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Similar or Different Training Cultures? German and Chinese Companies in Their Home and Host Countries

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Abstract: For internationally producing companies, training and recruiting skilled workers is particularly challenging. At various international locations, companies often encounter a "skills ecosystem" that differs to a greater or lesser extent from that of the home country. This article considers this problem and examines German companies in Germany and China and, conversely, Chinese companies in China and Germany. Specifically, it examines (1) how the training cultures of companies differ between the home country and abroad, (2) which influencing factors determine the training cultures realized in each case, and (3) what influence the respective nationally prevailing skills ecosystems specifically exert. The findings from these four perspectives document that German companies in Germany use the formal vocational training system of dual training, whereas German companies in China are strongly influenced by the local training culture of in-company learning. Moreover, Chinese companies in China also use this training, and only cooperate to a limited extent with the formal school-based vocational education and training system. These findings show that Chinese companies in Germany do not adopt the dual training system used in Germany. This article analyses these results and discusses the reasons behind them, drawing of a distinction between institutional logic and internal logic.

Keywords: training culture; skills ecosystem; vocational education; multinational companies; Germany; China

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1. Introduction

Globally operating companies need to employ skilled workers for their locations both domestically and worldwide. This is especially true for companies that produce complex and qualitatively demanding products [1]. These skilled workers require extensive education, which is often categorized as "intermediate skill level" in the scientific literature and is regularly placed below academic education [2]. For internationally producing companies, the training and recruitment of skilled workers poses a special challenge. This is because, at the various international locations, companies often encounter a "training culture" [3] that differs to a greater or lesser extent from that of the home country.

By training culture, we mean the short- and long-term company strategy of recruitment and training, which is not only shaped by internal needs [4] but also by the external conditions and circumstances of the location. These external conditions include, for example, the local vocational education and training (VET) system, the local labour market, government regulations, local and regional cooperations and the culturally determined appreciation of VET [5].

Despite the importance of this topic in the context of the increasing international activity of multi-national companies in recent decades, this topic has only been marginally studied in the academic literature so far. Gessler [1] identified successful transfer activities in a study on the training behaviour of Mercedes-Benz in Alabama. However, due to considerable deviations in implementation caused by the local context, this was more of a transformation than a transfer.

Aring [6] also noted a clear German influence in the training activities of North American subsidiaries of Volkswagen, BMW and Siemens as part of a case study investigation by the International Labour Organization (ILO), although these were heavily adapted to the local context. Körbel et al. [7] analysed the training of German skilled workers abroad in six countries. They identified various strategies with different degrees of duality, thus providing an overview of possible transfer variants. In addition, this group of authors found that different transfer solutions can also emerge within a country. The studies by Pilz and Li [8] (see also [9]) considered the qualification activities of German subsidiaries in China, India, Japan and the USA against the background of the companies' internationalisation strategies. The authors identified a clear orientation towards the local context. The involvement of companies in formal vocational training is also a core element in other studies [10] (p. 10).

Comprehensive findings were also provided by Röhrer et al. [11] in the context of the tourism industry in Mexico, and by Wiemann and Pilz [5], who examined the training behaviour of German multinational companies in Mexico, India and China. In the latter study, it became apparent that the local institutional settings exerted a large influence on the training culture of the companies. With regard to the specifics of the respective VET system and labour market, this study revealed that local actor networks, special legal regulations (e.g., on youth labour protection) and the cultural perception or value of VET were important influencing factors. As a result, we use the term "skills ecosystem" for these national context conditions, including the formal vocational training programs [12].

The research findings outlined here and in the existing literature reviews on the topic of VET transfer [13–16] show that, so far, very few results are available on the comparison between the training strategies of internationally active companies. Moreover, the influence of local skills ecosystems on training cultures has received limited research attention. Against the backdrop of this research desideratum, the following research questions will be examined:

1. How do training cultures of companies differ between home countries and abroad?
2. What factors influence the training cultures implemented in each case?
3. What influence do the respective nationally prevailing skills ecosystems have on the companies' training cultures?

To address these research questions, companies from Germany and China were selected as research objects. This selection was made against the background of very high direct investments in each other's countries (and thus a correspondingly high potential number of cases) [17,18]. Additionally, a "most different design" [19] was pursued with regard to the formal VET system in the home country.

Some essential information on the respective formal vocational training systems in Germany and China is provided here as an introduction to support a later interpretation of the findings. A direct comparison of the vocational training systems of the two countries is not made here. Rather, the information serves as a basis for the comparison of the findings on the four different perspectives.

In Germany, the training of the next generation of skilled workers at an intermediate qualification level is traditionally associated with vocational training in the dual system [20]. Although there is also a full-time school system, it was not mentioned by the experts in the interviews conducted. This system is regularly referred to as "dual" because the training is carried out at two places of learning: in the company and at a vocational school. Training usually lasts three years and is regulated by law for the whole of Germany in the Vocational Training Act. The aim of training in the dual system is to impart broad-based basic vocational training through a structured training course. It aims to ensure that people receive the qualifications and competences necessary for carrying out a (qualified) occupational activity in a changing world of work. Successful completion of the training course qualifies the trainee to practise as a specialist in one of the 325 currently recognised training occupations [21]. Full-time compulsory education in the general school system must have been completed prior to the start of VET. However, there are no further formal

entry requirements for access to training in the dual system; it is essentially open to all. Training takes place on the basis of a private-law vocational training contract between the training company and the trainee. The trainee is trained three to four days a week in the company and up to two days a week in the vocational school. The company bears the costs of the in-company training and pays the trainee an allowance that is contractually regulated between the collective bargaining parties. The level of remuneration increases with each year of training, and amounts, on average, to approximately one-third of the starting salary for a trained skilled worker. For in-company training, the occupational competences to be acquired are specified in training regulations, which are concretised by the training company through an individual training plan. For each recognised training occupation, a framework curriculum coordinated with the training regulations is established for teaching at vocational schools. Training environments are offered in companies in the private and public sectors in the practices of the liberal professions and, to a lesser extent, in private households. The companies make a contractual commitment to providing the trainees with the occupational competences specified in the training regulations for their respective training occupations.

The training regulations are binding, which ensures a uniform national standard independent of current company needs, and which corresponds to the requirements of the respective occupation. Training may only take place in companies in which the qualifications required by the regulations can be imparted by personnel with personal and professional aptitude. The suitability of the training companies and in-company training personnel is monitored by the competent self-governing body of the economy (chambers). The chambers also monitor the training itself. The training company draws up an in-company training plan for the trainees. This should correspond to the factual and temporal structure of the training regulations but may deviate if necessary for practical reasons, provided that the teaching of all training content is guaranteed. The vocational school is an independent place of learning in the dual system. It has the task of imparting basic and specialised vocational training and expanding the previously acquired general education. The training is completed with an examination and certification by a competent body, which is usually a chamber.

