

Project DualReg:

Locally rooted – worldwide linked up: Mexico – Success conditions for transfer of vocational education and training and dual practices

Research team:

Prof. Dr. Martina Fuchs, Prof. Dr. Matthias Pilz, Natascha Röhrer, Beke Vogelsang

Methodology:

In a preliminary study in 2019 and in the main study from 2020 to 2022, a total of 110 expert interviews were conducted with these different groups of actors: 18 German/Austrian/Swiss organisations active in the field of vocational education, 32 Mexican organisations, including public authorities, chambers, associations etc., 23 vocational training providers and 37 Mexican and international companies.

## Latest developments and conditions for success in the implementation and realisation of dual practices in Mexico

### Initial situation and challenges: Formations of dual practices

” *One of the problems at the moment is that we have 26 different dual models in Mexico, because everyone does what they feel like. (I\_25, German organisation)* “

In Mexico, interest in high-quality vocational education has increased over recent decades. The integration of practical phases in curricula is becoming increasingly important in vocational schools and universities. The national government therefore reformed the vocational education system in the 2010s and introduced the Modelo Mexicano de Formación Dual (MMFD) with the support of German-speaking stakeholders (Germany, Austria, Switzerland<sup>1</sup>).

In the meantime, various dual concepts have developed from the MMFD in the industry and tourism sector, at post-compulsory level, which provide practical phases of varying lengths. In addition, different concepts also exist in the respective sectors in the individual regions. For example, in addition to the Mexican dual model, there are also various in-house company models: programmes more closely following the German-language model and promoted by German-language organisations and chambers, as well as many other locally planned dual concepts. In some vocational education schools or universities, learners spend half days in companies for a certain period of time; other vocational education schools and universities provide for a practical stay for learners exclusively in a specific company, for a few weeks. The new government under President López Obrador has also decided that learners cannot only do their practical periods in private companies that belong to a chamber of commerce. Therefore, other organisations that are not affiliated to a chamber of commerce are now

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<sup>1</sup> Switzerland is a multilingual country, but the German-speaking part is taken into account in this study.

allowed to offer practical periods.<sup>2</sup> Consequently, many organisations are now able to participate and act as learning venues. Overall, there is no uniform concept of dual practices in Mexico: however, different actors are working to build a framework for the diversity of programmes.

- **Further development of the MMFD (Modelo Mexicano de Formación Dual)**
- **With regard to regions and sectors, there are a large number of different dual concepts with differing practical components**

### **Implementation of dual practices: Active and supporting actors**

In order to offer dual practices in Mexico, **two main actors** are particularly important: **vocational education organisations** (vocational education schools/universities), such as the Colegio Nacional de Educación Profesional Técnica (CONALEP), the Colegio de Estudios Científicos y Tecnológicos (CECYTE), Institutos Tecnológicos, the Universidad Interamericana para el Desarrollo (UNID), etc., and **companies** (Fig. 1). The two actors first conclude a contract so that the learners continue to maintain their student status and enjoy insurance cover, for example in the case of an accident. The learners can partly claim scholarships; however, only in a few cases do they receive financial support from the companies.

