, teorije, istraživanje o kontinuiranom obrazovanju, model višestrukih nivoa, konfiguracije.

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