The VET system in China differs from the German one in many aspects. Formal VET in China is organised on a full-time basis and is located in lower and upper secondary schools as well as in higher education. At the upper secondary level, which is relevant here, there are three types of vocational schools, two of which have similar structures and profiles due to the constant political reforms in Chinese VET. These two vocational school types are the vocational high schools (zhi ye gao zhong) and the vocational specialised high schools (zhong den zhuan ye xue xiao). The vocational specialised high school is the most common type of vocational school. Its profile consists of full-time schooling with a small practical component. Most of the practical lessons are held in a type of school workshop. Some practical training also takes place in companies, but there are no formalised regulations for training in the companies. Most of the time, the companies pay the interns an expense allowance. However, there is no regulated payment as in the German dual system.

The entry requirements for vocational specialised high schools are based on completion of the general education branch of secondary school and successfully passing an entrance examination. The training lasts two to four years, depending on the level of previous education and the chosen course of education. These schools can be divided into technical and pedagogical specialisations, where the technical specialisations train specialists for specialised fields such as industry or finance. Since 1986, graduates of vocational specialised high schools have been able to continue their education in higher vocational education at the tertiary level [22,23]. As mentioned above, the vocational high schools have a very similar profile to vocational specialised high schools. Vocational high schools will merge to vocational specialised high schools in the future. The vocational and vocational specialised high schools operate under the Ministry of Education (MoE). The MoE has published educational standards for the design of school subjects. General education subjects should

not exceed one-third of the total teaching hours. The schools can determine their school profile from 73 educational programmes.

Skilled workers school (ji gong xue xiao) are the third form of vocational school. This type of school operates under the Ministry of Labour, the Ministry of Human Resource and Social Security (MoHRSS) and is designed to very closely accommodate the needs of industry. The training content can be flexibly adapted and differs regionally. There are often cooperative activities between the schools for skilled workers and regional enterprises. The duration of training is usually three years, and it trains skilled workers who require good job-specific skills that can be quickly deployed in production. The entry requirement for these schools is the completion of the general junior secondary school at the lower secondary level. Skilled workers schools have the strongest practical orientation of all forms of vocational education at the upper secondary level and specifically train personnel for industrial production. In addition to the school certificate, at the end of their training, graduates take part in the industry-recognised state vocational aptitude certification, which certifies qualifications at the lower to intermediate level. This certification is a compulsory part of the training at the skilled worker school [22].

The costs incurred for VET are mainly financed by the state. The basic state funding is based on the number of students enrolled in the VET institutes [24]. Since autumn 2017, all students of VET schools at secondary level II have been exempt from school fees.

2. Methodological Approach

To answer the research questions, we conducted an analysis of the training behaviour of German companies in Germany and Chinese companies in China. Therefore, the focus was on surveying the companies' training cultures in the respective home countries. In the second step, the German companies in China and the Chinese companies in Germany were examined. This made it possible to compare foreign and domestic training activities.

This four-perspective design made it possible to analyse not only the comparison between the home country and the foreign country, but also to explore different or similar training strategies employed by companies from Germany and China.

To operationalise the construct "(inhouse) training culture" [3], we utilized a multi-level model of analysis by Pilz and Wiemann [25] (p. 98). This model does not automatically equate the formal (and often state-funded) VET system with the way companies meet the demand for skilled workers. Rather, this approach focuses on the company perspective and excludes the formal VET (in our approach, we assign the formal VET system to the skills ecosystem, see above). Specifically, this approach distinguishes between the macro, meso and micro levels, although only the macro and meso levels are relevant for the research focus here. At the macro-level, the institutional structures and economic, social and political frameworks are relevant. Specifically, this includes the external influencing factors for the companies training culture, such as the characteristics of the local labour market, connections with the local (vocational) training system and respect for VET (socio-culturally determined) [5]. At the meso level, organisational and regulatory design of VET plays a role. Factors such as decision making and strategy development in multinational companies, production-oriented training needs, recruitment and financing/costs are relevant here. At the micro level, training procedures are of interest. Our conceptual approach broadens the interpretation of the term "training culture" and concretizes it in terms of our research interest [26] (pp. 58–59).

The comparative study presented here is based on five individual studies conducted by us, which differ in terms of the number of cases and aspects of survey design, but all address the research questions that are focused on in this study. In all studies, expert interviews were conducted with training managers and training directors, which were guided by questionnaires based on the three levels outlined above. These interviews were electronically recorded and evaluated using qualitative content analysis methods [27], and the findings were condensed. This procedure was partially supplemented by company visits, observations of teaching-learning situations in the companies and analyses of documents

such as training plans (further detailed information on the individual studies can be found in the individual chapters). Through a renewed partial evaluation of the data material based on identical criteria from the external factors influencing the training cultures in the companies outlined above, a standardisation of the research design was achieved.

In detail, the design of the individual studies is as follows:

Two studies were conducted to investigate whether and why German companies train their junior staff in the dual system. In the first study, those responsible for training in five German companies in southern Germany were interviewed in the context of a German–British comparison using semi-structured interview questionnaires (see in detail [3]). The interviews lasted one to two hours and were each documented by two researchers. A total of 11 persons were interviewed in their function as managers, owners and training directors. The data collected in 2007 were evaluated again in the context of the operationalisation of the training cultures.

The second study is more recent [28]. For this study, 15 training managers at the headquarters of 8 large German companies in various sectors in Germany were surveyed in 2017 and 2018 using semi-structured interviews about training strategies. The interviews lasted approximately one hour and were each documented by audio tapes.

Another study that investigated the training activities of Chinese companies in China, conducted in 2018, is reported here [29]. A total of eleven Chinese companies were interviewed about their training and recruitment activities. The companies surveyed were from the manufacturing sectors of plastics, glass and metal processing, as well as small goods production in the Shanghai metropolitan area. The focus here was on the investigation of medium-sized companies to avoid distortions caused by lighthouse projects of some large companies. The number of employees in the companies studied ranged from 200 to 450. The interview guidelines used were developed along the lines of the second study on Germany (see above) but adapted extensively in advance to the Chinese context. Semi-structured interview guides were used to be able to consider additional categories derived from the findings. The interviews were conducted in Chinese language by two Chinese researchers. The interviews were audiotaped and then analysed by the two researchers and important aspects were translated into English.