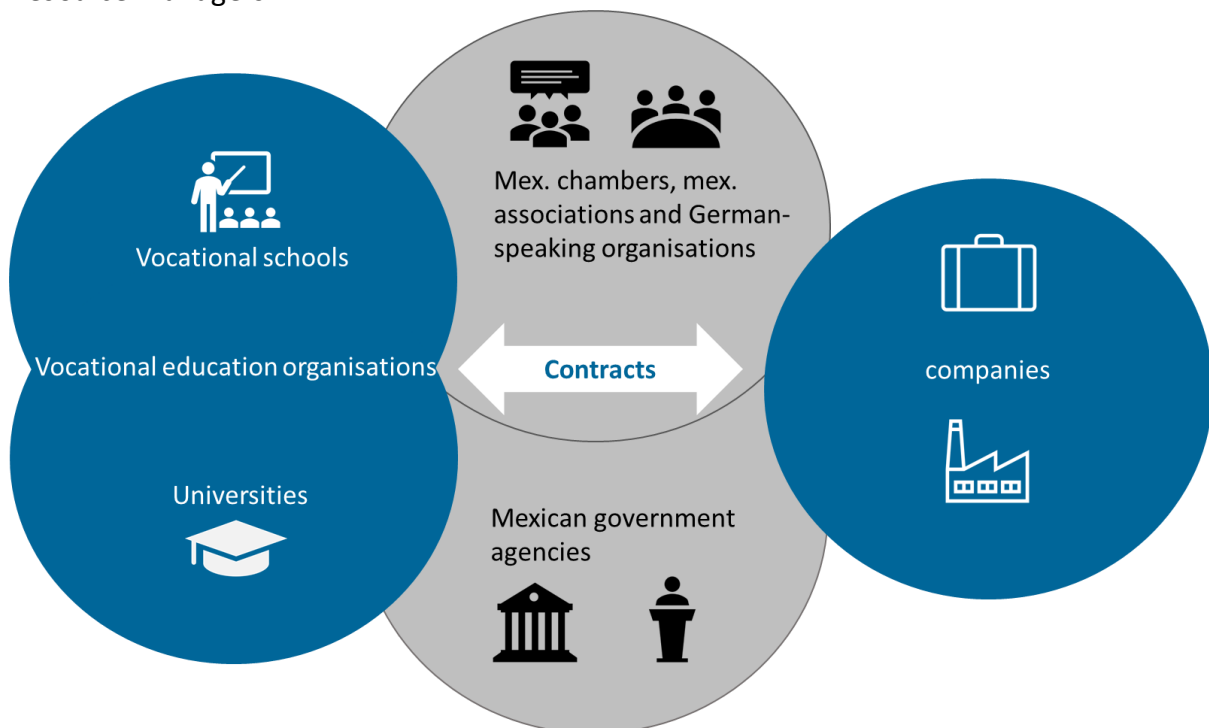
In addition to the two main actors, other actors, such as **Mexican government agencies, chambers, associations, and so forth**, and **German-speaking organisations** such as: the German Agency for International Cooperation (GIZ), the Austrian Development Agency (ADA), the Institute for Cooperation in Development Projects (ICEP), the Cámara Suizo-Mexicana (Swiss-Mexican Chamber of Industry and Commerce), the German-Mexican Chamber of Industry and Commerce (CAMEXA), the Federal Institute for Vocational Education and Training (BIBB), the German Office for international Cooperation in Vocational Education and Training (GOVET), the Embassy of the Federal Republic of Germany Mexico City and the German Academic Exchange Service (DAAD), support the implementation and realisation of dual practices.

Mexican government agencies include, for example, the Ministry of Education (Secretaría de Educación Pública, SEP) and the subordinate State Secretariat for Higher Medium Education (Subsecretaría de Educación Media Superior, SEMS). Examples of Mexican chambers and associations include the Business Coordinating Council (Consejo Coordinador Empresarial, CCE), the Employers' association (Confederación Patronal de la República Mexicana, COPARMEX), the National Chamber of Electronics, Telecommunications and Information Technology Industries (Cámara Nacional de la Industria Electrónica, de Telecomunicaciones y Tecnologías de la Información, CANIETI), the National Chamber of Manufacturing Industries (Cámara Nacional de la Industria de Transformación, CANACINTRA), the Federation of Mexican Private Higher Education Institutions (Federación de Instituciones Mexicanas

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<sup>2</sup> For better readability, only the learning location of the company is mentioned below, the other organisations are also considered as learning venues.

Particulares de Educación Superior, FIMPES) and the Los Cabos Association of Human Resource Managers.