The study on training cultures of German companies in China examined various production sites of German companies in the Shanghai area [25,30]. Different sizes were included in the selection of the companies. In addition to large transnational companies (global players), smaller transnational companies were also included. The study focused on mechanical and plant engineering sectors, the automotive industry and its suppliers, as well as the electronics and chemicals sectors, as they are particularly relevant to German direct investment in China. Due to the difficulty in accessing these companies, the selection process was based on direct approach, personal contacts and networks. A total of 73 training experts in 30 companies were interviewed in 45 interviews. The interviews were conducted in 2016 and 2017 by German researchers in German or English and recorded on audio tape.

When considering the training cultures of Chinese companies in Germany, data from an ongoing research project is referenced [31]. The project involves six virtually conducted interviews recorded in 2020 to 2022 with seven business and personnel managers working in branches of Chinese companies in Germany. Due to the difficulty in accessing these companies, the selection of the companies was not done in a random manner, but rather by means of personal contacts and networks. The interviews, each lasting approximately one hour, were audio taped. The companies were from the metal, electrical and ICT sectors, the majority of which have expanded into Germany in the last 4–15 years and currently have a maximum of 250 employees in Germany.

To compare the results in relation to the four different perspectives, an explorative–qualitative approach was used to capture detail and proceed in an interculturally sensitive manner.

3. Findings from Four Perspectives

The following is a presentation of the findings from the four perspectives:

3.1. Findings on the Training Behaviour of German Companies in Germany

Whether and why German companies train their junior staff in the dual system was the basis of two studies.

In the first study, many interviewees directly or indirectly mentioned the social responsibility that companies bear towards trainees.

> "Since the skilled crafts sector wants to bear social responsibility, secondary school pupils are also hired."—Owner, craft business in Germany

The organisation and structure of the German labour market was identified in this study as another important reason for participating in the dual system. The German labour market is regulated by various state laws (e.g., protection against dismissal), collective bargaining laws and the need for certificates as access authorisations to certain occupational activities. However, the willingness to train is ultimately oriented towards company demand, which in turn depends heavily on the quantitative and qualitative situation on the labour market:

> "Since the external market for this profession is empty, we are forced to promote training internally."—Bank manager in Germany

In Germany, the poaching problem [32,33] is seen as less relevant because training is provided by many companies. As a result, well-trained employees are available as replacements via the labour market when their own trained employees leave the company.

> "After training, many trainees go to companies that do not train themselves. But that's not a big problem because many other companies still train and new qualified employees can be found via the labour market."—Owner, craft business in Germany

In addition, many sectors in the German labour market are characterised by relatively long-term or permanent employment with low fluctuation. This was emphasised multiple times by the interview partners in this study.

The final point to be made in this study is that private companies in Germany calculate the costs and benefits of initial vocational education very precisely. The owner of the German craft enterprise aptly summarized this by saying, "Overall, the training must pay off for me." The costs are considerable, with mentioned amounts ranging from EUR 20,000 to 30,000. However, these costs for external course fees, training allowance, in-house trainers, working and learning materials, etc. are also offset by the revenue generated by productive work. Because trainees are (in part) already involved in the regular production of goods and services during the qualification phase, the costs are considerably reduced.

In addition to the returns, which can be calculated relatively precisely from a business management point of view, the surveyed companies also mentioned other benefits. However, the quantification of these benefits was only possible to a limited extent. First and foremost was the transfer of competences, which was mentioned by all of the involved companies. Only well-qualified employees can perform well. In addition to securing a well-qualified workforce in the long term, the long-term loyalty of employees to the company also plays a large role. This includes the fact that employees need to internalise the company's corporate culture, which can take place during training.

With regard to the influence of the education and training philosophy on training activities, the survey generated very clear findings for the involved German companies. The training was found to be comprehensive and necessarily broad-based, even from the employers' perspective, and thus company independent. General education also played a certain role in this.

> "With regard to general education, the political further education of the trainees, environmental education and the development into a 'responsible citizen' are to

be mentioned as important tasks of our company."—Training manager, industrial company in Germany

In the second study on German companies in Germany reported here and recently conducted by the authors [28], these earlier findings could be largely confirmed and partly extended. In this study, the interview partners also mentioned long-term planning to meet the needs of their companies. Thus, dual training appears to be the only suitable instrument at the intermediate skill level. Providing their own training within the framework of their own needs and possibilities was seen as a matter of course, and the quality of dual training was emphasised.

The companies justified the decision to provide their own training with the trainees' long-term commitment to the company:

"That is really purely German, that there is such a bond with the employer, that is, with the company where one is employed. In other words, where you have perhaps already done an apprenticeship. That's quite possible in the skilled worker sector."—Training manager, chemical company in Germany

This long-term approach was desired by the companies, and was also reflected in the trainees' opportunities to pursue careers after the training:

"I know a bunch of examples from the plant alone of people who have had a fantastic career with vocational training without having studied."—Training manager, automotive supplier in Germany

The practical relevance of the trainees' teaching–learning processes also plays an important role, which in turn, is related to the need and willingness of the costs to be covered:

"Training in company practice and company value creation are in the foreground. Producing for the rubbish bin is no longer in the foreground, but rather the attempt is made to impart knowledge and competence by means of real assignments. That should also be visible there, that you have contact with the specialist departments, that you take on orders or carry out work in the specialist department, that's what's at this point."—Training manager, car manufacturer in Germany

The external impact of the company is also important, and this underlines the social embedding outlined above:

"with the topic as a socio-political contribution or also as a factor when it comes to employer branding, it simply shows that it is because it is a very emotional topic. We always notice that in Germany, too, especially when it leads to negotiations with the social partners, that training is always an emotional topic and very often becomes a subject of negotiation between the social partners. There are reasons for that, because in the end it's about the future of our children."—Training manager, electronics manufacturer in Germany

The findings of both studies clearly indicate that German companies see various advantages to the dual VET system and therefore actively participate in this form of training [34]. Our survey did not find other forms of initial training at the intermediate skill level to a large extent. Consequently, from a company perspective, the German companies' training culture was strongly linked to the system of formal training in the dual system.

3.2. Findings on the Training Behaviour of Chinese Companies in China

Since little can be derived from the literature with regard to the training activities of Chinese companies in China, a study conducted in 2018 will be reported here [29]. The interviewed companies focused on work experience and less on formal vocational training when hiring employees in production. Approximately 90% of them reported hiring experienced employees for production activities who were already familiar with

common production processes, and formal VET was often not a prerequisite. The company representatives spoke about the simple tasks that were carried out on the assembly line:

> "The employees all have experience in assembly line production before they come to us. In the future, we would also like to cooperate with schools. Graduates from the schools will be used in management and research."—HR manager, metal producer in China

One company reported that it had previously cooperated with vocational schools to identify potential employees through work placements. However, these school graduates had higher expectations in terms of remuneration, working conditions and activities, and the turnover among this group was very high. For technicians, engineers and administrative jobs, three companies cooperated with higher vocational colleges, and short internships were sometimes offered. The companies also participated in school career fairs to attract graduates. Two companies recruited individual production workers through a vocational specialised high school to secure management trainees for production departments.

The recruitment behaviour of these companies resulted in no extended in-company training—according to the German understanding of dual initial vocational training—in the Chinese companies. In-company training was limited to the induction of new employees. However, there was minimal differentiation present between experienced employees or (vocational) school graduates.

This in-company training was divided into two parts in all the companies. In the first weeks, there was formal training regarding general information about the company, for example the company culture, products, rules and house rules, as well as general safety instruction. The duration of this first part of the induction varied depending on the company. In general, it lasted one to two weeks. This training was conducted centrally for all new employees in company training rooms by staff from the human resources department. For example, within a company, department heads or experienced employees taught technical content on certain products. The training was accompanied by in-house training materials including but not limited to manuals, house rules and product brochures. In all companies, this training concluded with a written knowledge test. The second part of the induction took place directly at the workplace in the respective department. New employees were often trained by department heads or experienced employees. The process began with new employees observing the job performance of experienced employees for a certain period of time, usually one week. In the weeks that followed, the new employees gradually became active themselves. The duration of this part of the induction depended heavily on the progress of the new employees, and there may have been other specific safety training courses in the individual departments.

> "Our induction takes place according to the principle of 'experienced people supervise new ones'. At first, the new employee only observes, then he is gradually allowed to operate the machine himself. Towards the middle of the year, we organize another central training session for all employees who have been hired this year. Each department head gives a presentation on his or her area of responsibility so that the new employees get an overview of what the company does."—HR manager, producer of small plastic parts in China

Following induction, there was hardly any initial in-house training and, as such, further training measures were highly relevant, although their intensity varied between companies. The regular safety training courses prescribed by the state were the same. In addition to these, further training took place mostly as needed within the production departments, and only the department heads were trained. The department heads then had the task of passing on the new knowledge and skills to their employees. There was little standardisation in how this was accomplished by the interviewed companies.

> "We focus more on the department heads in further training. They pass on the new knowledge in their department. Weekly staff meetings are held in each department. Important information is shared in these meetings. This is also where

some training activities are implemented by the department heads."—Human Resources Manager, print technology in China

There were no exams, and certificates were only issued by external training staff, if at all. Furthermore, machine training was often conducted by machine manufacturer personnel. In all companies, the majority of training activities were organised and carried out by employees from the human resources department or by specialised department heads. With the exception of one company, these persons did not have any pedagogical qualifications. According to the survey results, with the exception of one company, such pedagogical qualifications were not considered necessary. Professional knowledge and practical experience were seen as important by the companies.

"No, he [employee] is not a real trainer. He works in this department and is an expert in this field, but he has no qualification as a trainer."—Human resources manager, producer of electrical parts in China

These findings clearly show that Chinese companies primarily recruit experienced staff from the labour market and, instead of initial training, they practice a shorter induction period followed by further specific further training, if necessary. As a result of the extensive decoupling from formal VET, the companies' training cultures in China were found to be much more characterised by (lower level) in-company training activities.

3.3. The Training Behaviour of German Companies in China

In this section, we will examine the training cultures of German companies in China. To this end, we refer to a study that examined various production sites of German companies in the Shanghai area [25,30]. These findings indicate that the companies created different solutions to accommodate a different skills ecosystem, including setting up their own training centre and adapting to local practices.

More than the half of the German companies in the sample cooperated in different ways with vocational schools, particularly vocational specialised high schools, and with higher VET institutions. Depending on the size of the companies, the cooperation was intensified through their own company-specific classes, and there was support in the form of equipment or assistance in conducting the classes.

In addition, increased cross-company cooperation was observed. Particularly in the greater Shanghai area, there was joint cooperation with higher vocational colleges, as well as cooperation with inter-company training centres. Genuine cooperation with the local VET system, in the sense of mutual coordination of content and teaching and learning methods, was an exception.

From the companies' perspective, the courses offered in the schools usually had only a small practical component, and they felt that the individual responsibility of their students was not sufficiently promoted. One expert reported on his experiences in cooperating with a vocational school:

"From my point of view, the Chinese system is more theory-oriented, less practice. That means that when they are finished after three years, we can't really do much with them. Then the real practical part begins."—Training manager, German car manufacturer in China

Therefore, formal school-based vocational training was often followed by in-company training, as one interviewee explained:

"We are still too small. Or: We can't afford it. Therefore, every now and then we have trainees who we then bring in from a technical school, and we then train them for ourselves."—Manager, German chemical and mechanical engineering company in China

Other companies also reported taking over the school part themselves. For example, various prominent German companies in China offered training that was closely oriented to the German dual model within their own training centres, at considerable expense of

resources. However, very few companies tested and certified their inhouse training. One interviewee provided the following statement on the certification of training in cooperation with a vocational school:

> "Well, that all goes through the school. They don't get anything from us. And we are not really interested in the certificates. They have to be able to do something and want to work and then it's good."—Manager, German mechanical engineering company in China

A group of small companies did not offer training for junior staff themselves and did not cooperate with vocational schools. They reported often recruiting experienced skilled workers from other companies and trained them only briefly.

A special feature found in almost all companies was the distinction between low-skilled and skilled workers. Although the former were often recruited from local vocational schools and only received rudimentary training, this was not sufficient for more demanding tasks. These included, for example, the control of automats, robots and plants, as well as maintenance and repair. The companies reported making a greater commitment to training these technical specialists.