**Figure 1: Implementation of dual practices by active and supporting actors in Mexico**

### **Similarities and differences between industrial and tourism companies regarding dual practices in Mexico**

In Mexico's two central economic sectors, industry and tourism, different dual concepts are being tested and many of them have already been implemented. In both sectors, companies and vocational education organisations play a central role in implementing and offering dual practices. Interviewees in both sectors report various challenges in implementation, including, for example, the fact that personnel of government agencies, and other organisations close to the government, are often exchanged due to a change of government, meaning that new relationships with the new responsible persons have to be established. Another common feature is that both formal and informal relationships between people from different organisations are constantly being established and need to be maintained. In addition to monthly or annual meetings of the organisations, there are also groups on social media, or a personal exchange between human resource managers or coordinators of the dual programs of the vocational education organisations. In fact, some human resource managers, who are responsible for the dual practices in the company, are often also active in chambers and associations, and thus take on a dual role. This dual role further expands and strengthens social networks.

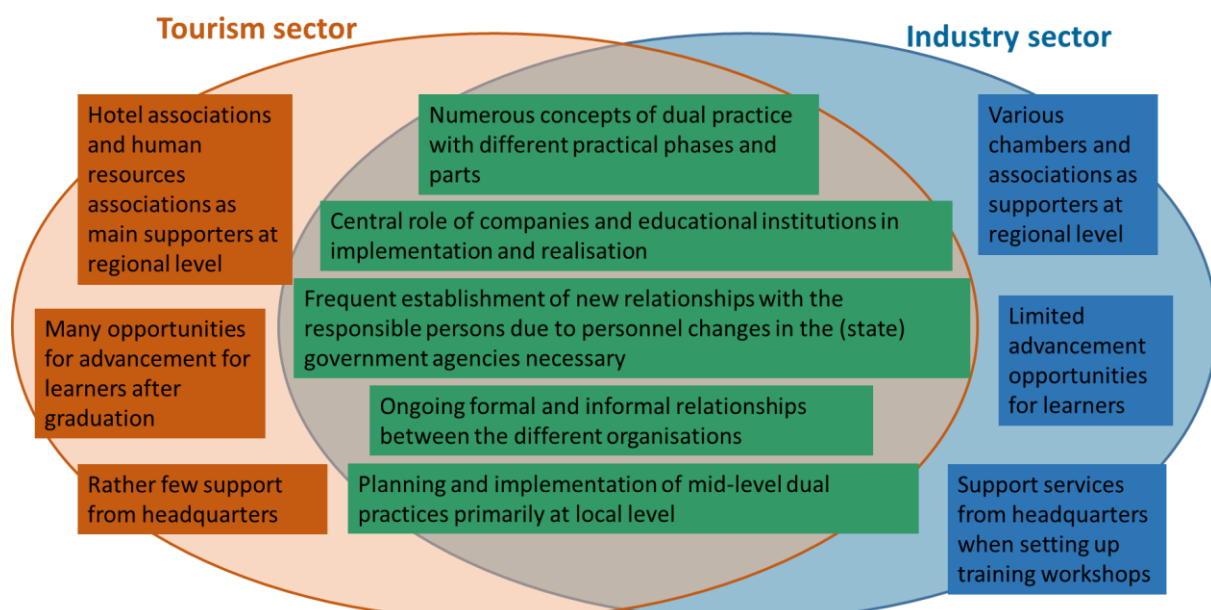
There are three main differences between the industry and tourism sector. The first concerns the variety of different actors involved in the two sectors. **In the tourism sector, the hotel associations and human resources associations act as the main supporters of dual practices at regional level.** A representative from a vocational education organisation explains:

*“Yes, we have [name of a nationally known association], but here at the regional level, it doesn't have much of an impact on hotels. The hotels are part of regional associations, such as the Asociación de Hoteles de la Riviera Maya, the Asociación de Hoteles de Cancún,... This is how the hotels are divided.” (I\_8, vocational education organisation)*

In the industrial sector, in contrast to tourism, **various chambers and associations perform a supporting function at regional level**, such as CANACINTRA, CANIETI or COPARMEX. A number of players from the German-speaking area, such as CAMEXA, DAAD or the BIBB, are also active in the industrial sector, whereas in the tourism sector GIZ in particular is involved as a German-speaking player in projects. Accordingly, the networks in the industrial sector are more extensive.