Because the production processes were often less automated in China than in Germany and also involved more manual and less complex job profiles, many of the companies surveyed also reported having no need for comprehensive training according to the dual model:

> "Otherwise, we have already defined and simplified our processes and also our process instructions to such an extent that even a more or less unskilled person can easily follow the process steps. And that's one of the biggest challenges here, to simply break it down to such an extent that you could basically take X random person to do it."—Manager, German chemical and mechanical engineering company in China

In instances where comprehensive qualification was not absolutely necessary, many companies refrained from cost-intensive and lengthy investments in large parts of the workforce. In the metropolis of Shanghai, the labour market is characterised by a high degree of flexibility, which is why all companies reported both a relatively high employee turnover and a low level of employee loyalty. The low company loyalty was described by one interviewee as follows:

> "Otherwise, the loyalty, so if there is a better offer, then the chance is already there that someone will leave. So, it's not like in Germany that people tend to stay and say 'come on, now I've been there for five years, now I'm not changing either', but it happens faster."—Training manager, German car manufacturer in China

Due to the strict entry restrictions of universities who chose this career path only because they did not meet the university entry requirements. This leads to the assumption of a rather low level of identification with the respective occupational profile and the company. Therefore, the willingness to change companies and occupations is also increasing. In our study, five companies explicitly tended to plan for the short term. According to the respondents, this planning pattern was often due to the short-term awarding of contracts and the strongly fluctuating order volumes of projects for which they acted as suppliers. As a result, newly hired workers needed to be deployable without much lead time. In China, for example, migrant workers are often recruited for low-skilled jobs, which are aimed at a short-term working relationships from the outset. As one interviewee described:

> "Where we still have a fluctuation, of course, is with temporary workers that we need to cover the peaks. When we have a lot of work, we practically take them off the street and let them do simple jobs, then when we don't need them anymore, we just let them go again."—Manager, German chemical and engineering company in China

This perspective is contrary to a long-term qualification strategy such as a three-year dual training program based on the German model. Overall, the findings of this study indicate that a clear connection to the local skills ecosystem was evident, especially for simple activities. However, the influence of the German model was only detected to varying degrees for technical specialists. For this relatively small group of employees, the connectivity to the formal VET systems proved to be an important influencing factor in China, as the vocational schools provided German companies with an institutional link. Overall, German companies in China tended to have an internal training culture that was shaped by the conditions of the labour market.

3.4. The Training Behaviour of Chinese Companies in Germany

When considering the training cultures of Chinese companies in Germany, reference is made to data from an ongoing research project [31]. This survey revealed that none of the companies interviewed were actively participating in dual training activities in Germany at the time of the interview. In principle, the cost/benefit ratio was found to play a decisive role in deciding whether to offer dual training activities at the branches of the Chinese companies in Germany. In this context, the interviewed business and personnel managers placed particular emphasis on the organisational and time expenditure of such activities, while purely monetary cost considerations were not given priority. These assessments should be seen in the context of the dynamic growth or change processes in the branches under consideration at the time of the interviews. The interviewees attributed the reasons for these situations to the dependent role of the branch office in the international corporate organisation, as well as the young age of most of the branch offices considered.

This aspect was described by a person responsible for human resources in a branch of a Chinese company which has been located in Germany for more than 10 years:

> "After settling here, we first had to make sure that we established ourselves, gained market share and made ourselves known in general. And then that meant hard work for each individual. And you didn't have the time, or haven't had the time yet, to really train as a trainer or to have the time. Because that means extra work, as you can see. And you have to compensate or balance this somehow in addition to the actual task you have in the company. So, from that point of view, it hasn't come up yet."—Human resources manager, Chinese machining company in Germany

The interviewees who were socialised within the German labour market and training system showed a positive openness and familiarity with German dual training practices. Some of them had also undergone dual vocational training themselves. This underlines the previously described observation that non-participation in dual systems is presumably rooted in the current situations of the branches under consideration and not in a fundamental rejection of the system. Approximately 90% of the HR managers interviewed also described their HR colleagues in a similar way.

For example, the HR manager from the branch of the Chinese company, who was quoted earlier, described her open-mindedness and familiarity with the system and her dual training considerations as follows:

> "What we have thought about and will certainly make possible next, and have already taken the first steps towards this, is [an apprenticeship opportunity] [in the,] in the warehouse. So that one simply says: 'We could also train someone ourselves as a warehouse logistician'. And we have already had the first talks with the Chamber of Industry and Commerce. And we listened to what it looks like, what is needed, what are the prerequisites. And in the end, we already have the licence, so to speak. And we could more or less start tomorrow."—Human resources manager, Chinese machining company in Germany

Similarly, plans to start dual training activities were described in five of the Chinese company branches in Germany that were also considered.

The following quotation also underlines this combination of organisational and time expenditure for the company branch and positive openness and familiarity on the part of the HR managers. It comes from a conversation with a person responsible for human resources in the management of a branch of a Chinese electronics company, which has expanded rapidly in recent years:

> "generally already open to it [training]. It's more a question of resources. I think we really need someone here soon to support us in the human resources department, and then you can also look after something like that very well. But in itself, I would also trust myself to do it. I know how it works with the vocational school. I know what you have to pay attention to and how the trainees can be employed here or the dual students. So... I've also thought about maybe looking into whether this could start next year or the year after."—Human resources manager, Chinese electronic company in Germany

In the context of these positive views of the German dual training system, the decision-making competences of these persons in the international corporate context were a decisive factor. Four of the seven interviewed persons reported seeing a relatively high degree of independence in terms of personnel strategy within the international company for the German branches. Because of this configuration, the previously described system socialisation and the positive, open-mindedness and familiarity of the HR managers within the branches with the system can be assigned even greater importance.

The person working in the management of the branch of a Chinese electronics company quoted above described this as follows:

> "I would have said that [about training activities] is decided together with the managing director. Yes. And I don't think that we will see restrictions, that the mother in China says: No. You shouldn't do that. Or so. I can't imagine that, because we know the German market here and we know the training system. From there..."—Human resources manager, Chinese electronics company in Germany

A person in charge of human resources from a branch of a Chinese mechanical engineering company described the decision-making competences, with a clear performance restriction, in many personnel matters as follows:

> "we [are] very free. So, we can do a lot on our own. Otherwise, they don't have any guidelines. As long as it works, everything is good!"—HR Manager, Chinese construction machinery manufacturer in Germany

Five of the interviewees mentioned a difficult German labour market for the subsidiary in connection with the recruitment of skilled workers as a reason for considering the establishment of dual training opportunities. Other reasons cited were a potential long-term employment relationship and the possibility of teaching company-specific content. The person from the management of a branch of a Chinese electronics company quoted above described it as follows:

> "Of course, it is also very good for us when we [...] have trainees. They get to know the company from the ground up. We can use them here later. So, in itself, I think it's a good thing."—HR Manager, Chinese electronic company in Germany

If these considerations are viewed in the context of German labour market regulations and dynamics, as well as the overall situation of the subsidiaries described above, an adaptation to national structures and dynamics seems to be emerging over time. Poaching activities to recruit skilled workers were described as a strategy by two interview partners, but this was primarily for filling management positions.

Overall, the interview partners seldom mentioned societal and traditional roles of responsibility related to dual training opportunities as important motivations. However, two interviewees from the branch office of a company explicitly emphasized the responsibilities

of future trainees in connection with dual training activities that had not yet begun but were being considered:

> "We said that we first wanted to have a proper status, that we really wanted to bring continuity here, that we really wanted to say that the trainee could really learn something from everyone, rather than just doing filing in the commercial area."—HR Manager, Chinese construction machinery manufacturer in Germany

Our findings do not indicate that the Chinese management level was pushing participation in the German dual training system. However, given the relevance of understanding the German labour market, as emphasised several times by the interview partners, the findings suggest that less importance is attached to training. This is further supported by the fact that no company has offered dual training to date.