Another noticeable difference is in the opportunities for advancement for learners. **In the tourism sector, there are many opportunities for career advancement for learners after attending dual training courses** — even promotion to director is possible. **Opportunities for career advancement in the industrial sector**, on the other hand, **are limited**, and a university degree is required for many higher positions.

In general, the **planning and implementation of dual practices at an intermediate skill level of qualification takes place primarily at the local level**. In the industrial and tourism sector, the personnel managers, or training managers on-site in the companies, are responsible for the training of skilled workers at the medium qualification level. In the case of multinational companies or multi-company organisations, there is usually little influence from the headquarters on the design of the dual practices. However, **some (German, Austrian and Swiss) industrial companies, are sometimes aided by the parent company in the establishment of training workshops and certain support services when they are founded**. For example, trainers are sent to the subsidiary for the initial period, to train the workers. In the tourism sector, on the other hand, fewer support services are provided by headquarters.



**Figure 2: Overview of the similarities and differences between industrial and tourism companies**

## **Conditions for the successful implementation and realisation of dual practices**

The implementation of dual practices in Mexico requires appropriate frameworks and prerequisites. In Mexico, the Ministry of Education (Secretaría de Educación Pública, SEP) is responsible for governance and coordination at the national level. Therefore, with a view to the institutional framework, the laws passed by the Mexican Ministry of Education are of prime importance (“Acuerdo Secretarial” or “Acuerdo número 18/11/18”). These laws form the basis of the formalisation of dual practices. On this basis, vocational education organisations (vocational schools/universities) are able to conclude contracts with companies, which are a prerequisite for offering practical placements.

In addition to institutional framework conditions, social framework conditions such as specific practices and the nationwide reputation of dual training paths, are also important. Since dual practices are still little known in Mexican society, dual practices in vocational education can be seen as worthwhile based on promotional work done to inform people of its advantages. For example, vocational education organisations prefer to cooperate with large companies, as they are well known in society and, due to their size, offer numerous fields of training areas and can impart a wide variety of relevant practical skills. There are also some vocational education schools and universities that are particularly attractive for learners. Above all, very dedicated people, chambers and associations, take on the role of promoter, and promote dual practices. Chambers and associations can convince companies in particular, because they are in regular contact with them. In Mexico, however, the implementation of dual practices is also attributable to individuals from different organisations; thus, vocational education managers or trainers, especially in multinational industrial companies, act as promoters because they are familiar with the German dual system, for example (see e.g., Pilz & Wiemann, 2020). In order to influence companies positively, it is necessary to make the (financial) benefits of dual practices visible. Showing benefits and visible successes helps to increase the motivation and participation of companies. Likewise, locally established institutional structures and networks support opportunities for exchange, decision-making and feedback.

Material and non-material resources are both also fundamental in establishing dual practices. For example, some German-speaking organisations support the Mexican actors in the implementation with advice and financial means; while other German-speaking organisations have trained coordinators and teachers in vocational education. The interviewees also pointed out the importance of qualified teachers and adequate equipment in vocational education organisations and stated that more investment by the Mexican government is needed to meet the demands of companies.

Some German-speaking organisations cooperate with Mexican organisations on a national, and sometimes regional level in order to jointly implement dual concepts. Some particular actors from Germany are very active, such as CAMEXA, GIZ, GOVET and BIBB. Consequently, the understanding of roles is also important. A German-speaking actor explains with regard to his Mexican partner organisations:

*“What I notice is that (...) [they] want to create their own structures. So of course, they want support and advice, but they want to decide for themselves how they*

*position themselves and how they implement it. That is very obvious.” (I\_18, German-speaking actor)*