4. Discussion of the Overall Findings

The four different perspectives presented here can be compared to answer the research questions. The findings we collected clearly show that the training practices of companies differed between the home country and abroad. However, this applied more to German companies, which use the dual system intensively at home but only to a limited extent in China. Complex training was also provided in some German companies in China, especially in cooperation, especially in cooperation with the local vocational schools. However, in many cases, this only applied to trainees who would later be employed in jobs with higher levels of requirements. The large amount of simple work, on the other hand, was done by unqualified or semi-skilled workers.

The Chinese companies in our study, on the other hand, operated identically in Germany as they did in China. They did not provide initial training themselves, but instead fulfilled their needs by recruiting external skilled workers.

Concerning the impact of the national skills ecosystems, various and complex factors could be identified as influencing the respective inhouse training cultures. In addition, the various factors are interdependent. For example, a flexible labour market with high employee turnover leads companies to pay particular attention to training costs, as the return on investment is hardly given if internally well-trained specialists leave quickly [35]. Table 1 maps the findings in a structured, condensed form.

Table 1. Elements of company training culture by country of origin.

Corporate Strategies Regarding Training Activities in Relation to External Factors	***German Companies in Germany***	***Chinese Companies in China***	***German Companies in China***	***Chinese Companies in Germany***
Labour market regulation/structure/dynamics in the country where the business is located	Little poaching, shortage of skilled workers in various areas	High demand for skilled workers, which is met through poaching	High employee turnover rate are partially perceived as a problem	High demand for skilled workers, which is met through poaching
Decision-making authority over training activities	Local	Local	Local	Locally and through parent company
Recruitment	Recruitment of school leavers and training by the dual apprenticeship system	External recruitment	Recruitment via vocational schools only for some higher positions, recruitment of unskilled labour for simple tasks	External recruitment
Social responsibility	Exerts significant influence	Not pronounced	Not pronounced	Not pronounced
Costs for the company	Relevant, but cost–benefit ratio is considered, including a practically and suitably trained, long-term perspective	Costs not relevant, as externalised to state actor (vocational school) or other companies	Costs relevant, but training economically sensible for specialist positions	Costs relevant
Production-oriented training needs	Comprehensive and broad training of as many employees as possible	Strong Taylorisation of work processes and thus low demand for skilled workers	Strong Taylorisation of work processes and thus low demand for skilled workers	Need for skilled workers in production, but no need for training due to external recruitment

Based on the findings presented so far, it is now possible to discussed the influence of the respective nationally prevailing skills ecosystem on the training culture of the companies. In all four perspectives, it is evident that the respective skills ecosystem exerts a significant influence on the training culture.

The German training system is defined by a highly regulated and standardised framework (see above), which includes the involvement of many different actors, including trade unions. This alone achieves a high level of consensus and acceptance across society. The linking of dual training with the collective bargaining system and the connection to other parts of the education system (e.g., the further training option to become a craft master) also promotes the reputation and standing of VET. This perspective is supported by the social responsibility towards trainees and a certain traditionally shaped motivation to train. However, our findings show that the Chinese companies in Germany were less influenced by these "soft" elements of the German skills ecosystem. Although the statements of the German-born training managers demonstrated their understanding of this culture, they were counteracted by requirements from the parent company. Conversely, it is surprising that the "state dominance" regarding the state vocational school system in China [36] ultimately exerted less influence on training strategies in both the Chinese and German companies. Despite the strong regulation of the full-time vocational schools that is common in China (see above), in-company training behaviour was largely decoupled from or independent of this. Consequently, in contrast to Germany, the company's training culture in China was largely shaped by the respective activity of the individual company. This activity was often limited to the training of externally recruited workers. One reason for this could also be the lack of practical relevance of full-time school-based training, which can be found in many full-time school-based vocational training systems worldwide [37]. Consequently, the points of contact between company-organised VET activities and school-based offerings are limited [38]. Ultimately, the Chinese inhouse training culture is therefore more geared towards the short-term strategy of poaching, primarily due to high turnover and the risk of poaching by other companies. Since not only Chinese, but also German companies are affected by this, companies of both countries of origin behave similarly in China and shy away from the costs of comprehensive training. Consequently, German companies in China are more likely to adapt to the training culture of Chinese companies than to export the German training culture. Table 2 provides an overview of these findings.

Table 2. Companies' training cultures in relation to the national VET system by country of origin.

German Companies in Germany	*Chinese Companies in China*	*German Companies in China*	*Chinese Companies in Germany*
Close link between companies' training cultures and the national VET system (as part of the local skills ecosystem)	***Weak link*** between companies' training cultures and the national VET system (as part of the local skills ecosystem)	***Weak link*** between companies' training cultures and the national VET system (as part of the local skills ecosystem), ***except*** for higher skill level job positions	***Weak link*** between companies' training cultures and the national VET system (as part of the local skills ecosystem), ***but*** changes in the future are possible

Against the background of the theory-based approaches outlined in the introduction, it can be stated that the design of training and recruitment in companies can yield fruitful results by analysing the connection between the "training culture" and "skills ecosystem". However, the interpretation of the findings thus realised tends to remain at a medium level of abstraction. However, if more comprehensive and abstract approaches are to be used, other theoretical approaches must be consulted.

To reflect on these findings in a more theoretical manner, it is useful to turn to theories of "institutional logic", which Zoellner [39] has recently applied the field of VET research. The author shows that the country-specific institutional design of the labour market and VET exert dominant influences on the strategies of companies and training providers, and therefore the transfer of training cultures between countries is difficult (see [4] for similar empirically validated findings). This argumentation is largely consistent with our conception of the importance of training cultures and our empirical findings. However, why this situation is different for Chinese companies in Germany can be explained by

extending the institutional logic approach. To do this, we refer to Raffe [40], who contrasts the institutional logic with an "internal logic". From the perspective of the individual enterprise, this internal logic can, in some cases, override the external logic. In our case, this seemed to happen with Chinese companies in Germany where, contrary to the German training culture, internal needs for skilled labour were met through external recruitment. This procedure was presented as cost-saving and being in the interest of the Chinese parent companies. However, these internal logics were also partially evident in German companies in China, where the need for urgently available and well-trained specialists was often met through training in cooperation with state vocational schools as in the German system or as a follow-up to vocational school training. was often met through training in cooperation with state vocational schools or as a follow-up to vocational school training, as in the German system.