Another important condition for successful cooperation, is the continuous and open communication between those involved at international, national and regional level. In this way, goals can be formulated through various communication channels, agreements can be made, and the understanding of roles can be sharpened. For example, this is facilitated at the international or national level, during round table meetings of the German embassy, or at the ‘jour fixe’ of German commercial training providers, with Mexican authorities. Actors at national and regional levels also communicate at regular meetings of the national chambers and associations, with their regional organisations, or at meetings of the relations coordinators of the vocational education schools and universities. Some vocational education organisations have established Coordination Council meetings (Consejos Coordinadores), through which exchanges between vocational education organisations, Mexican organisations and companies are promoted. In the “Consejos Coordinadores,” among other things, possible adjustments to the curricula are discussed. There is also an exchange between the relationship teachers and the human resource managers, especially when the practical phases are imminent for the learners, or they are currently completing them. In these diverse ways, trust can be built and lasting relationships created.

**Table 1: Overview of the framework conditions and requirements for dual practices**

Already in the implementation ✓ In process

<b>Legal framework: Formulate common goals</b>	
<ul style="list-style-type: none"> <li>• <b>Management and coordination at national level</b> → Mexican Ministry of Education (Secretaría de Educación Pública) is responsible </li> <li>• “Acuerdo (Secretarial)”: Agreement to reform the dual practices 2015 or 2022 and 2018 ✓</li> <li>• Contracts between vocational education organisations and companies ✓</li> </ul>	
<b>Social framework: Sensitisation and promotion by individuals, chambers and associations</b>	
<ul style="list-style-type: none"> <li>• Performing persuasion work in companies </li> <li>• Make the (financial) benefits of dual practices visible → long-term, dual practices are only possible with the cooperation of companies and schools and universities </li> <li>• Create opportunities for exchange, decision-making and feedback </li> </ul>	
<b>Mobilisation of resources</b>	
<ul style="list-style-type: none"> <li>• Support for Mexican actors, from international organisations and companies, through advice and financial support ✓ / </li> <li>• Qualified teaching staff and appropriate equipment needed in vocational educational organisations </li> </ul>	
<b>International, national and regional cooperation</b>	
<ul style="list-style-type: none"> <li>• Cooperation between German, Swiss and Austrian organisations with Mexican organisations at national and partly regional level ✓</li> <li>• Cooperation between national organisations and regional actors ✓</li> <li>• <b>Building relationships and trust with partners: continuous and open communication</b> both between companies and educational organisations and with other regional and national actors ✓</li> </ul>	



**For detailed information, please take note of our previous publications:**

- Vogelsang, B., Röhrer, N., Pilz, M., & Fuchs, M. (2022). Actors and factors in international transfer of dual training approaches: The coordination of vocational education and training in Mexico from a German perspective. *International Journal of Training and Development*, 1-18. <https://doi.org/10.1111/ijtd.12279>
- Pilz, M., Vogelsang, B., Fuchs, M., Röhrer, N. (2022). Actor networks to promote vocational education in the Mexican tourism sector, Department of Economic and Social Geography, University of Cologne (Working Paper, 2022-01).
- Fuchs, M., Röhrer, N., Vogelsang, B. (2021). Companies as local skill-providers? The 'skills ecosystem' in Mexico. *Erdkunde*, 75 (4), 295-306. <https://doi.org/10.3112/erdkunde.2021.04.03>
- Vogelsang, B., Röhrer, N., Fuchs, M., & Pilz, M. (2021). Cooperation Between Learning Venues and its Limits: The Hotel Industry in Cancún (Mexico). *International Journal for Research in Vocational Education and Training*, 8(4), 67-89.
- Röhrer, N., Vogelsang, B., & Fuchs, M. (2021). The region matters—for whom? The regional actor network for vocational education and training in tourism of Cancún (Mexico). *International Journal of Training and Development*, 25(3), 244–258. <https://doi.org/10.1111/ijtd.12217>

Further information:

- Wiemann, K. & Pilz, M. (2020). 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 M. Pilz and J. Li (Eds.): *Comparative vocational education research. Enduring challenges and new ways forward* (pp. 199-220). Springer VS, Wiesbaden.