5. Conclusions

The study of the reciprocal training activities of companies in the home and host countries at the two-country level has so far been neglected in research. Here, we have shown that companies neither automatically export the training culture of the home country nor always imitate the training culture of the host country. Beyond the company-internal, and thus very specific, logics for the chosen form of training, our findings indicate that the German skills ecosystem (including the training philosophy) has a larger effect on German companies abroad than, the German skills ecosystem has on foreign companies in Germany. This is an unusual finding, as other studies often refer to an "institutional density" that exerts great influence on the behaviour of local companies [41]. However, it should be noted that the results presented here were based on only one country (China) in the German context. Although similar findings have been reported for Indian companies [42], initial findings on companies active in Germany from other countries (e.g., Japan, the USA and the UK) also point to divergent logics of action [31]. Furthermore, this study was limited by the assessment of a small number of companies, all of which had not been active in Germany for very long. Another limitation is that the companies surveyed belonged to different sectors. This is because other results indicate that the industry, for example in security-relevant areas, can have an influence on the training strategy [43]. Moreover, a generalisation of our findings is also problematic, given that we have only studied two countries [44]. In addition to increasing the number of cases studied, expansion to include other countries with different training cultures would be necessary in future research.

Nevertheless, our findings provide initial insights into an area of international VET that has previously received little research attention, and thus promotes scientific knowledge. Moreover, our results can be applied in practice. For example, experts from business development or employment service can provide advice on this topic when foreign MNEs relocate. This is especially true for Germany, where integration into the local skills ecosystem through participation in the dual system offers companies various advantages that go beyond mere social responsibility. Particularly at the intermediate skill level, training can help cover the long-term skilled labour needs of individual companies in Germany, which is becoming increasingly important in times of demographic change.

For foreign companies, mediation between the domestic training culture and that of the host country is often indispensable to cover the necessary demand for skilled workers in the case of a major new settlement.

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References

1. Gessler, M. Educational transfer as transformation. A case study about the emergence and implementation of dual apprenticeship structures in a German automotive transplant in the United States. *Vocat. Learn.* **2016**, *10*, 71–99. [CrossRef]
2. Ryan, P. Introduction: Comparative research on vocational education and training. In *International Comparisons of Vocational Education and Training for Intermediate Skills*; The Falmer Press, Routledge: Abingdon, UK; New York, NY, USA, 1991; pp. 1–22. ISBN 978-042-931-881-8.
3. Pilz, M. Initial vocational training from a company perspective: A comparison of British and German in-house training cultures. *Vocat. Learn.* **2009**, *2*, 57–74. [CrossRef]
4. Vogelsang, B.; Pilz, M. Conditional factors for training activities in Chinese, Indian and Mexican subsidiaries of German companies. *Eur. J. Train. Dev.* **2021**, *45*, 419–435. [CrossRef]
5. Wiemann, K.; Pilz, M. Transfer research as an element of comparative vocational education and training: An example of factors influencing the transfer of dual training approaches of German companies in China, India and Mexico. In *Comparative Vocational Education Research: Enduring Challenges and New Ways Forward*; Pilz, M., Li, J., Eds.; Springer VS: Wiesbaden, Germany, 2020; pp. 199–219. ISBN 978-3-658-29924-8.
6. Aring, M. *Innovation in Quality Apprenticeships for High-Skilled Manufacturing Jobs in the United States*; International Labour Organisation: Geneva, Switzerland, 2014; ISBN 978-92-2-128768-1.
7. Körbel, M.; Pierenkemper, S.; Zibrowius, M. *Fachkräftesicherung Deutscher Unternehmen im Ausland—Erfahrungen bei der Übertragung Dualer Ausbildungselemente*; Institut der deutschen Wirtschaft Köln: Cologne, Germany, 2017.
8. Pilz, M.; Li., J. Tracing Teutonic footprints in VET around the world? The skills development strategies of German companies in the USA, China and India. *Eur. J. Train. Dev.* **2014**, *38*, 745–763. [CrossRef]
9. Pilz, M. Training patterns of German companies in India, China, Japan and the USA: What really works? *Int. J. Res. Vocat. Educ. Train.* **2016**, *3*, 66–87. [CrossRef]
10. Bliem, W.; Schmid, K.; Petanovitsch, A. *Erfolgsfaktoren der Dualen Ausbildung: Transfermöglichkeiten*; Institute for Educational Research of the Economy: Vienna, Austria, 2014; ISBN 978-3-902742-80-3.
11. Röhrer, N.; Vogelsang, B.; Fuchs, M. The region matters—For whom? The regional actor network for vocational education and training in tourism of Cancún (Mexico). *Int. J. Train. Dev.* **2021**, *25*, 244–258. [CrossRef]
12. Buchanan, J.; Anderson, P.; Power, G. Skill ecosystems. In *The Oxford Handbook of Skills and Training*; Warhurst, C., Mayhew, K., Finegold, D., Buchanan, J., Eds.; Oxford University Press: Oxford, UK, 2017; pp. 444–465, ISBN 9780199655366.
13. Toepper, M.; Zlatkin-Troitschanskaia, O.; Kühling-Thees, C. Literature review of international empirical research on transfer of vocational education and training. *Int. J. Train. Dev.* **2022**, *26*, 686–708. [CrossRef]
14. Li, J.; Pilz, M. International transfer of vocational education and training: A literature review. *J. Vocat. Educ. Train.* **2023**, *75*, 185–218. [CrossRef]
15. Martínez-Izquierdo, L.; Torres Sánchez, M.; Pereyra, M. Difficulties, challenges and problems in the ongoing process of dual VET implementation in Spain: A systematic review of the scientific literature. In *Policies & Partnership with the World of Work—National and Cross-National Perspectives. Emerging Issues in Research on Vocational Education & Training*; Herrera, L.M., Teräs, M., Gougoulakis, P., Eds.; Premiss: Stockholm, Sweden, 2020; Volume 6, pp. 310–338, ISBN 978-91-89077-171.
16. Valiente, O.; Scandurra, R. Challenges to the implementation of dual apprenticeships in OECD countries: A literature review. In *Technical and Vocational Education and Training. Vocational Education and Training in Times of Economic Crisis. Lessons from around the World*; Pilz, M., Ed.; Springer: Cham, Switzerland, 2017; Volume 24, pp. 41–57, ISBN 978-3-319-47856-2.
17. Deutsche Bundesbank. *Statistics on the Structure and Activity of Foreign Affiliates of German Investors*; Deutsche Bundesbank: Frankfurt, Germany, 2019.
18. Germany Trade and Invest. *GTAI FDI Report 2021*; Germany Trade & Invest: Berlin, Germany, 2022.
19. Anckar, C. On the applicability of the most similar systems design and the most different systems design in comparative research. *Int. J. Soc. Res. Methodol.* **2008**, *11*, 389–401. [CrossRef]
20. Fürstenau, B.; Pilz, M.; Gonon, P. The dual system of vocational education and training in Germany—What can be learnt about education for (other) professions. In *Springer International Handbooks of Education. International Handbook of Research in Professional and Practice-Based Learning*; Billett, S., Harteis, C., Gruber, H., Eds.; Springer: Dordrecht, The Netherlands, 2014; pp. 427–460, ISBN 978-94-017-8902-8.
21. Hippach-Schneider, U.; Huismann, A. *Vocational Education and Training in Europe: Germany*; Cedefop ReferNet VET in Europe reports 2018; BIBB: Bonn, Germany, 2019.

22. Hao, Y. *The Reform and Modernization of Vocational Education and Training in China*; WZB Discussion Paper, No. SP III 2012-304; Wissenschaftszentrum Berlin für Sozialforschung (WZB): Berlin, Germany, 2012.
23. Zhao, Z.; Liu, Y. Vocational education and training in economic transformation in China. In *The Wiley Handbook of Vocational Education and Training*; Guile, D., Unwin, L., Eds.; John Wiley and Sons, Inc.: Medford, MA, USA, 2019; pp. 495–512.
24. iMOVE. China: Umsetzungsplan zur Nationalen Reform der Berufsbildung. Available online: https://www.imove-germany.de/de/alle_news/China-Umsetzungsplan-zur-nationalen-Reform-der-Berufsbildung.htm (accessed on 7 April 2023).
25. Pilz, M.; Wiemann, K. Does dual training make the world go round? Training models in German companies in China, India and Mexico. *Vocat. Learn.* **2021**, *14*, 95–114. [CrossRef]
26. Depner, H.; Bathelt, H. Exporting the German model: The establishment of a new automobile industry cluster in Shanghai. *Econ. Geogr.* **2005**, *81*, 53–81. [CrossRef]
27. Kuckartz, U. *Qualitative Text Analysis: A Guide to Methods, Practice and Using Software*; SAGE Publications Ltd: London, UK, 2014; ISBN 9781446288719.
28. Fuchs, M. Knowledge transfer, power and empowerment: MNCs' transfer of vocational education and training to their international subsidiaries. *DIE ERDE* **2022**, *153*, 15–27. [CrossRef]
29. Li, J.; Wiemann, K.; Shi, W.; Wang, Y.; Pilz, M. Vocational education and training in Chinese and German companies in China: A 'home international' comparison. *Int. J. Train. Dev.* **2019**, *23*, 153–168. [CrossRef]
30. Wiemann, J.; Wiemann, K.; Pilz, M.; Fuchs, M. Duale Ausbildung im Ausland: Ein ‚Heimspiel'? Zur Qualifizierung von Produktionsbeschäftigten in deutschen Unternehmen in China, Indien und Mexiko. In *Konzepte und Wirkungen des Transfers Dualer Berufsausbildung*; Gessler, M., Fuchs, M., Pilz, M., Eds.; Springer: Wiesbaden, Germany, 2019; pp. 359–392, ISBN 978-3-658-23185-9.
31. Fuchs, M.; Westermeyer, J.; Finken, L.; Pilz, M. Training activities in subsidiaries of foreign multinational companies: Local embeddedness in Germany? *Int. J. Train. Dev.* **2021**, *25*, 414–432. [CrossRef]
32. Mühlemann, S.; Wolter, S. Firm-sponsored training and poaching externalities in regional labor markets. *Reg. Sci. Urban Econ.* **2011**, *41*, 560–570. [CrossRef]
33. Mohrenweiser, J.; Zwick, T.; Backes-Gellner, U. Poaching and firm-sponsored training. *Br. J. Ind. Relat.* **2019**, *57*, 143–181. [CrossRef]
34. Berger, S.; Pilz, M. Benefits of VET. In *ReferNet Research-Report Deutschland 2009*; Hippach-Schneider, U., Toth, B., Eds.; BIBB: Bonn, Germany, 2010; pp. 6–49, ISBN 978-3-88555-876-0.
35. Mühlemann, S.; Wolter, S.C. Return on investment of apprenticeship systems for enterprises: Evidence from cost-benefit analyses. *IZA J. Labor Policy* **2014**, *3*, 25. [CrossRef]
36. Schneider, S.; Wessels, A.; Pilz, M. Theory and Practice of Teaching and Learning in the Classroom—Lessons from Indian Industrial Training Institutes. *Vocat. Learn.* **2022**, *16*, 99–120. [CrossRef]
37. Pilz, M. Typologies in comparative vocational education: Existing models and a new approach. *Vocat. Learn.* **2016**, *9*, 295–314. [CrossRef]
38. Hao, T.; Pilz, M. Attractiveness of VET in China: A study on secondary vocational students and their parents. *J. Educ. Work* **2021**, *34*, 472–487. [CrossRef]
39. Zoellner, D. Institutional logics: Reconceptualising 'public providers' in post-open market technical and vocational education and training. *J. Vocat. Educ. Train.* **2020**, *72*, 415–434. [CrossRef]
40. Raffe, D. Modules and the strategy of institutional versatility: The first two years of the 16-Plus action plan in Scotland. In *Education and the Youth Labour Market: Schooling and Scheming*; Raffe, D., Ed.; The Falmer Press: London, UK; New York, NY, USA; Philadelphia, PA, USA, 1988; pp. 162–195.
41. Fuchs, M.; Westermeyer, J.; Finken, L. Evolutionäre Dynamiken: Multinationale Unternehmen und duale Ausbildung. *Ber. zur Dtsch. Landeskd.* **2022**, 1–21. [CrossRef]
42. Lorscheid, K.; Pilz, M. Yes, we can! Eine Untersuchung zum Ausbildungsverhalten indischer Unternehmen in Deutschland. *Kölner Z. Für Wirtsch. und Pädagogik* **2017**, *32*, 64–84.
43. Lahiff, A.; Li, J.; Zenner-Höffkes, L.; Unwin, L.; Pilz, M. Industrial standardisation as a driver for cross-national convergence in training processes: Aviation apprenticeships in England and Germany. *Eur. J. Train. Dev.* **2019**, *43*, 752–766. [CrossRef]
44. Zenner-Höffkes, L.; Harris, R.; Zirkle, C.; Pilz, M. A comparative study of the expectations of SME employers recruiting young people in Germany, Australia and the United States. *Int. J. Train. Dev.* **2021**, *25*, 124–143. [CrossRef]